

	CRC204107 Discharge Permit to Discharge Contaminants into air from an industrial or trade premise	Comments
	General Conditions	
1	<p><u>This consent authorises the discharge of contaminants to air from following list of activities undertaken at the Rangiora Racecourse, 309 West Belt Rangiora, legally described as Rural Section 10449 and Rural Section 19334 at or about map reference NZTM 2000 1564979mE, 5206833mN as shown on Plan CRC204107A, which is attached to, and forms part of this resource consents:</u></p> <ul style="list-style-type: none"> <u>a) site preparation, topsoil stripping, overburden removal and storage;</u> <u>b) construction and maintenance of bunds and stockpiles;</u> <u>c) extraction of material to a depth of 5 m but no closer than 1 m from above monitored groundwater level (at the time of extraction);</u> <u>d) transportation, loading, delivery, unloading, deposition and stockpiling of extracted material and backfill material;</u> <u>e) site rehabilitation; and</u> <u>f) movement of vehicles associated with the above activities.</u> 	<u>DVK, JB and RC agree</u>
2	<p><u>The hours of operation for quarry activities other than monitoring and dust suppression are limited to:</u></p> <ul style="list-style-type: none"> <u>a) Monday to Friday excluding public holidays:</u> <ul style="list-style-type: none"> <u>i. Trucks crossing the racetracks of the Racecourse: 10am – 6 pm</u> <u>ii. All other activities: 7am – 6pm</u> <u>b) Saturdays excluding public holidays: 7am – 3pm.</u> 	<u>DVK, JB and RC agree</u>
3	The Person in Charge, or another nominated person, must be available at all times (including outside quarry operation hours) to respond to dust emission complaints and issues in accordance with measures described in the AQMP.	<u>DVK, RC and JB agreed✓</u>

	<u>Limit</u>		
4	The discharge shall not cause dust or the deposition of particulate matter that gives rise to offensive, objectionable, noxious or dangerous effects beyond the boundary of the site as shown on Plan CRC204107A.		DVK, RC and JB agreed
5	The maximum area of unconsolidated land comprising of the excavation area, backfilling areas and rehabilitation area shall not exceed two hectares. Advice Note: This maximum area of disturbed land does not include the racetrack.		DVK, RC and JB agreed
6	No crushing or processing of aggregate shall occur onsite. Stockpiles shall be located as shown on Plan CRC204107A.		DVK, RC and JB agreed GR -Do we need to specify a condition requiring treatment of the stockpiles or do you all agree that particular detail can be left to AQMP? Applicant is most likely to use water trucks as they do at Cones Road, esp since stockpiles will be dynamic. DVK - I am happy that the method for dust control of these stockpiles can be included within the management plan. It is my expectation that the proposed dust control procedures will be as discussed by the experts during conferencing.
7	The discharge of dust and/or particulate matter from the gravel extraction and/or wider activities within the site shall not create any dust hazard or nuisance to Transpower's National Grid		DVK, RC and JB agreed

	transmission lines, including support structures as shown on Plan CRC204107B.		
	Air Quality Management Plan (AQMP)		
8	<p>a)g) Prior to the commencement of quarry activities, the Consent Holder must prepare an Air Quality Management Plan (AQMP) <u>and associated Standard Operating Procedures (SOPs)</u> for the certification of the CRC Manager.</p> <p>b)h) <u>Works must not commence until the Consent Holder has received written certification of the AQMP.</u></p> <p>i) <u>Notwithstanding this, the works may proceed if the Consent Holder has not received a response from the CRC Manager within 40 working days of the date of the submission of the AQMP.</u></p> <p>(in accordance with the process described in consent CRC-XXXX Conditions 11-15. The purpose of the AQMP is to:</p> <p>Identify the actions required to ensure compliance with the conditions of this consent;</p> <p>Identify the persons responsible for carrying out all actions in relation to meeting the requirements of this consent</p> <p>Describe the methods to control dust, including the frequency and triggers for water suppression activities; and</p> <p>Describe the dust and meteorological monitoring methodology; and</p> <p>Identify responses to non-compliance with consent triggers and complaints.</p>	<p><i>Agreed in principle.</i></p> <p><i>Suggest add in controls over monitoring of bund formation.</i></p>	<p>RC and JB agreed.</p> <p>DVK - See my comments re AQMP conditions below</p>
9	The exercise of this consent must be undertaken in accordance with the certified AQMP.		DVK, RC and JB agreed
10	Prior to submitting the AQMP <u>(including the SOPs)</u> to the CRC Manager <u>for certification</u> , the Consent Holder must have the AQMP reviewed by a Suitably Qualified and Experienced Practitioner (SQEP) who is a Certified Air Quality Practitioner to confirm that the measures proposed in the AQMP are appropriate to achieve compliance with conditions of this consent and enable the		DVK, RC and JB agreed

	management of discharge of dust beyond the boundary to a level that is not offensive, objectionable, noxious or dangerous.		
11	The AQMP (including the SOPs) must be reviewed by a SQEP, at least once per year, to ensure it remains fit for purpose. Any amendments to the AQMP must be subject to certification by the CRC Manager in accordance with conditions 14-19 of resource consent CRC-XXXX <u>Condition 810</u> .	Hearing notes <i>Donovan's point is that he agrees that the AQMP conditions are appropriate and thorough. But excludes him from reviewing these so he is unable to advise his client on the effectiveness of the AQMP at this stage in the process</i>	<u>DVK, RC and JB agreed</u>
12	<p>The AQMP must include, but not be limited to:</p> <ul style="list-style-type: none"> — The actions required to ensure compliance with the conditions of this consent; — The methods to control dust, including the frequency and triggers for water suppression activities; and — Responses to non-compliance with consent triggers and complaints a) A description of the purpose of the AQMP; b) A description of the dust sources on site; c) A description of the receiving environment and identification of sensitive receptors within 250 metres of site boundaries; <u>d) The actions required to ensure compliance with the conditions of this consent;</u> e) The methods (including dust reduction through design methodologies) to be used for controlling dust at each source during quarry activities and from wind erosion outside of quarry operation; — The methods to control dust, including the frequency and triggers for water suppression activities; and <u>e) f) A description of site rehabilitation methodology and associated dust control measures;</u> <u>g) A description of dust particulate matter and wind monitoring requirements including;</u> 	<p>Hearing discussion notes on 5f:</p> <p><i>This Is one of the key issues we are seeking to resolve.</i></p> <p><i>Method of monitoring may need to be fleshed out a bit more.</i></p> <p><i>RC and JB are confident that nephelometer type instruments measuring PM10 will provide the data required – indication on when dust levels are high and mitigation or stop work is required. This is based on the system working at other Canterbury quarries.</i></p> <p><i>Donovan wants to see near- NESAQ monitoring equipment such as an E-BAM measuring TSP. This equipment costs around \$20k and can operate practically in this type of situation but benefits from having a power supply as the solar panels become large to supply the power</i></p>	<p><u>RC and JB agreed</u></p> <p><u>DVK - I agree that these AQMP Consent Conditions are appropriate should the commissioners wish to grant the consent.</u></p> <p><u>Whilst it is still my preference that I am able to view a detailed AQMP such is required by these consent conditions during the hearing such that I can provide a more informed opinion to the commissioners. If the commissioners are of the mind to grant the consent (whether they direct the applicant to provide a more detailed AQMP prior to the close of the hearing or not) then these AQMP consent conditions are consistent with that which would be applicable for a quarry of this nature in this receiving environment.</u></p>

	<p>i. The location of <u>the wind monitoring equipment</u>;</p> <p>ii. The location of dust-particulate matter monitors relative to active work areas <u>within 250 m of sensitive locations</u>;</p> <p>iii. Details of and wind direction, wind speed trigger levels <u>as set out in Condition 1414 and associated alarm system. This should also include the wind direction to be used in fulfilment of Condition 1414 (b).</u></p> <p>iv. Details of the particulate matter trigger levels as set out in Condition 1515 and associated alarm system</p> <p>i.v. <u>and Monitoring instrumentation methodology, setup requirements, maintenance and calibration procedures</u>;</p> <p>h) A description of procedures for responding to dust and wind condition-based trigger levels and associated follow up investigations, actions and recording of findings;</p> <p>f) Responses to non-compliance with consent triggers and complaints</p> <p>g)i) A system for training employees and contractors to make them aware of the requirements of the AQMP;</p> <p>h)i) Names and contact details of staff responsible for implementing and reviewing the AQMP <u>in order to achieve the requirements of this consent</u>; Procedures, processes and methods for managing dust when staff are not on site<u>outside of standard operating hours</u>;</p> <p>i) Methods for determining the weather conditions that will trigger a restriction on potentially dusty activities;</p> <p>j)k) A method for recording and responding to complaints from the public;</p>	<p><i>needs. Donovan is asking if there is power at the four observational towers placed around the course?</i></p> <p><i>This matter remains unresolved.</i></p> <p><i>Depending on the surface of the site access road PM10 monitoring may also be required on the eastern boundary.</i></p>	
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	<p><u>l)</u> A maintenance <u>and calibration</u> schedule for meteorological and particulate <u>(including PM₄₀)matter</u> monitoring instruments;</p> <p><u>k)m)</u> <u>Contingency measures for responding to dust suppression equipment malfunction or failures, including wind and particulate matter monitoring instruments.</u></p> <p><u>n)</u> Separate Standard Operating Procedures (SOPs) dedicated to the management of potential dust discharges from specific sources, including but not limited to:</p> <ul style="list-style-type: none"> i. Stockpiles; ii. Site roads – sealed and unsealed; iii. Triggers for the use of water for dust suppression; iv. The use of dust suppressants other than water; v. Aggregate excavation and backfilling areas; vi. Top soil and overburden stripping and stockpiling; vii. Bund construction, maintenance and the recontouring of slopes during rehabilitation; viii. Any automated dust suppression for dust prone areas that can be activated outside of working hours; ix. Location and calibration of <u>PM₄₀ particulate matter</u> and meteorological monitoring equipment; <p><u>m)o)</u> Environmental information management for recording, quality assurance, archiving and reporting the quantity and types of data including all ambient environmental data for wind, rainfall-evaporation, <u>PM₄₀ particulate matter</u> concentrations, community feedback, and all data required for dust management of the site; and</p> <p><u>n)p)</u> A copy of the SQEP's peer review report and comments on how the AQMP has addressed the review.</p>		
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	<p><u>Advice note:</u> For the purpose of the consent, sensitive receptor means:</p> <ul style="list-style-type: none"> a) The area within 20m of the façade of an occupied dwelling; or b) A residential area or zone as defined in a District Plan; or c) A public amenity area, including those parts of any building and associated outdoor areas normally available for use by the general public, excluding any areas used for services or access areas; or d) A place, outside of the Coastal Marine Area, of public assembly for recreation, education, worship, culture or deliberation purposes. e) It does not include the Rangiora Racecourse and its associated facilities. 		
	<u>Dust Mitigation and Monitoring</u> <u>Dust Mitigation Trigger Levels</u>		
13	<p>When the wind is blowing towards a nephelometer from the direction of the site and when continuous PM₁₀ <u>boundary</u> monitoring indicates that the following trigger levels have been reached, the consent holder shall adopt the following response:</p> <ul style="list-style-type: none"> a) 1-hour average at 55µg/m³ or higher shall require immediate actions to investigate and reduce site dust emissions; and b) 1-hour average at 65 µg/m³ or higher shall require immediate cessation of all quarry activities (excluding dust suppression activities) and taking actions to investigate and reduce site emissions. 	<p><i>Hearing discussion notes:</i></p> <p><i>JB and RC are happy with these trigger levels given experience at other sites.</i></p> <p><i>Donovan is seeking TSP trigger levels.</i></p>	<p><u>RC and JB agreed</u></p> <p><u>DVK - As discussed extensively in the hearing I consider that this condition and associated trigger levels should be for TSP boundary monitoring. All other conditions which refer to boundary dust monitoring should be amended to reflect TSP monitoring. The TSP trigger levels originally proposed Section 5.4.4 of the AQIA are appropriate.</u></p>
14	<p>Quarry activities (except dust suppression measures) within 250 metres of a sensitive receptor location must not be undertaken when:</p>		<p><u>DVK, RC and JB agreed</u></p>

	<ul style="list-style-type: none"> a) wind speed reaches or exceeds 7 m/s (1-hour average); and b) quarry activities would be directly upwind of a sensitive receptor (1-hour average wind direction). c) During dry weather conditions. 		
15	<p>If at any time, including outside normal operating hours, visible dust is blowing beyond the site boundary or if the <u>PM₁₀-particulate matter</u> monitoring trigger in Condition 17 is breached the Consent Holder must:</p> <ul style="list-style-type: none"> a) Cease all quarry activities (except dust suppression measures); b) Continue all dust suppression activities including but not limited to the immediate watering of both active and inactive exposed surfaces; c) Investigate possible sources of the dust; d) Only resume quarry activities (other than dust suppression) once there is no longer visible dust blowing beyond the site boundaries and when the monitoring trigger in Condition 17 is no longer being breached; and e) Notify the CRC Manager within one working day of the dust event, including its cause and the dust suppression actions undertaken. 		DVK, RC and JB agreed
	<u>Mitigation Measures</u>		
16	<p>The Consent Holder must take all reasonably practicable measures to minimise the discharge of dust from quarry activities, including but not limited to:</p> <ul style="list-style-type: none"> a) Assessing weather and ground conditions (wind and dryness) at the start of each day and ensure that applicable dust mitigation measures and methods are ready for use prior to commencing quarry activities; b) Taking wind direction and speed into account in planning quarry activities to minimise the risk of dust dispersion towards any residential dwellings that are within 250 metres of the site boundary; c) Water suppression such as using water carts, fixed sprinklers, or water misting system will be applied as 	<p><i>Based on the review of Mr Chilton I consider the actions related to dust suppression using water should be proactive and therefore elevated in this list. This should not be a back-up measure.</i></p> <p><i>In relation not (g), I am unclear about what constitutes a long-term stockpile. There should be a</i></p>	<p>Delete (p) and (q)</p> <p>p) Sealing the access road from the River Road entrance to the racetrack crossing location;</p> <p>q) Requiring all loads entering and existing the site to be covered; and</p> <p>Insert:</p>

	<p>required to dampen down disturbed areas and stockpiles. This must occur during dry weather, irrespective of wind speed;</p> <p>d) During site preparation, limiting the height of topsoil and overburden to no more than three metres above natural ground level;</p> <p>e) Limiting and extracted aggregate and imported VENM stockpiles to no more than 5 m in height above natural ground level;</p> <p>f) During quarrying operations, locating temporary stockpiles of <u>processed</u> aggregate within the quarry floor area below natural ground level;</p> <p>g) Vegetating any long-term stockpiles (Stockpiles A and B) of topsoil, overburden or unprocessed aggregate;</p> <p>h) Regularly vacuum sweeping sealed areas;</p> <p>i) Constructing and maintaining unsealed internal roads so that they are comprised of an aggregate base, with surfaces that are graded and free of potholes;</p> <p>j) Minimising drop heights when loading trucks and when moving material;</p> <p>k) Pre-dampening topsoil and overburden with a water cart or sprinklers prior to its extraction and removal;</p> <p>l) Carrying out land stripping and land rehabilitation during favourable weather conditions when winds are below 7 m/s;</p> <p>m) Undertaking routine onsite and offsite inspections of visible dust emissions and deposited dust throughout each day of quarry activities and electronically logging findings and any dust suppression actions, and to make the results of the inspections available to ECan when requested;</p> <p>n) Maintaining an adequate and “ready to deploy” supply of water and equipment on site for the purposes of dust suppression at all times;</p> <p>o) Imposing a speed restriction on all internal <u>unpaved</u> roads of 15 kilometres per hour at all times and clearly signposting this limit on all internal roads;</p> <p>p) Sealing the <u>first 50m of the</u> access road from the River Road entrance to the racetrack crossing location <u>and surfacing the balance of the road length with road millings.</u></p>	<p><i>definition or clarification provided such as the duration of time between the stockpile being actively added to or reduced in size.</i></p> <p><i>Not agreed with respect to parts (p) and (q)</i></p> <p>Hearing discussion notes on 10p. Surface of the site access road.</p> <p><i>RC and DVK want to see more detail on the milled asphalt option. JB agrees this information would be helpful. The information we are seeking from Taggart includes:</i></p> <ul style="list-style-type: none"> <i>Milled asphalt specs – size distribution</i> <i>Depth of Milled asphalt layer.</i> <i>Any fines material used to bond milled asphalt layer.</i> <i>Will the milled asphalt road surface be watered?</i> <i>What maintenance does the milled asphalt road surface require?</i> 	<p>p) Sealing the access road from the River Road entrance for 50 m;</p> <p><u>e. Need to define VENM</u></p> <p><u>f. May need to define and limit the number and size of these stockpiles</u></p> <p><u>DVK - I agree with RC, a limit on the quantity of VENM and aggregate in the stockpiles would be appropriate. In the application it was proposed that up to 11,500 m3 of extracted aggregate and 23,000 m3 of VENM would be stored in stockpile A and Stockpile B. Can we insert these limits?</u></p> <p><u>Also if the applicant is wanting to temporarily store material in the pit, it may be appropriate to limit the stockpile size/amount of material in the pit. Although if any temporary stockpiles are to be limited to be within the pit and the 2 ha working area then I'm fairly</u></p>
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	<p>The road shall be maintained in good condition so as to minimise any dust emissions from the surface of the road;</p> <p>q) Requiring all loads entering and existing the site to be covered; and</p> <p>r) Using water from bore M35/9270 (Consent CRC160231) on the site together with water stored in tanks or similar vessels for dust suppression purposes.</p>	<ul style="list-style-type: none"> For JB and PT. Is there any data on the dust reduction efficacy other than the observations made at SOL quarry road? <p><u>No monitored data from Taggart but can see it in the Cones Road yard if you would like. Was observed to work very well at SOL quarry. Reduced visible dust plumes significantly. No quantitative performance data know of. Was observed to work very well at SOL quarry site access road. Reduced/eliminated visible dust plumes significantly. Number of neighbour complaints reduced immediately. No quantitative performance data know of. But from a theoretical viewpoint considering the robustness of the surface, the hardness of the asphalt material and lack of available fines this surface should perform as well as if not better than a chemical suppressant. A chemical suppressant binds the fines together to provide a time limited consolidated surface. The milled asphalt surface will certainly will have a greater operational life.</u></p> <p><u>From memory SOL watered their milled asphalt surface once at the</u></p>	<p><u>happy that the limit on height should be sufficient.</u></p> <p><u>P. contingency needed if road surface isn't effective. This could be to run the water truck over the road or run a k-line sprinklers down the side of the road or</u></p> <p><u>q. RC I'm of the view this is still need Jeff. This point that this is industry standard practice is accepted and in my view it should be done.</u></p>
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		<p><u>beginning of the day for precautionary purposes and because it was on route to the unsurfaced part of the site access road.</u></p> <p><u>JB will visit cones road before attending hearing on 06/05/21</u></p>	<p><u>Q JB. Agree this is a suitable industry good practice but not required for reasons stated in evidence</u></p>
	<p><u>The surface of the site assess road beyond the 50 m sealed portion and up to the racecourse crossing shall be surfaced with milled asphalt specs which shall:</u></p> <p><u>a) Contain milled asphalt with a size distribution of 2-20 mm;</u></p> <p><u>b) The milled asphalt shall be placed on top of a road base constructed of at least 200 mm of compacted AP65 basecourse and then at least 100 mm of compacted AP40 basecourse.</u></p> <p><u>c) The milled asphalt top layer shall be at least 50 mm deep and compacted with a roller prior to use.</u></p> <p><u>d) The surface of the milled asphalt access road shall be inspected daily, where cracks or potholes are identified the road it to be repaired and resurfaced with compacted milled asphalt.</u></p> <p><u>e) Where extensive deterioration of the access road occurs the whole length of the access road is to be resurfaced with a new layer of milled asphalt.</u></p> <p><u>f) The consent holder is to ensure that sufficient milled asphalt to resurface the entire length of the access road is available at short notice.</u></p>	<p><u>Information from Paul Taggart on the proposed surfacing of the site access road</u></p> <ul style="list-style-type: none"> <u>Milled asphalt specs – size distribution – 2-20mm</u> <u>Construction method of surface. – spread off truck and finished w grader, then compacted</u> <u>Compacted depth of Milled asphalt layer. – 30-50mm</u> <u>Any fines material used to bond milled asphalt layer? – bitumen content already in it</u> <u>Will the milled asphalt road surface be watered?- won't need watered, might just wash off traffic dust (off truck wheels but will be minimal)</u> <u>What maintenance does the milled asphalt road surface require? – Easy to maintain, can top up and re-compact</u> 	<p><u>But RC From my perspective, this is subject to robust information being provided on the efficacy of this measure as I've not seen it implemented elsewhere, and information on how the base of road millings will be formed (depth and compaction etc).</u></p> <p><u>d) Method for washing will need to be more detailed.</u></p> <p><u>DVK - I have inserted a proposed condition for the milled asphalt road which is based on the information JB sent through. This provides minimum construction and maintenance specifications. It also stipulates that surface fines from tracked material shall be removed by one or more of three standard mitigation measures (watercart, k-line sprinklers or vacuum sweeper).</u></p> <p><u>If this condition is accepted by the applicant I am happy that there will be</u></p>

	<p><u>g) A watercart, k-line sprinklers, and/or a vacuum sweeper are to be used to keep the milled asphalt road free of tracked material from the quarry.</u></p> <p>Constructed by spreading off a truck levelled with a grader, then compacted to a specification of ??;</p> <p>Have a Depth of Milled asphalt layer of 30 to 50 mm;</p> <p>Be washed once per week to remove any particulate build-up; and</p> <p>Be maintained by topping up with additional milled asphalt and recompacted.</p> <p>Have water dust suppressant applied if any visible dust plumes are observed.</p> <p><u>h)</u></p>		<p><u>no requirement for regulatory PM10 monitoring at the boundary of the airshed.</u></p>
	Meteorological monitoring		
17	<p>Prior to the commencement of any on-site activities as listed in Condition (1), the Consent Holder shall install an anemometer a <u>meteorological monitoring station at a location described in the AQMP on the site that has a height of 10 metre above natural ground level.</u> The anemometer-meteorological monitoring station shall be capable of continuously monitoring:</p> <p>a) Wind direction-speed and direction at a height of 10 m above the natural ground level;</p> <p>b) Wind speed;</p> <p>c) Rainfall; and</p> <p>d) Temperature.</p>		<p><u>DVK, RC and JB agreed</u></p>
18	<p>The meteorological monitoring instruments shall be:</p> <p>s) Installed at a height of at least ten metres above natural ground level;</p>		<p><u>DVK, RC and JB agreed</u></p>

	<p>t) Installed, and operated <u>and calibrated</u> in accordance with 'AS/NZS 3580.1.1:2016. Methods for Sampling and Analysis of Ambient Air: Part 1.1: Guide to Siting Air Monitoring Equipment'; and</p> <p>u) Able to provide and record the meteorological monitoring results continuously using an electronic data logging system with an averaging time for each parameter of not more than one minute.</p> <p>v) Able to provide the meteorological data to the Quarry Manager and CRC in real-time in an appropriate format.</p> <p>w) Fitted with an alarm system that is able to send warnings and alerts to the Quarry Manager or other nominated person; and</p> <p>x) Maintained and calibrated in accordance with the manufacturer's specifications by a Suitably Qualified and Experienced Practitioner. The consent holder shall maintain a record of when maintenance is undertaken and provide this to the CRC Manager in the Annual Report <u>required by Condition 25</u>.</p>		
19	All meteorological monitoring data must be retained for the duration of this consent and provided to the CRC Manager, in real-time, at continuous intervals if requested.		
	<u>Dust/Particulate Matter Monitoring</u>		
20	<p>Prior to the commencement of the activities in Condition (1), the Consent Holder shall ensure the installation and operation of at least two continuous <u>dust/particulate matter</u> monitors for the purpose of continuous PM₁₀ monitoring for the duration of this resource consent. The monitor shall be:</p> <p><u>a) Located in accordance with the AQMP so that they are situated between the centre of that days quarrying activities and the nearest downwind off-site sensitive receptor</u>;</p> <p><u>b) Undertaken when any dust generating activity is within 250 m of a sensitive receptor.</u></p>	<p><i>Specifications for the installation, operation, maintenance and calibration of the PM₁₀ monitoring equipment is necessary to ensure robust monitoring is in place to inform triggers.</i></p> <p><i>Not agreed with respect to part (a)</i></p> <p><i>Hearing discussion notes on a.</i></p>	<p><i>Part (a) too prescriptive. Siting will be sufficiently covered in the AQMP.</i></p> <p><u>a)</u> Located in accordance with the AQMP so that they are situated between the centre of that days quarrying activities and the nearest downwind off-site sensitive receptor;</p> <p><u>b)</u></p>

	<p>a)c) <u>Located between the dust generating activity and the sensitive receptor in a position which is likely to provide data representative of impacts which could potentially occur at the sensitive receptor.</u></p> <p>b)d) Sited in general accordance with AS/NZS 3580.1.1:2016 Methods for sampling and analysis of air - Guide to siting air monitoring equipment;</p> <p>e)e) Installed, operated, maintained and calibrated in accordance with the AS/NZS 3580.12.1:2015 Guidelines. Methods for sampling and analysis of ambient air – Determination of light scattering – Integrating nephelometer method;</p> <p>f)f) Able to provide and record the PM_{10} results continuously using an electronic data logging system with an averaging time for each parameter of not more than one minutes;</p> <p>g)g) Fitted with a heater so that the inlet temperature is maintained at least 10 degrees Celsius above the ambient temperature;</p> <p>h)h) Able to provide the dust data to the CRC in real-time in an appropriate electronic format;</p> <p>i)i) Fitted with an alarm system that is able to send warnings and alerts to the Quarry Manager or other nominated person; and</p> <p>j)j) Maintained in accordance with the manufacturer's specifications by a Suitably Qualified and Experienced Practitioner. The consent holder shall maintain a record of when maintenance is undertaken and provide this to the CRC Manager in the Annual Report.</p>	<p><i>Location of monitors may also need to be addressed in more detail on the conditions. Donovan is suggesting that we have a condition that monitoring locations are defined by drawing a 250 m buffer around the adjacent sensitive receptors and that monitoring required when a dust generating activity is occurring within this buffer.</i></p> <p><i>JB there is some merit to this suggestion and I think we can make it work pragmatically. Effectively this would mean a monitoring would be required on the western boundary during bund construction and during excavation of stages 1 and 8. A monitor would be required on the eastern boundary during bund construction and excavation stages 4, 5 and 6.</i></p>	<p>c) <u>Some draft wording for consideration to address DVK's comments. I think this reflects what would be in the AQMP so no disbenefits from including this here. A figure could be appended to the conditions showing general locations of monitoring. DVK had a sketch of this. Nominally along the eastern and western boundary</u></p> <p><u>DVK - Re c) I am of the opinion that it would be better not to stipulate a specific monitoring instrumentation. The consent holder may wish to use a dust monitoring device which is not a nephelometer in the future if a more accurate/practicable near reference dust monitor is available in the future. You could consider adding "or an alternative particulate matter monitoring device which meets or exceeds the performance criteria stipulated in the AS/NZS 3580.12:2015". This allows for better technology which may be developed in the future to be utilised by the Consent holder.</u></p> <p><u>Note that the above AS/NZS standard would be amended if the commissioners were to agree with me that TSP would be the most applicable size fraction for boundary monitoring.</u></p>
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21	All PM₁₀ particulate matter monitoring data must be retained for the duration of this consent and provided to the CRC Manager, in real-time, at continuous intervals.		DVK, RC and JB agreed
	<u>Bund formation</u>		
22	<p><u>When constructing the acoustic bunds, the following controls apply:</u></p> <ul style="list-style-type: none"> <u>a) Wherever possible the bunds shall be constructed during winter months (May to September);</u> <u>b) Consider the weather forecast for the day; (only work in wind speeds of less than ??);</u> <u>c) Maintaining a buffer distance of 250 m when wind speeds are above 57 m/s in a direction towards the nearest sensitive locations;</u> <u>d) Material to be excavated must be thoroughly wetted using a water cart ahead of excavation and wetted thoroughly thereafter;</u> <u>e) A continuous PM₁₀ particulate matter monitor must operate between the bund and nearest neighbour with alarm triggers in accordance with Condition 13;</u> <u>f) Wind monitoring must be carried out and dust generating activities shall cease when the wind is blowing towards sensitive locations and the wind speeds exceed 7 m/s (hourly average) in accordance with Condition 1414;</u> <u>g) The bunds may must be immediately hydroseeded, covered or have a suitable dust suppression agent applied; and</u> <u>h) Vegetated cover should be established as soon as practicable and maintained to ensure healthy cover during dry months.</u> <p><u>[Do you need another condition here on whether monitoring will be TSP or PM₁₀ during western bund construction and whether those monitors are separate to the other ones identified for the general quarry?]</u></p>		<p>RC and JB agreed</p> <p>DVK has added suggested edits</p>
	<u>Complaints Register</u>		
<u>23</u>	<p><u>The Consent Holder shall maintain a Complaints Register for any complaints received. The Complaints Register must include:</u></p> <ul style="list-style-type: none"> <u>a) The date and time the complaint was received;</u> 		DVK, JB and RC agreed

	<ul style="list-style-type: none"> b) <u>The nature and location of where the complaint has originated, if provided;</u> c) <u>A summary of the complaint;</u> d) <u>Particulate matter and wind conditions at the time the when the dust was observed by the complainant; and</u> e) <u>Any corrective action undertaken by the consent holder to avoid, remedy or mitigate the issue raised.</u> 		
24	<u>The Complaints Register must be provided to the CRC Manager annually, and must otherwise be available to the CRC Manager and on request.</u>		<u>DVK, JB and RC agreed</u>
	Annual Report		
25	<p>The Consent Holder shall provide an annual monitoring report for the period of 1 July to 30 June to the CRC Manager, by 31 August each year. The annual monitoring report shall include but not be limited to:</p> <ul style="list-style-type: none"> a) A record of any maintenance of the meteorological or dust monitors undertaken over the proceeding 12-month period; b) A record of all occasions where a trigger level has been reached including any investigations and actions taken; and c) The complaints record <u>and investigations</u> required in accordance with Condition <u>23</u>. d) Contact details for the site management and out of hours contact details. e)d) 		<u>DVK, JB and RC agreed</u>
	<u>Review</u>		
26	<p><u>The CRC may, during the month of May or November each year, review any or all of the conditions of the consent pursuant to section 128 of the Resource Management Act 1991 for all or any of the following purposes:</u></p> <ul style="list-style-type: none"> a) <u>To deal with any adverse effect on the environment which may arise from the exercise of the consent that was not foreseen at the time of granting of the consent, and which</u> 		<u>DVK, RC and JB agreed</u>

	<p><u>is therefore more appropriate to deal with at a later stage; and/or</u></p> <p>b) <u>To require the Consent Holder to adopt the best practicable option to remove, remediate or reduce any adverse effects on the environment resulting from the activity; and/or</u></p> <p>c) <u>To review the monitoring requirements and trigger levels and trigger responses; and/or</u></p> <p>d) <u>To review the methodology of quarry activities should adverse dust effects become an issue; and/or</u></p> <p>e) <u>To require consistency with any relevant Regional Plan, National Environmental Standard or Act of Parliament.</u></p>		
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