

**IN THE ENVIRONMENT COURT
AT CHRISTCHURCH
I TE KŌTI TAIAO O AOTEAROA
KI ŌTAUTAHI**

Decision No. [2024] NZEnvC 238

IN THE MATTER of the Resource Management Act 1991

AND an appeal under s120 of the Act

BETWEEN COAST ROAD RESILIENCE
GROUP INCORPORATED

(ENV-2024-CHC-41)

Appellant

AND WEST COAST REGIONAL
COUNCIL

First Respondent

AND GREY DISTRICT COUNCIL

Second Respondent

Environment Judge P A Steven – sitting alone under s279 of the Act

In Chambers at Christchurch

Date of Consent Order: 2 October 2024

CONSENT ORDER

A: Under ss 279(1)(b), 279(1), 290(1) and 108AA(1)(a) of the Resource Management Act 1991, the Environment Court, by consent, orders that:



CRRG v WCRC & GDC – CONSENT ORDER

- (1) the appeal is allowed to the extent that TiGa Minerals and Metals Limited is granted resource consent to undertake open-cast sand mineral mining on the Barrytown Flats in accordance with the conditions and plan as set out in Appendix 1, attached to and forming part of this order;
- (2) the respondents are directed to re-issue the resource consents (reference WCRC: RC-2023-0046 and GDC: LUN-3154/23) incorporating the changes directed under (1), so that any reader not familiar with this proceeding can read the resource consent and understand it as a whole, without having to read, interpolate and consider separately the changes made by this consent order;
- (3) the appeal is otherwise dismissed.

B: Under s285 of the Resource Management Act 1991, there is no order as to costs.

REASONS

Introduction

[1] This proceeding concerns the Coast Road Resilience Group Incorporated's ('GRRGI') appeal against the decision of the West Coast Regional Council and Grey District Council to grant resource consent¹ to TiGa Minerals and Metals Limited to undertake open cast mineral sands mining and processing over 12 years at a site on Barrytown Flats, State Highway 6, West Coast.² CRRGI appealed seeking that the decision be overturned and consents refused or any further or consequential relief as may be necessary to address the matters it raised in its submission and appeal.

¹ Reference WCRC: RC-2023-0046 and GDC: LUN-3154/23.

² *Independent Commissioners' Decision on Application by TiGa Minerals and Metals Limited to Mine at Barrytown*, dated 29 April 2024.

[2] I have read and considered the consent memorandum of the parties dated 20 September 2024 which details the agreement reached between the parties to resolve the appeal. The parties have agreed a number of changes that address the parties' concerns and will ensure the adverse effects of the proposal are avoided where necessary. I have also read and considered the affidavit of planner, Katherine McKenzie,³ who described the fundamental changes agreed to the conditions of consent, recording her opinion that the agreed changes are within scope and will:⁴

- (a) aid in providing clarity and consistency;
- (b) reduce the effects or the risk of effects occurring from the mining operation; and/or
- (c) reduce the extent of operations on the site from those granted on first instance.

Other relevant matters

[3] The Director-General of Conservation, Royal Forest and Bird Society Incorporated, and Te Rūnanga o Ngāti Waewae each gave notice of an intention to become a party to this appeal under s274 of the Resource Management Act ('the RMA' or 'the Act') and have signed the memorandum setting out the relief sought.

[4] No party seeks costs, all parties agreeing that costs should lie where they fall.

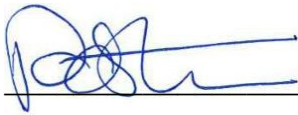
[5] The parties advise that all matters proposed for the court's endorsement fall within the court's jurisdiction and conform to the relevant requirements and objectives of the Act including, in particular, Pt 2.

³ Affirmed 19 September 2024.

⁴ At [16].

Outcome

[6] The court makes this order under ss 279(1), 290(1) and 108AA(1)(a) RMA, such order being by consent rather than representing a decision or determination on the merits pursuant to s297. The court understands for the present purposes that all relevant parties to the proceeding have executed the memorandum requesting the orders. On the information provided to the court, I am satisfied that the orders will promote the purpose of the Act so I will make the orders sought.



P A Steven
Environment Judge



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Appendix 1: Conditions of Consent (September 2024)

General Conditions for GDC and WCRC	
1.0 General	
1.1	The Consent Holder must carry out the mineral sand mining activities in general accordance with the application and associated documents dated April 2023, further information provided 26 July 2023, 5 September 2023, information provided and amendments made through the hearing, and the Site Plan enclosed as Schedule 1 prepared by Tai Poutini Resources, <u>and the "Additional Weland Mitigation Planting" Plan enclosed as Schedule 9.</u>
1.2	The Consent Holder must ensure all staff and contractors are made aware of, and have access to, <u>and comply with</u> , the resource consent conditions prior to the commencement of mining. A copy of the resource consent conditions <u>and the map required by 7.1(c)</u> must also be readily available on-site.
1.3	All actual and reasonable costs incurred by the Consent Authorities in monitoring, enforcement and administration of this resource consent must be met by the Consent Holder.
1.5	Accountable Person
	<p>a. Within 2 months of the commencement of these consents, the Consent Holder must appoint an Accountable Person to be responsible for ensuring compliance with all conditions of these consents. The Accountable Person must be based on-site for a minimum of 4 hours per day, for three days per week. The Accountable Person must:</p> <ol style="list-style-type: none"> i. Review, submit and ensure compliance with all management plans listed in the conditions of these consents; ii. Ensure there is another person who can provide cover in the event they are sick or unavailable, and to provide for succession ('Nominated Cover Person'); iii. Be the point of contact between the Consent Holder, the Consent Authorities, the Community Liaison Group (<u>CLG</u>) and the community generally, and pro-actively engage with these parties as required under these consents; iv. Deliver on reporting requirements required by the conditions of these consents. <p>b. The Consent Authorities must be advised of the name and contact details of the Accountable Person and the Nominated Cover Person. In the event that the Accountable Person or Nominated Cover Person change, the Consent Authorities must be notified.</p> <p><u>c. A sign must be erected at the property boundary adjacent to the site access road, which provides the name and contact details of the Accountable Person and Nominated Cover Person required to be appointed under sub-clause a.</u></p> <p><u>Advice Note: The Accountable Person, any other representatives of the Consent Holder should note that CRRG members have expressed a desire for an 'in writing' approach when liaising with all community parties including neighbours. Two contacts available for in-writing contact should be established with parties, including the consent holder, within 5 working days prior to commencement of works on-site. During communications, respectful lead in times of at least one week's notice should be used when disseminating information. 'Cold calling' via phone, text or in person is not considered acceptable unless agreed upon in writing with individual parties.</u></p>
2.0 Notification	
2.1	For monitoring purposes, the Consent Holder must notify the Consent Authorities of the following: <ol style="list-style-type: none"> a. the intended commencement date of works on-site at least 15 working days prior to commencement of works on-site; and b. the intended completion of final mine closure rehabilitation activities at least 15 working days prior to works ceasing on-site.
3.0 Review of Conditions	
3.1	Pursuant to Section 128(1) of the Resource Management Act 1991, the Consent Authorities may review any of the conditions of these consents by serving notice on the Consent Holder within a period of 60 working days, commencing on each anniversary of the date of commencement of these consents for any of the following purposes: <ol style="list-style-type: none"> a. To deal with any unanticipated adverse effect on the environment which may arise from the exercise of the consents which is appropriate to deal with at a later stage, including any material elevation of noise levels associated with the mining or processing operation for extended

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	<p>periods of time, which was not anticipated by the noise modelling that informed the resource consent conditions.</p> <p>b. To assess the <u>effectiveness and</u> appropriateness of imposed monitoring parameters, monitoring regimes and monitoring frequencies and to alter these accordingly.</p> <p>c. To ensure that any management plan required by- conditions gives effect to conditions of these consents.</p> <p>If the information made available to the Consent Authorities by the applicant for the purposes of applying for consent contained material inaccuracies and the effects of the exercise of the consent are such that it is necessary to apply more appropriate conditions.</p>
<u>3.2</u>	<u>Notwithstanding the annual review, the Consent Authority may review the conditions of this consent at any time to avoid adverse effects on Westland Petrel, in response to reporting under conditions 18.7, 18.8 or 18.15, where an interaction or interactions have continued to occur despite implementation of further mitigation measures in accordance with conditions 18.7 or 18.8.</u>
4.0 Bond Conditions	
4.1	<p>The Consent Holder must provide and maintain in favour of the Consent Authorities (the West Coast Regional Council and the Grey District Council [jointly for their respective interests]) a bond or bonds related to mine closure activities <u>and rehabilitation</u> required by these consents.</p> <p><i>Advice Note: The Consent Holder remains liable under the Resource Management Act 1991 (or its successor) for any breach of these consents which occurs before expiry of these consents and which become apparent during or after the expiry of the relevant consent.</i></p>
4.2	<p>The payment of the bond quantum by the Consent Holder, as required by Condition 4.5 must <u>either</u> be:</p> <p><u>a</u> A bond in favour of the Consent Authorities for the guarantee sum in a form and executed by a surety acceptable to the Consent Authorities;;<u> or</u></p> <p>A cash bond deposited with and held in a bank account by the Consent Authorities.</p>
4.3	Where a bond is guaranteed in accordance with Condition 4.2 a), the <u>The</u> guarantor must bind itself to pay up to the bond quantum for the carrying out and completion of all obligations of the Consent Holder under the bond.
4.4	The bond (as set at any time under Condition 4.1) must be held or remain in full force and effect throughout the term of these consents until all conditions under these consents have been performed unless otherwise agreed by the Consent Authorities.
4.5	<p>a. The bond quantum must be:</p> <ol style="list-style-type: none"> i. \$160,000.00; plus ii. A sum to be determined by the average of two quotes provided to the Consent Authorities by the Consent Holder for the removal of the processing plant building and ancillary buildings and structures within the processing plant area shown in Schedule 2 and the reinstatement of this area to pasture. <p>b. The method for arriving at the bond quantum does not limit the scope of the bond, which is set by Condition 4.1.</p>
4.6	The provisions of Section 109 of the Resource Management Act 1991 must apply to any bond, or bonds, required pursuant to the above and must not be limited by the details of the bond instrument.
4.7	The amount of the bond must <u>may</u> be inflation adjusted annually <u>after 3 years from the execution of the bond under Condition 4.8, issue of consent, if requested by the Consent Authorities, or and may be inflation adjusted if requested by the Consent Authorities,</u> by the movement of the CPI relative to the CPI at the date when the bond is first provided.
4.8	<p>The Consent Holder must not exercise these consents:</p> <ol style="list-style-type: none"> a. Until the bond required by Condition 4.1 has been fully executed by the Consent Holder and guarantor, or has been deposited with the Consent Authorities, or b. In respect of any inflation adjusted bond referred to in Condition 4.7, after 30 working days have expired from the date the Consent Holder was notified of the terms of the inflation adjusted bond by the Consent Authorities unless the inflation adjusted bond has been executed with the

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	<p>Consent Authorities by the Consent Holder and guarantor, or has been deposited with the Consent Authority; or</p> <p>c. In respect of any bond sum changed or reviewed pursuant to Sections 127 or 128 of the Act, after thirty 30 working days have expired from the date the Consent Holder was notified of the decision of the changed or reviewed bond by the Consent Authorities unless the changed or reviewed bond has been executed with the Consent Authorities by the Consent Holder and guarantor, or has been deposited with the Consent Authorities, or</p> <p>d. If, during the term of these consents, the whole or any part of the bond is required to be used for the carrying out and completion of all obligations of the Consent Holder under the bond, unless the full bond has been executed with the Consent Authorities by the Consent Holder and guarantor, or has been deposited with the Consent Authorities.</p>
4.9	The Consent Holder must complete such work requested in respect of which any bond or deposit is held, within the time period nominated by the Consent Authorities' written request.
4.10	If the consents are transferred in part or whole to another party or person, the bond must continue until any outstanding work at the date of transfer is completed to ensure compliance with the conditions of these consents, unless the Consent Authorities are satisfied adequate provisions have been made to transfer the liability to the new Consent Holder.
4.11	In the event of any such transfer of the consents, the Consent Holder must ensure that the transfer provides a replacement bond to the Consent Authorities on the terms required by the Bond Conditions.
4.12	<p>The Consent Holder must meet the costs of providing any bond, or bonds, including the costs of the bond and any substitute bond.</p> <p><i>Advice Note: The Consent Authority will release the bond upon the closure of the mine if all conditions of consent have been complied with to the satisfaction of the Consent Authorities.</i></p>
5.0 Annual Work Programme	
5.1	<p>At least <u>420</u> working days prior to mining activities commencing and thereafter on or before the anniversary date of the mining activities commencing, the Consent Holder must submit a programme of work ("Annual Work Programme") for certification by the Consent Authorities detailing:</p> <p>a. The proposed works to be carried out over the next 12 months including:</p> <ol style="list-style-type: none"> i. Equipment to be used; ii. Areas of topsoil and overburden stripping and stockpile locations; iii. New areas of land disturbance that will be mined; iv. Access tracks; v. Drilling or prospecting sites and other tracks to be constructed; and vi. Any other site works within the consent area. <p>b. The approximate open volume of the working pit at the start of the year including the depth of excavations and the area of the working pit.</p> <p>c. The progressive rehabilitation works to be carried out over the next 12 months including:</p> <ol style="list-style-type: none"> i. Areas of unrestored land (i.e. any land not finally topsoiled and revegetated) at the beginning of the 12 month period; ii. The area that will be fully rehabilitated during the forthcoming 12 months; iii. Maximum slope angles, bench heights and widths of recontoured ground, if applicable; iv. Rehabilitation methods and techniques including replacement of topsoil and vegetation cover; <p>d. Description of measures to prevent adverse effects on natural waterbodies, including drainage works within the consent area, and the collection and treatment of site run-off;</p> <p>e. Any general soil conservation measures undertaken;</p> <p>f. Any pit wall stability measures undertaken;</p> <p>g. A description and analysis of any unexpected adverse effects that have arisen as a result of activities within the last 12 months, the steps taken to address those adverse effects and measures implemented to avoid a repeat occurrence of them.</p>
5.2	The following plans, reports and results of monitoring must also be submitted as part of the Annual Work Programme:

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	<p>a. A detailed plan or aerial photograph showing:</p> <ol style="list-style-type: none"> i. The open working area at the start of the year; ii. Proposed mine path for the forthcoming year including haul and access roads; iii. Rehabilitated ground behind the open pit area; iv. Location of existing and intended topsoil or overburden dumps and their dimensions; v. Location of natural surface water bodies; vi. Location of present and intended drainage works and settling ponds; and vii. Any other site works within the consent area. <p>b. A Site Specific Erosion and Sediment Control Plan in accordance with Condition 23.0.</p> <p>c. Results of surface water quality, surface water flows, and groundwater level monitoring from the previous 12 months in the form of an Annual Hydrological and Water Quality Report required by Condition 26.5.</p> <p>d. Any proposed updates to management plans submitted in accordance with the respective conditions of consent.</p> <p>e. Results of any previous dust monitoring required by Condition 28.3.</p>
5.3	The Consent Holder must provide the Consent Authorities with any further information, which the Consent Authorities may reasonably request after considering any Annual Work Programme. This information must be provided within 5 working days of any request from the Consent Authorities.
6.0 Management Plans	
6.1	<p>At least <u>240</u> working days prior to undertaking any activities authorised by these consents, the Consent Holder must submit the following management plans to the Consent Authorities for certification:</p> <ol style="list-style-type: none"> a. Noise Management Plan b. Avian Management Plan c. Wetland Construction and Riparian Planting Plan d. Dust Management Plan e. Rehabilitation Management Plan f. Water Management Plan and Monitoring and Mitigation Plan g. Erosion and Sediment Control Plan h. Landscape Mitigation Planting Plan i. Transport Management Plan j. Lighting Management Plan <p><i>Advice Note: These are collectively referred to as 'Management Plans'.</i></p> <p><i>Advice Note: Where a plan requires the input of an appropriately qualified professional, the Consent Authorities may engage an appropriately qualified person to peer review the plan as part of the certification process. <u>The cost of any required peer reviews will be met by the Consent Holder.</u></i></p>
6.2	<p>a. The purpose of the Management Plans is to implement the relevant conditions of these consents. All Management Plans must include (where relevant):</p> <ol style="list-style-type: none"> i. The purpose/objective of the plan; ii. Reference to the conditions of these consents that the management plan implements; iii. How each of the relevant conditions have been given effect to; iv. Procedures for implementing the relevant plan; v. Plan auditing check lists; vi. Monitoring programmes and/or monitoring protocols; vii. Feedback mechanisms for adaptive management, including circumstances in which a material change to the management plan would be required; viii. An organisational chart showing staff and contractor positions and responsibilities for plan implementation; ix. Relevant training and induction procedures and training schedules <u>for staff and contractors</u>; and x. Reporting procedures and format for providing the results of any monitoring or surveys required by the plan. <p>b. Where plans require the input of an appropriately qualified professional, the Consent Holder must engage an appropriately qualified person to prepare the Plan.</p>

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6.3	Site activities must not commence until the Management Plans listed in condition 6.1 have been certified by the Consent Authorities.
6.4	<p><u>Within 20 working days of the date of submission of a management plan under Condition 6.1, the Consent Authorities must:</u></p> <p>a. <u>If the Consent Holder has not received a response from the Consent Authorities confirm to the Consent Holder that the management plan is certified; or within 20 working days of the date of submission of a management plan under Condition 6.1, the management plan must be deemed certified.</u></p> <p>b. <u>If the response from the Consent Authorities is respond that they are not able to certify the management plans, the Consent Holder must consider any and provide reasons and recommendations provided by the Consent Authorities, amend the management plan accordingly, and resubmit the management plan to the Consent Authorities to the Consent Holder.</u></p> <p><u>Advice note: If a Consent Authority does not certify a management plan under Condition 6.4.b, the Consent Holder will need to resubmit the management plan under Condition 6.1.</u></p>
6.5	<p>The Consent Holder may amend a management plan at any time to take into account:</p> <p>a. Any positive measure/s to ensure the stated objectives of the management plan are achieved;</p> <p>b. Any changes required to further reduce the potential for adverse effects as a result of actions identified in the Annual Work Programme; and</p> <p><u>c. Any required actions identified as a result of monitoring to address a. or b.</u></p> <p><u>d. Any changes or opportunities to reduce actual or potential adverse effects on the environment in response to concerns, comments or complaints received from the Consent Authorities and the Community Liaison Group.</u></p> <p>Where the preparation of a management plan required the input of an appropriately qualified person, any amendment to that management plan must also be undertaken by an appropriately qualified person.</p> <p><i>Advice Note: Some management plans have ongoing annual review requirements which are required in order to avoid, remedy or mitigate effects. These specific review requirements are stipulated in the relevant conditions of this consent.</i></p> <p><i>Advice Note: Amendments to the Avian Management Plan may trigger the need for an updated Wildlife Act Authority.</i></p>
6.6	<p>Any amended management plan must be provided to the Consent Authorities within 20 working days of its review, for recertification in accordance with Condition 6.1.</p> <p><i>Advice Note: The Consent Authorities may engage an appropriately qualified person to peer review the amendments.</i></p>
6.7	A management plan may only be amended in a way that is consistent with, and does not contravene, the conditions of these resource consents.
6.8	<p><u>Within 20 working days of the date of submission of a management plan under Condition 6.6, the Consent Authorities must:</u></p> <p>a. <u>confirm to the Consent Holder the management plan is certified; or if the Consent Holder has not received a response from the Consent Authorities within 20 working days of the date of any reviewed management plan submitted in accordance with Condition 6.6, the management plan must be deemed certified.</u></p> <p>b. <u>If the response from the Consent Authorities is that respond that they are not able to certify the management plan and provide, the Consent Holder must consider any reasons and recommendations provided by the Consent Authorities, amend the management plan accordingly, and resubmit the management plan to the Consent Authorities Holder.</u></p> <p><u>Advice note: If a Consent Authority does not certify a management plan under Condition 6.8.b, the Consent Holder will need to resubmit the management plan under Condition 6.6.</u></p>

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6.9	A copy of the latest version of the certified Management Plans must be kept on site at all times and all staff and contractors personnel must be made aware of each Plan and their responsibilities under each Plan.
6.10	Subject to any other conditions of these consents, all activities must be undertaken in accordance with the latest version of the certified Management Plans.
7.0 Method of Operations	
7.1	<p>a. The mine boundaries must be clearly marked on the ground before any earthworks take place, with</p> <ul style="list-style-type: none"> i. a 20m setback from the northern property boundary from the eastern extent of Rusty Pond to the eastern extent of the Mine Disturbance Area; ii. A 30m setback from the northern property boundary from the eastern extent of Rusty Pond to the western extent of the Mine Disturbance Area; and iii. and Collins Creek, a 40m setback from the coastal lagoonCanoe Creek Lagoon and its surrounding wetland and any wetland. i-iv. A 20m setback from Collins Creek, and any other wetland. <p>a-b. The extent of the wetlands within the site and the the coastal lagoonCanoe Creek Lagoon edge must be delineated by a suitably qualified and experienced ecologist <u>using the Ministry for the Environment Wetland delineation protocols</u> at least 20 working days prior to the site boundary being marked to determine the location of the setback and the coastal lagoonCanoe Creek Lagoon edge of the planting required by condition 19.0.</p> <p>b-c. A map showing the extent of delineated wetlands, the coastal lagoonCanoe Creek Lagoon edge, and the required setbacks from the northern property boundary and Collins Creek, <u>Canoe Creek Lagoon</u>the coastal lagoon, and any wetland must be provided to the Consent Authorities, at least 10 <u>working</u> days prior to the boundaries being marked.</p> <p>e-d. There must be no overhead power lines on the site. <i>Advice Note: Condition 18.1 requires a setback of 100m from the edge of <u>the coastal lagoon</u>Canoe Creek Lagoon during the bird breeding season.</i></p>
7.2	The maximum area of site disturbance must not exceed 8.0 hectares at any one time. <i>Advice Note: The disturbed area includes the mine pit, water management infrastructure, processing plant area, active rehabilitation areas, <u>any lighted areas</u> and the access road.</i>
7.3	<ul style="list-style-type: none"> a. The Consent Holder must strip soil material ahead of mining operations and stockpile it for progressive and final mine closure rehabilitation purposes. b. Stockpiled soil must be protected from erosion caused by water and wind as far as practicable.
7.4	The Consent Holder must not bury any topsoil or soil material suitable as a growing medium or remove it from the site.
7.5	<ul style="list-style-type: none"> a. Prior to mining in each of panels 1, 4-9, and 10, the consent holder must engage a geotechnical engineer to carry out ground investigations and prepare a geotechnical report to: <ul style="list-style-type: none"> i. confirm the ground conditions within the panel, and determine appropriate pit wall geometry to ensure pit wall stability; and ii. identify any requirements for staff training to remediate a pit wall failure b. The geotechnical investigations informing the report must include monitoring of pit wall performance in earlier panels (where applicable), and involve the use of in ground inclinometers to measure slope deformation and piezometers to measure groundwater response. <u>c.</u> The Consent Holder must submit the geotechnical report to the Consent Authorities at least 20 working days prior to commencing each panel, for certification that the ground conditions are suitable and pit wall stability will be achieved with required water management mitigation infrastructure in place, such that there is less than 0.5m of modelled displacement in an Ultimate Limit State event (1 in 100 year earthquake) within 20m of the pit crest. e-d. <u>Where pit wall performance is not as anticipated and failure occurs, the consent holder must engage a geotechnical engineer to investigate the cause of failure, and implement any recommendations as soon as practicable.</u>
7.6	When mining first occurs within 100m of the coastal lagoon Canoe Creek Lagoon, Rusty Pond or the northern boundary in each of panels 4-8 and 10, the Consent Holder must: <ul style="list-style-type: none"> a. Commence filling the mining pit at the western pit wall within 6 weeks of commencing the panel;

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	b. Complete filling the mining pit within 100m of the coastal lagoon <u>Canoe Creek Lagoon</u> within 8 weeks of commencing the panel.
7.7	The consent holder must use mains supplied electricity to operate the processing plant once it is commissioned. <i>Advice Note: During construction of the processing plant and mine infrastructure, on-site electricity generation via diesel powered generators may be required before a mains electric power supply is established.</i>
<u>7.8</u>	<u>The processing plant on the site may only be used to process materials extracted from the site at Lot 1 DP412689 and Rural Section 2847 on the Barrytown Flats, State Highway 6.</u>
8.0 Hazardous Substances	
8.1	a. Refuelling, lubrication and mechanical repairs of equipment and storage of hazardous substances and dangerous goods must be undertaken in such a manner that ensures spillages of hazardous substances or dangerous goods onto the land surface or into a waterbody do not occur, including that refuelling must not occur within 20 metres of a water body. b. Any accidental discharge of greater than 20 litres of fuel, oil or hazardous substances must be reported immediately to the Consent Authorities along with details of the steps taken to remedy and/or mitigate the adverse effects of the discharge.
8.2	All contractors and/or operators transporting or storing more than 20 litres of fuel, oil or hazardous substances must carry spill kits to contain any fuel, oil or hazardous substances discharges on-site.
8.3	A list of all hazardous substances and dangerous goods stored or used on site must be maintained on site at all times showing the location of the storage and use.
8.4	Diesel storage must be limited to 40,000 litres, and must be contained in a certified tank with full secondary containment. <i>Advice Note: hazardous substance storage is managed by the Hazardous Substances and New Organisms Act 2006, and must be certified under this legislation.</i>
8.5	The Consent Holder must undertake quarterly systematic testing of the heavy minerals concentrate from within the active mining area to confirm that the concentrate remains below the acceptable level of radioactivity concentration limits as specified in Schedule 2 of the Radiation Safety Act 2016. Copies of the independent test results must be submitted to the Consent Authority within 10 working days of receipt of the results. <i>Advice Note: If material meets the criteria in Schedule 2 of the Radiation Safety Act 2016, the extraction, processing and transport of heavy minerals concentrate will require a Source Licence under this Act, and may possibly require a radiation safety plan as per section 18 of the Act.</i>
8.6	In the absence of any extant and current New Zealand Code of Practice for handling naturally occurring radioactive materials, the Consent Holder must carry out all activities on site in accordance with the Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing Code of Practice and Safety Guide published by the Australian Radiation Protection and Nuclear Safety Agency. <i>Advice Note: The Code of Practice within this consent condition requires that if radiation levels exceed 1Bq/g, the relevant authority must be notified, which differs from state to state. In the New Zealand context, the relevant body to notify is the Office of Radiation Safety.</i>
8.7	a. The Consent Holder must maintain radiation monitoring devices in the locations specified in the Dust Management Plan. Data from the radiation monitoring devices must be collected and analysed once every three months. Copies of the test results must be submitted to the Consent Authorities with 10 working days of receipt of the results. b. If the radiation monitoring devices record radiation levels exceeding the equivalent of 1 mSv (millisievert) above background levels over 12 months (i.e., the sum of results from the past four device readings at each location minus background levels established prior to the activity commencing), then the Radiation Safety Act 2016 applies, and the Consent Holder must: <ul style="list-style-type: none"> i. inform and consult the Office of Radiation Safety, New Zealand Ministry of Health; and ii. carry out all activities on site in accordance with the Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing Code of Practice and Safety Guide published by the Australian Radiation Protection and Nuclear Safety Agency (or any subsequent revision).

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8.8	<p>a. The Consent Holder must undertake daily analysis of heavy minerals concentrate samples from the processed stockpile area using a hand-held X-Ray Fluorescence device.</p> <p>b. If a sample results in a calculated activity concentration of >1.0 Becquerel per gram (Bq/g) based on U+Th assay*, the Consent Holder must have the sample analysed by an independent laboratory for head-of-chain radioactivity concentration measurement. .</p> <p>c. If the independent assessment confirms that radiation levels in the heavy minerals concentrate exceeds 1 Bq/g, the Consent Holder must notify the Office of Radiation Safety and act as directed.</p> <p>d. If levels exceed 10 Bq/g on the hand-held device, the heavy minerals concentration process must stop, a sample must be submitted for independent testing, and the heavy minerals concentration material in question must be diluted with tailings material to reach <1 Bq/g and returned to the mining pit.</p> <p>e. If the independent test confirms a reading of greater than 10 Bq/g, the Office of Radiation Safety must be notified and a Radiation Safety Plan must be prepared by the Consent Holder and be submitted for approval by the Office of Radiation Safety within 10 working days of the reading.</p> <p>f. The heavy minerals concentration process must not resume until the Radiation Safety Plan is approved.</p> <p>g. If the independent test confirms a reading of greater than 1 Bq/g but less than 10 Bq/g, the Consent Holder must notify the Office of Radiation Safety and act as directed.</p> <p>h. Daily monitoring records must be made available to the Consent Authorities on request, and copies of any independent test results must be submitted to the Consent Authorities within 5 working days of receipt of the results.</p> <p>* Activity Concentration (Bq/g) = U(ppm)× 0.01244 + Th(ppm)× 0.0042</p> <p><i>Advice Note: XRF devices are managed by the Office of Radiation Safety, and a Source Licence is required to possess and operate these devices.</i></p>
8.9	<p>a. Prior to the commencement of HMC stockpiling, the Consent Holder must install an apparatus to measure Radon-222 activity concentration within the HMC stockpile building.</p> <p>b. If no Radon-222 readings of >300 Bq/m³ are detected within the first year of the heavy minerals concentration process, the apparatus may be decommissioned.</p> <p>c. Data from the apparatus must be supplied to the Consent Authorities at least once every 3 months for the first 12 months of the heavy minerals concentration process, and within 10 days of a reading of >300 Bq/m³ being registered.</p> <p>d. If the independent assessment confirms that Radon-222 levels in the HMC stockpile building exceeds 300 Bq/m³, the Consent Holder must notify the Office of Radiation Safety and act as directed.</p> <p><i>Advice Note: The 300 Bq/m³ level of airborne radon derives from the IAEA Safety Standard No. GSR Part 3.</i></p>
9.0 Rehabilitation	
9.1	<p>The Consent Holder must carry out progressive rehabilitation, to achieve the following requirements:</p> <p>a. Reinstatement of the productive pasture;</p> <p>b. Reinstatement of existing drainage patterns to reflect pre-mining catchment areas;</p> <p>c. Ensuring short and long term stability of the reinstated landform; and</p> <p>d. Protecting Canoe Creek, Canoe Creek Lagoon, Northern Drain, Rusty Pond, Collins Creek and surrounding wetlands from the effects of erosion and sediment generation.</p> <p><i>Advice Note: Stability means an area inherently resistant to erosion such as rock, or rendered resistant by the application of aggregate, geotextile, vegetation, mulch or an approved alternative. Where vegetation is to be used on a surface that is not otherwise resistant to erosion, the surface is considered stabilised once an 80% vegetation cover has been established.</i></p>
9.2	<p>At the completion of mining (final mine closure), the mine area must be fully rehabilitated, by reinstating the productive pasture in general accordance with a Rehabilitation Plan. The objectives of the Rehabilitation Plan are:</p> <p>a. To create a final landform with a similar contour and profile at final mine closure as that which existed prior to mining;</p> <p>b. To establish vegetation cover on all areas disturbed by mining activity;</p>

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	<p>c. To protect freshwater values associated with Collins Creek, Canoe Creek, Canoe Creek Lagoon, Northern Drain, Rusty Pond, and surrounding wetlands;</p> <p>d. To reinstate the primary pre-mining catchment areas for the Northern Drain, Rusty Pond, Collins Creek and Canoe Creek Lagoon so that the contouring and surface drainage installed during mine rehabilitation does not increase the rate of groundwater drainage at the site; and</p> <p>e. To establish a wetland in the Clean Water Facility in accordance with the Wetland and Riparian Planting Plan.</p> <p>e.—</p> <p><i>Advice Note: Final mine closure is the completion of all mining and progressive rehabilitation works and removal of buildings.</i></p> <p><i>Advice Note: All Management Plans are required to adhere to the requirements of Condition 6.0.</i></p>
9.3	<p>The Rehabilitation Plan must include the following:</p> <p>a. A programme of progressive rehabilitation of the pre-mining landform, adhering to maximum disturbed area limits.</p> <p>b. The original and final mine closure topography.</p> <p>c. Contouring of all post-mining landforms.</p> <p>d. Establishment of pasture cover over all disturbed land.</p> <p>f. Restoration of drainage discharge channels that are compatible with the hydrology of the original and constructed wetlands.</p> <p>e.—</p> <p>f.e. Erosion and sediment runoff control measures.</p> <p>g.f. Removal of buildings, equipment, and structures; and</p> <p>h.g. Post-mining weed and pest control requirements.</p>
9.4	<p>If for any reason active mining ceases for more than 3 months, operational stockpiles must be removed and the stockpiled material returned to the mining area, and all disturbed areas must be rehabilitated as required by the conditions of these consents within 6 months from the date of the last mining activity.</p>
10.0 Complaints and Non-Compliance	
10.1	<p>The Consent Holder must maintain a complaints register for all aspects of operations in relation to these consents. The register must be available to the Consent Authorities at all times and must detail:</p> <p>a. the date, time and type of any complaint;</p> <p>b. the cause of the complaint; and</p> <p>c. any action taken in response to the complaint (including any amendments to be pursued to the Management Plans required by Condition 6.0).</p>
10.2	<p>Upon receipt of any complaint, the Consent Holder must promptly investigate the complaint, take action to remedy or mitigate the cause of the complaint and within 24 hours inform the Consent Authorities of the details of the complaint and any action taken.</p>
10.3	<p>Complaints which may infer non-compliance with the conditions of these consents, must be referred to the Consent Authorities within 48 hours of their receipt.</p>
10.4	<p>a. The Consent Holder must immediately notify the Consent Authorities upon becoming aware of any non-compliance with the conditions of these consents</p> <p>b. Within 5 working days thereafter the Consent Holder must provide written notification to the Consent Authorities which explains the cause of the non-compliance, and if the cause was within the control of the Consent Holder, steps which were taken to remedy the non-compliance and steps which will be taken to prevent any further occurrence of non-compliance with the conditions of these consents.</p> <p><i>Advice Note: This consent condition does not replace the compliance and enforcement responsibilities of the Consent Authorities.</i></p>
11.0 Community Liaison Group	
11.1	<p>a. Within 90 working days of commencement of these consents, the Consent Holder must establish a Community Liaison Group (CLG).</p> <p>b. An invitation must be extended to:</p>

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	<ul style="list-style-type: none"> i. 5-6 representatives of the Barrytown community which must include owners (<u>or their chosen representatives</u>) of Lots 2 and 3 DP 3375, RS 4884, <u>RS 5327, Lot 1 DP 3403</u>, and Lot 2 DP 3403; a member of the Coast Road Resilience Group; and a representative from the Barrytown School Board of Trustees. ii. the Department of Conservation, iii.ii. the West Coast Penguin Trust, and iv.iii. Te Runanga o Ngāti Waewae; c. The Consent Holder must ensure that members of the CLG are provided with the opportunity and facilities to meet at least once every three months for the first 12 months of mining operations, and thereafter as agreed with the CLG. d. Minutes of meetings held must be taken by the Consent Holder and submitted to the Consent Authorities within 10 working days of each meeting. e. The Consent Holder must provide reasonable support for the CLG by covering the costs of the meeting venue and an independent chair, organising meetings at a local venue, and inviting all members of the CLG at least 5 working days before the meeting is held. f. The Consent Holder must make a payment of \$500 each time a meeting is held to a local community group or charity, which is to be decided by attendees of each meeting. <p><i>Advice Notes:</i></p> <ul style="list-style-type: none"> i. Some examples of eligible groups are the Barrytown School, Barrytown Community Hall, Conservation Volunteers NZ, <u>West Coast Penguin Trust</u>. ii. The CLG is not a decision making body, but an important forum for the dissemination of information from the Consent Holder to interested parties. It also provides the opportunity for meaningful engagement between the parties, and for the CLG to comment on consent compliance and provide recommended changes to operations, monitoring and adaptive management. iii. Comments and recommendations from the CLG are to be given due consideration by the Consent Holder. iv. If it is not possible to establish or maintain a CLG through lack of interest or participation from the local community, Department of Conservation, the West Coast Penguin Trust, and Te Runanga o Ngāti Waewae then such failure to do so will not be deemed a breach of these conditions. v. Due to the large number of participants, it is expected that only one representative of the Department of Conservation, the West Coast Penguin Trust, and Te Runanga o Ngāti Waewae named in condition 11.1 will attend, to maintain the efficiency and effectiveness of the group.
11.2	<p>The purpose of the CLG is to provide an ongoing means of communication between the Consent Holder and the local community, both through regular meetings and informal communication between the members and the Consent Holder. Matters to be discussed at CLG meetings may include, but are not limited to:</p> <ul style="list-style-type: none"> a. Any complaints recorded and actions taken in response to the complaints as required by Condition 10.1 to 10.3; b. Any traffic safety complaints or concerns associated with the haulage of heavy metal concentrate on State Highway 6 , including but not limited to driver behaviour; c. Any matters of concern with respect to State Highway 6 that should be reported to the West Coast Regional Council Land Transport Committee or NZTA (<u>e.g. road defects causing vibration effects</u>); d. <u>Prior to certification and thereafter, Any</u> proposed amendments to Management Plans including recommended changes to operations, monitoring, and adaptive management; <u>e.</u> The results of any surveys or monitoring undertaken in accordance with conditions of these consents. <u>e-f.</u> <u>Notification of activity schedules to inform the local community of upcoming activities at the site, particularly during construction.</u>

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Grey District Council Conditions	
12.0 Hours of Operation	
12.1	<p>Trucking, loading of trucks, mining, overburden and topsoil stripping, bund development and any related activities must not operate during the hours of darkness. For the purpose of this condition, hours of darkness are between 30 minutes after sunset to 30 minutes before sunrise.</p> <p><i>Advice Note:</i> sunrise and sunset times can be found here https://www.sunrise-and-sunset.com/en/sun/new-zealand/westport/2023/june</p> <p><i>Advice Note:</i> In addition to condition 12.1, further restrictions on transport operations are contained in Condition 15.0 Transport, and further noise restrictions are contained in Condition 16.0 Noise.</p>
12.2	<p>a. Processing plant and maintenance activities within the processing plant area may operate 24 hours a day and 7 days a week.</p> <p>b. Processing plant shifts must operate 0700-1900 and 1900-0700.</p> <p>c. Mining shifts must operate only during the hours of daylight. For the purpose of this condition, hours of daylight are between sunrise and sunset.</p>
12.3	Trucking activities must not occur on Sundays.
13.0 Buildings	
13.1	Buildings associated with the mining activity must be constructed and located generally in accordance with the site plan titled "TiGa Consent Application" stamped as approved by Grey District Council and dated [insert date of stamp here] and prepared by Tai Poutini Professional Services Ltd Schedule 1 and the building plans included as Schedule 2.
13.2	The colours to be used for all buildings and structures must be recessive and non-reflective and have a light reflectance value (LRV) of less than 20%, including but not limited to Colorcote colours Karaka, Grey Friars, Lignite, and or Thunder GreyMudstone (LRV 16%), Rivergum (18%), Permanent Green (LRV 10%) or Ironsand (9.5%).
13.3	The Consent Holder must remove all buildings with the exception of the Heavy Mineral Concentrate Storage Shed and reinstate the processing plant area to pasture before the completion of the term of consent.
13.4	The processing plant building must be constructed without windows, to avoid light spill from the building.
14.0 Site Access	
14.1	At least 10 working days prior to the trucking of Heavy Mineral Concentrate from the site, the vehicle crossing for access to the site from State Highway 6 must be formed in accordance with the vehicle crossing layout plans submitted by the consent holder and labelled as "T1001: Barrytown Mine, TiGa Minerals and Metals Ltd, Indicative Access Arrangement" stamped as approved by Grey District Council and dated [insert date of stamp here] and attached as Schedule 3.
14.2	<p>Prior to vehicle crossing formation works occurring, the consent holder must submit to the Grey District Council a copy of the Waka Kotahi NZ Transport Agency's approval to undertake works on the State Highway (as detailed in advice notes a - e).</p> <p><i>Advice Notes:</i></p> <p>a. It is a requirement of the Government Rounding Powers Act 1989 that any person wanting to carry out works on a state highway first gain the approval of Waka Kotahi NZ Transport Agency for the works and that a Corridor Access Request (CAR) is applied for and subsequently a Work Access Permit issued before any works commence. A CAR will be required for the vehicle crossing from the subject site to State Highway 6.</p> <p>b. Detailed design approval will be provided through the CAR process.</p> <p>c. A CAR is made online via www.beforeudig.co.nz and/or www.submitica.co.nz. The CAR needs to be submitted at least 15 working days before the planned start of works.</p> <p>d. A copy should also be sent to the Waka Kotahi NZ Transport Agency environmental planning team at environmentalplanning@nzta.govt.nz.</p> <p>e. The Corridor Access Request will need to include:</p>

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	<ul style="list-style-type: none"> i. The detailed design for the vehicle crossing. In developing the detailed design, the consent holder will need to consult the Waka Kotahi NZ Transport Agency, including the Regional Safety Engineer and Network Manager. ii. A Construction Traffic Management Plan that has attained approval from the Waka Kotahi NZ Transport Agency Network Manager. iii. A design safety audit which has been prepared, processed and approved in accordance with Waka Kotahi guidelines for Road Safety Audit Procedures for Projects (https://www.nzta.govt.nz/assets/resources/road-safety-audit-procedures/docs/road-safetyaudit-procedures-tfm9.pdf)
15.0 Transport	
15.1	<ul style="list-style-type: none"> a. Truck movements to and from the site associated with the removal of heavy mineral concentrate must only travel south of the site, and must be limited to 50 per day and 5 per hour and must only occur during the hours of daylight. b. Hours of daylight are between 30 minutes before sunrise and 30 minutes after sunset. <i>Advice Note: For the purpose of the Transport conditions, a movement is defined as being a movement either to or from the site. A truck and trailer unit entering and leaving the site is therefore 2 movements.</i> <i>Advice Note: Refer to Condition 12.0 for further restrictions on hours/days of operation.</i> Advice Note: Truck and trailer units must comply with NZTA maximum load and speed limits.
15.2	<p>Truck movements associated with removal of heavy mineral concentrate must be limited to no more than 3 per hour between 0500 and 0700 each day so long as those truck movements are during the hours of daylight.</p> <p><i>Advice Note: For the purpose of the Transport conditions, a movement is defined as being a movement either to or from the site. A truck and trailer unit entering and leaving the site is therefore 2 movements.</i></p>
15.3	<ul style="list-style-type: none"> a. The Consent Holder must operate a transport service for mining and processing plant staff shift workers, and require all shift workers to use this transport service during the hours of darkness. For the purpose of this condition, hours of darkness are considered to be between 30 minutes after sunset to 30 minutes before and sunrise. b. The transport service must provide for staff living both north and south of the site, by running separate passenger vehicles in each direction. If there are less than 5 staff who arrive at site from either direction on any given shift, a passenger transport service is not required, provided that all staff arriving from that direction arrive and leave in the same vehicle. c. At least 10 working days prior to mining commencing, the Consent Holder must confirm to the Consent Authority how many staff are on each shift, their direction of travel, and what vehicles are proposed to cater for these staff movements. <i>Advice Note: The purpose of this condition to is minimise the number of vehicles arriving at and leaving the site, especially during hours of darkness, to avoid transport associated effects on the Westland Petrel. Some flexibility in the configuration of these vehicles is required, because it is not possible to know where future staff will live, and how this may change. It is intended that the company will run 1 to 2 minivan vehicles in each direction per shift, as required to ensure no staff are arriving by private passenger vehicle for shift work.</i>
15.4	<p>Notwithstanding Condition 15.3, light vehicle movements must not exceed 140 light vehicles per day.</p> <p><i>Advice Note: For the purpose of the Transport conditions, a movement is defined as being a movement either to or from the site. A truck and trailer unit entering and leaving the site is therefore 2 movements.</i></p>
15.5	<p>A record of light and heavy vehicle movements must be kept by the Consent Holder and supplied to the Consent Authority on request monthly.</p>
15.6	<p>Any signage adjacent to or directed towards State Highway 6 must comply with the Waka Kotahi NZ Transport Agency policy manual for Third Party Advertising Signs (2022) and the Grey District Plan rules.</p> <p><i>Advice Note: Signage will not be permitted within the state highway corridor, unless approved by Waka Kotahi.</i></p>

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15.7	<p>Truck movements must not leave or arrive at the site between the hours of 0800-0900 and 14:45-1600 each school day that the Barrytown Primary School bus is operating.</p> <p><i>Advice Note: For the purpose of the Transport conditions, a movement is defined as being a movement either to or from the site. A truck and trailer unit entering and leaving the site is therefore 2 movements.</i></p> <p><i>Advice Note: School term dates can be found on the Ministry of Education’s website, however exact dates each school operate will vary and should be confirmed with the Barrytown School directly.</i></p>
15.8	<p>Northbound trucks must communicate with other trucks within the HMC fleet prior to the <u>passing bay/pull over bay immediately 925m</u> north of Nine Mile Creek, and must pull over and wait at the passing bay if there is a southbound truck approaching the tight road geometry section from Twelve Mile Bluff to the south side of Ten Mile Creek, and not progress further until the southbound truck has cleared the area.</p> <p><u>Trucks shall not stop on accessways beside or opposite either residential entrances or intersections, including but not limited to that immediately north of Nine Mile bridge.</u></p>
15.9	<p>The Consent Holder must conduct transport activities in general accordance a Transport Management Plan. The objective of the Transport Management Plan is to ensure all drivers operating vehicles associated with the mining activity demonstrate considerate and safe driver behaviour to:</p> <ol style="list-style-type: none"> contribute to the safe and efficient operation of the road transport network ; avoid adverse effects on wildlife along the trucking route; avoid adverse effects on pedestrian and cycle safety along the trucking route. <p><i>Advice Note: All Management Plans are required to adhere to the requirements of Condition 6.0.</i></p>
15.10	<p>The Transport Management Plan must include:</p> <ol style="list-style-type: none"> A method of reporting <u>and responding to</u> encounters <u>(including near misses, injuries and fatalities)</u> with the Westland Petrel and other <u>indigenous</u> wildlife; A method of reporting crashes involving a vehicle associated with the activity and any other road user and road defects, to the Consent Authority and the relevant Road Controlling Authority (where this is not the Consent Authority); Hours of operation of various vehicle types to avoid adverse noise and traffic safety effects as dictated in the conditions of consent; Procedures to avoid heavy vehicles <u>leaving or arriving at the site/travelling on the school bus route</u> between the hours of 0800-0900 and 14:45-1600 each school day that the Barrytown Primary School bus is operating, including safe locations to wait on SH6 during these times, if required; A method for trucks to <u>display/carry</u> clear identification and a phone number for the Consent Holder or haulage company, for the purpose of enabling other road users to report driver behaviour to the Consent Holder. If the identification and phone number is for the haulage company, a process to ensure that any complaints are reported to the Consent Holder within 48 hours. A method for the Consent Holder to record, investigate and advise truck and staff transport service drivers of any complaints received about driver behaviour, and <u>action taken</u> to provide this record to the Consent Authority <u>in accordance with the procedure for complaints in condition 10.0 when requested.</u> <u>A description of “locations of care” where drivers will need to take additional care, including but not limited to areas of tight road geometry, areas of greater pedestrian and cyclist concentration, and areas near schools.</u> g. Methods to minimise amenity disturbance for residents, including but not limited to locations where use of <u>air-Jacob brakes and C-brakes</u> must be avoided, including the Cargill Road intersection, <u>9 Mile and 12 Mile residential areas.</u> <u>The TMP must clearly, eg by GPS and reference to landmarks, identify laybys where it is feasible for truck drivers to pull off and let faster traffic through and/or communicate ahead to the fleet, using a means of radio contact which has been trialed and documented.</u>

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	<p><u>i.j.</u> A method of real time communication between truck drivers to avoid trucks passing each other at areas of tight geometry, and to alert other truck drivers to the presence of a cyclist, pedestrian (<u>e.g. students</u>) or other emerging safety hazard to minimise risks to other road users.</p> <p><u>j.k.</u> Staff induction procedures, including regular briefing (eg 'Toolbox Talks')<u>formal training</u> for drivers regarding the requirements of the TMP, considerate and safe driving behaviour around pedestrians and cyclists, identified locations of care, being alert for tourist drivers, and any other pertinent requirements regarding driver behaviour.</p> <p><u>k.l.</u> A requirement for truck drivers to read and agree to any aspects of the TMP within their control as drivers.</p> <p><u>m.</u> A requirement to regularly report to the West Coast Regional Land Transport Committee on any particular areas of concern with State Highway 6 (including those raised by the CLG);</p> <p><u>l.n.</u> <u>A requirement to report road surface defects and maintenance issues with State Highway 6 to NZTA;</u></p> <p><u>m.o.</u> Procedures to notify drivers when alterations to the TMP have occurred.</p>
15.11	<p>a. In the event that any vehicle associated with the mining operation is involved in a crash, the Consent Holder must notify the Consent Authority and engage a suitably qualified transport engineer to review the Transport Management Plan within 5 working days to identify any further mitigation measures that can be implemented to avoid similar incidents occurring again.</p> <p>b. The review and recommendations of the transport engineer must be provided to the Consent Authority within 10 working days of the incident occurring, and the management plan amendment process in Condition 6.0 must be followed.</p>
15.12	<p>a. The Consent Holder must review the Transport Management Plan once every 12 months, and within 5 working days of any near miss with a pedestrian, cyclist or other vehicle, or <u>indigenous</u> wildlife incident, and communicate any updates to staff.</p> <p>b. The review must be provided to the Consent Authority within 10 working days of the incident occurring, and the management plan amendment process in Condition 6.0 must be followed.</p>
15.13	<p>a. The Consent Holder must ensure that GPS Monitoring Systems are installed on the trucks carrying Heavy Mineral Concentrate to facilitate the investigation of complaints about driver behaviour, near misses with a pedestrian, cyclist or other vehicle, wildlife encounters, accidents and compliance with Conditions 15.1, 15.2, 15.5 and 15.7.</p> <p>b. GPS Monitoring Records must be supplied to the Consent Authority on request.</p>
16.0 Lighting	
16.1	Lighting must not exceed 2.0 lux spill (horizontal and vertical) of light onto any adjoining property, measured at any point more than 2m inside the boundary of the adjoining property or the closest window on the adjoining property whichever is the closest.
16.2	<p>Without limiting Condition 16.3, lighting must be designed, installed and operated in a manner which adheres to the Australian Government's National Light Pollution Guidelines for Wildlife January 2023 (or subsequent revision); including but not limited to:</p> <p>a. Utilising the Seabird Light Mitigation Toolbox in Appendix G – Seabirds (Schedule 4);</p> <p>b. All fixed lighting must be directed downward, shielded to avoid light spill, with a lighting temperature of no more than 2000K, and be filtered to reduce blue and violet wavelengths;</p> <p>c. Lights must only illuminate the object or area intended;</p> <p>d. Fixed lights must be mounted as close to the ground as practicable;</p> <p>e. External lighting must be minimised on the seaward side of buildings to minimise light spill toward the coast;</p> <p>f. External lighting must use the lowest intensity lighting possible, while ensuring compliance with workplace health and safety requirements;</p> <p>g. External lighting must be equipped with light minimising technology, including motion sensors or timers;</p> <p>h. Any windows must have blackout blinds fitted and those blinds must be closed during the hours of darkness to avoid any light spill from internal lighting within buildings;</p> <p><u>i.</u> The consent holder must ensure mobile lighting within the mine site adheres to the above principles, including dipping headlights of vehicles operating on site.</p>

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	<u>i.j. Any external doors in the building housing the process plant must be designed to prevent light escaping from the building.</u>
16.3	<p>The consent holder must manage lighting on the site in accordance with a Lighting Management Plan (LMP), which has been prepared by a suitably qualified ecologist in consultation with a suitably qualified lighting professional, and provided to the Department of Conservation for comment prior to certification by the Consent Authority. The objectives of the LMP are:</p> <ol style="list-style-type: none"> To ensure adverse effects of artificial lighting on wildlife (specifically the Westland Petrel) are avoided. To ensure fixed and mobile artificial lighting is managed in accordance with best-practice guidelines¹. To enable ongoing use of the site and its environs by the birds which currently occur in the area. <p><i>Advice Note: All Management Plans are required to adhere to the requirements of Condition 6.0.</i></p>
16.4	<p>As a minimum, the LMP must include:</p> <ol style="list-style-type: none"> A description of the wildlife that may be present on or around the site that may be sensitive to lighting; A description of the potential lighting effects on identified wildlife; Specific lighting management actions to protect identified wildlife; Reporting requirements to enable the Consent Authority to confirm compliance with associated consent conditions; Best practice lighting design principles to avoid lighting effects on wildlife; A description of the proposed exterior and mobile lighting associated with the activity (including vehicle movements to and from the site); Auditing requirements to ensure that lighting is installed and operated appropriately.
16.5	<ol style="list-style-type: none"> The Consent Holder must provide a detailed lighting plan to the Consent Authority and the Department of Conservation at least 20 working days prior to the commissioning of the processing plant, with an accompanying design statement, prepared by a suitably qualified lighting professional, confirming compliance with conditions 16.1 and 16.2. If the Department of Conservation considers that the detailed lighting plan does not comply with Condition 16.2, the Consent Holder must consider any reasons and recommendations provided by the Department of Conservation, amend the detailed lighting plan accordingly, and resubmit the plan to the Consent Authority and the Department of Conservation.
16.6	<ol style="list-style-type: none"> Within 10 working days of the heavy minerals concentration processing plant being commissioned, the Consent Holder must engage a suitably qualified lighting professional to carry out a lighting audit, to confirm that the lighting has been installed in accordance with the detailed lighting plan required by Condition 16.3. If the audit concludes that compliance with Conditions 16.1 and 16.2 is not achieved, the Consent Holder must instruct the auditor to determine what alterations are required to the external lighting to achieve compliance. The Consent Holder must undertake any alterations recommended by the auditor within 5 working days of the receipt of those recommendations. The audit report and the details of any lighting alterations intended or undertaken must be submitted to the Consent Authority and the Department of Conservation within 10 working days of receipt of the audit.
17.0 Noise	
17.1	<p>The consent holder must ensure that all operational mining and processing activities on the site do not exceed the following noise limits at or within the notional boundary of any dwelling existing at the date consent is granted on any other site except 3261 Coast Road:</p> <ol style="list-style-type: none"> Daytime (0700-2200): 55 dB L_{Aeq}(15 min) Night-time (2200-0700): 45 dB L_{Aeq}(15 min) and 75 dB L_{AFmax}

¹ National Light Pollution Guidelines for Wildlife (Australian Government, 2023).

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	<p>when measured and assessed in accordance with the latest New Zealand noise standards: NZS 6801:2008 “Acoustics – Measurement of environmental sound” and NZS 6802:2008 “Acoustics - Environmental Noise”.</p> <p><i>Advice Note: ‘Notional boundary’ is defined as a line 20 metres from any side of a dwelling or the legal boundary where this is closer to the dwelling.</i></p>
17.2	<p>Construction activities must be conducted in accordance with NZS 6803: 1999 “Acoustics - Construction Noise” and must comply with the “typical duration” noise limits contained within Table 2 of that Standard.</p> <p><i>Advice Note: Construction activities include the formation of access roads, bunds, dams and final land contouring and planting, and the construction of the processing plant and load out area. For the avoidance of doubt, overburden stripping and topsoil removal associated with mining operations must not be considered construction activities.</i></p>
17.3	<p>a. The consent holder must prepare a Noise Management Plan (NMP) to control day-to-day noise emissions from the site. This NMP must be submitted to the Consent Authority for certification 10 working days prior to commencement of the commencement of on-site works.</p> <p>b. As a minimum, the NMP must include:</p> <ol style="list-style-type: none"> i. The person responsible for implementing the NMP ii. Applicable noise conditions relating to noise iii. Training of staff relating to how to minimise noise and vibration iv. Maintenance schedule for site access road surfaces to avoid excessive noise and vibration v. Mining and HMC processing risk analysis for noise generation vi. Method for handling noise complaints vii. Noise monitoring methodology, including frequency, duration, and location. <p><i>Advice Note: All Management Plans are required to adhere to the requirements of Condition 6.0.</i></p>
17.4	<p><u>a.</u> The Consent Holder must engage a suitability qualified and experienced independent person to undertake compliance noise monitoring:</p> <p style="padding-left: 20px;"><u>- at two periods of high noise during construction activities (i.e. access road construction)</u></p> <p style="padding-left: 20px;">- within 30 days of mining or processing operations occurring and thereafter at 3 monthly intervals for the first 12 months of the mining operation.</p> <p>Thereafter, compliance noise monitoring must be undertaken on an annual basis.</p> <p>a-b. All noise monitoring must be submitted to the Consent Authority within two weeks of completion of each monitoring event.</p> <p>b-c. If compliance with Condition 17.1 is not achieved, the Consent Holder must:</p> <ol style="list-style-type: none"> i. investigate the reasons for non-compliance and within 20 working days implement additional mitigation measures to achieve compliance with those noise limits. ii. submit a report to the Consent Authority within 30 working days of the relevant monitoring event detailing the additional mitigation measures that were implemented. <p>d. If additional mitigation measures are implemented, the Consent Holder must engage a suitability qualified and experienced independent person to undertake further compliance noise monitoring within 10 working days of any mitigation measure being implemented to determine the effectiveness of that mitigation.</p> <p><u>e.</u> If compliance with Condition 17.1 is still not achieved the Consent Holder must repeat the requirements of c. and d. until compliance is achieved.</p>
17.5	<p>Mining operations must utilise the best practicable option to minimise noise at all times. This includes but is not limited to the replacement of worn machinery parts, review of operational practices, maintenance of vehicle and generator mufflers, lubrication of moving machinery to avoid squeaks and squeals, access road maintenance, utilising sound insulation covers, and appropriate operation of all equipment.</p>
17.6	<p>a. Vehicles or equipment must not be fitted with tonal reversing alarms.</p> <p>b. Where reversing alarms are required, broadband reversing alarms must be used.</p>

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18.0 Avian Management	
18.1	Mining, topsoil and overburden stripping and rehabilitation activities must not take place within 100m of the site's northern boundary, Canoe Creek Lagoon (as delineated in Condition 7.1) or any wetland between the months of August and December each year.
18.2	<p>a. If a nest of a threatened or at risk bird species is detected within an area to be mined during the breeding detection surveys, the nest must be protected by establishing, physically marking and maintaining a 50m buffer between the nest and any works so as to minimise the risk of nest abandonment. All vehicles, machinery and people must be excluded from the area and local pest control implemented until either the nest is abandoned or any chicks fledge in accordance with the management set out in the Avian Management Plan (AMP).</p> <p>b. If a nest is abandoned, the AMP must be reviewed by a suitably qualified ecologist to investigate the reasons for abandonment and if there are any additional measures that should be undertaken to protect nests in future.</p> <p><i>Advice Note: Conditions relating to the AMP are Conditions 18.11 to 18.14.</i></p>
18.3	Staff, contractors and visitors associated with the mining activity must not be permitted to bring dogs to the site at any time, except for conservation purposes.
18.4	The Consent Holder must establish a ring of traps and/or bait stations targeting rats and mustelids placed around the perimeter of the property and the coastal lagoon <u>Canoe Creek Lagoon</u> in accordance with the AMP. The network of traps must be installed prior to mining commencing and be serviced as required.
18.5	<p>a. The Consent Holder must deploy wildlife cameras around the coastal perimeter of the mine disturbance area and other suitable locations as required to monitor for Kororā, and around the processing plant area and the access road to monitor for <i>Procellaria westlandica</i> (Westland Petrel).</p> <p>b. The cameras must be equipped with motion sensors, and be installed by a suitably qualified ecologist.</p> <p>c. 10 cameras to detect Kororā must be placed at suitable locations and set to record for at least 10 nights every month, with the location to be determined by the ecologist.</p> <p>d. 10 Cameras to detect Westland Petrel must be installed around the processing plant and the length of the access road, operating during the hours of darkness each night, with the location to be determined by the ecologist.</p> <p>e. Imagery must be reviewed daily for wildlife interactions by a staff member; and Imagery must be reviewed for wildlife interactions at least weekly by a suitably qualified ecologist, retained for a minimum of 6 months, and be made available to the Consent Authority or the Department of Conservation on request.</p> <p>e.f. <u>Monitoring for Westland Petrel shall also include nightly on-ground searches over the operational areas of the site for the first three months of operation, and throughout the fledging season of 14 November to 14 January for the first two seasons each year, and then as required as detailed in the AMP.</u></p>
18.6	<p>a. Any interactions with sightings of Kororā wildlife and Westland Petrel recorded as a result of the monitoring requirements in the AMP including the wildlife cameras required by Condition 18.5, must be reported to the Consent Authority and the Department of Conservation on a weekly basis from 1 November to 31 January each year, and on a monthly basis from 1 February to 31 October.</p> <p>b. Footage must be made available to the Department of Conservation and the consenting authority as set out in Condition 18.5.</p>
18.7	<p>a. If a Westland Petrel interaction is detected, the Consent Holder must follow the procedure set out in the AMP including contacting the Department of Conservation as soon as possible and transfer of any birds found alive to their care as soon as the Department can take them.</p> <p>b. Within 20 workings days of the interaction the Consent Holder must have the AMP and Lighting Management Plans reviewed by a suitably qualified ecologist and a suitably qualified lighting professional in consultation with the Department of Conservation to determine what additional measures can be taken to avoid any further interactions with Westland Petrel.</p>

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	<p>c. <u>The additional measures identified in 18.7(b) must take account of the findings of any previous reviews; and</u></p> <p>d. <u>The Consent Authority must be advised of any recommendations, and these recommendations must be implemented as soon as practicable.</u></p> <p><i>Advice note: An interaction is defined as the presence of a <u>grounded</u> bird or birds within <u>the Site, close proximity to the mining infrastructure, including buildings, vehicles and plant where they are or could be put at risk.</u></i></p>
18.8	<p>a. If two <u>or more</u> Westland Petrel interactions are detected <u>within any three month period</u>a four-week period, all activities during the hours of darkness must cease until a further review of the AMP and Lighting Management Plan by a suitably qualified ecologist and a suitably qualified lighting professional has been carried out, in consultation with the Department of Conservation, to determine the possible causes and additional mitigation measures that can be employed to avoid further interactions with Westland Petrel <u>(such review to include consideration of changes to the operating hours specified in conditions 12.1 and 12.2 and the lighting requirements in conditions 16.1 and 16.2).</u></p> <p>b. <u>Mining and processing activities may only recommence following the completion of investigations that demonstrates, to the satisfaction of Grey District Council:</u></p> <p style="padding-left: 40px;">i) <u>that the interaction was not likely to have been caused by the consented activities; or</u></p> <p style="padding-left: 40px;">ii) <u>that changes to night time operations are implemented to ensure that further interactions with Westland Petrel are avoided</u>(such review to include consideration of changes to the operating hours specified in conditions 12.1 and 12.2 and the lighting requirements in conditions 16.1 and 16.2); <u>and certification of revisions to the AMP and Lighting Management Plan; and/or variation of conditions 12.1, 12.2, 16.1 and 16.2) are completed in accordance with the outcomes of the review in clause a above.</u></p> <p>b.c. and the implementation of any further mitigation measures recommended by the ecologist or suitably qualified lighting professional.</p> <p><i>Advice Note: Any amendment to the AMP will be required to comply with the certification process under Condition 6.0, and any Wildlife Act Authority requirements.</i></p>
18.9	<p>a. The Consent Holder must engage a suitably qualified <u>ecologist or ornithologist expert</u> to carry out annual penguin surveys <u>in the period 1 August – 30 November to detect the presence of Kororā. The survey area is that land within 500m of the mining disturbance area including Pakiroa beach. A certified conservation dog will be used where practicable.</u>of Pakiroa beach and the mine area using a certified conservation dog within 500m of the mining disturbance area to detect the presence of Kororā.</p> <p>b. The first survey must be conducted within the first 12 months of the commencement date of the resource consent, and at least two annual surveys must be completed before mining commences.</p> <p>c. If penguins or burrows are detected the location must be mapped and the Consent Holder must undertake the following management actions:</p> <p style="padding-left: 40px;">i. If penguins are detected using the mining area to access other habitats, any existing access ways must be maintained and/or works affecting that accessway must be completed in the period April – June (outside the breeding and moult period).</p> <p style="padding-left: 40px;">ii. Any potential penguin burrows identified must be investigated, including use of a burrowscope, to determine whether Kororā are using them.</p> <p style="padding-left: 40px;">iii. Where any penguin burrows are compromised by mining (i.e. there are direct effects), replacement artificial burrows or nest boxes must be installed at a rate of 2:1. Any additional nest boxes provided must be located within the vegetated coastal foreshore habitat associated with any identified accessways.</p> <p style="padding-left: 40px;">iv. If penguins are found within the mine site, a specific Penguin Management Plan must be developed by a suitably qualified and experienced ecologist on behalf of the applicant in consultation with the West Coast Penguin Trust. The West Coast Penguin Trust must be</p>

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	<p>reimbursed for reasonable time and expenses associated with consultation on the Penguin Management Plan.</p> <p>v. Any deceased penguins found on or near the mine site must be provided to the Department of Conservation for necropsy.</p>
18.10	<p><u>a. If</u></p> <p>i. <u>Kororā are detected within 500m of the mine disturbance area; and</u> ii. <u>no Kororā are detected within the mine disturbance area; and</u> iii. <u>no access tracks are detected beyond the coastal margin in the pre-mining surveys required by Condition 18.9.</u></p> <p>The Consent Holder must erect a penguin fence along the length of the Canoe Creek Lagoon boundary, from Collins Creek to the northern boundary of the mine disturbance area, on the landward side of the the coastal lagoon <u>Canoe Creek Lagoon</u> planting so as to exclude Kororā from entering the mine disturbance area.:</p> <p>i. if Kororā are detected within 500m of the mine disturbance area; and ii. no Kororā are detected within the mine disturbance area; and iii. no access tracks are detected beyond the coastal margin in the pre-mining surveys required by Condition 18.9.</p> <p><u>a-b.</u> The penguin fence must be comprised of <u>dark grey or black</u> geosynthetic mesh to a height of at least 900mm above ground and buried at least 300mm below the ground and with posts no greater than 4m apart.</p> <p><u>b-c.</u> The fence installation must be certified as preventing the ingress of Korora to the mine disturbance area by a suitably qualified ecologist.</p> <p><u>e-d.</u> The certification must be supplied to the Consent Authority prior to mining commencing. <i>Advice Note: The requirement to erect a penguin fence only applies if Kororā are detected within 500m proximity of the mine disturbance area but are not within the site. If no Kororā are detected near the mine disturbance area, a penguin fence is deemed unnecessary.</i></p>
18.11	<p>The Consent Holder must conduct activities on site in general accordance with an Avian Management Plan (AMP) prepared by a suitably qualified ecologist or ornithologist, <u>in consultation with Department of Conservation</u>. The objectives of the AMP are:</p> <p>a. To ensure adverse effects on the threatened and at risk birds present in the vicinity of the site and any other threatened and at risk species detected by subsequent monitoring are avoided.</p> <p>b. To ensure significant adverse effects on the rushland, flaxland and other important bird habitats adjoining the mining site including Canoe Creek Lagoon, Rusty Pond and the coastal margin are avoided.</p> <p>c. To ensure safe ongoing use of the site and its environs by the birds which currently occur in the area.</p> <p><i>Advice Note: All Management Plans are required to adhere to the requirements of Condition 6.0.</i> <i>Advice Note: Threatened or at-risk bird species refers to the Conservation Status according to the Department of Conservation's Threatened Classification System</i></p>
18.12	<p>The AMP must detail:</p> <p>a. A description of the site and surrounding avian habitats</p> <p>b. A description of the threatened and at risk indigenous birds likely to be present in these habitats and which species require specific mitigation measures</p> <p>c. A description of the mitigation measures that are required to be implemented to avoid effects on threatened and at risk indigenous birds, <u>which may include the use of a specially trained Westland Petrel detection dog (if available)</u>-. d. A procedure for managing and responding to Westland Petrel or other wildlife being found on the mine site;</p> <p>e. A description of the monitoring requirements to assess the effectiveness of the AMP</p>
18.13	<p>The AMP must be reviewed annually by the Consent Holder. Any proposed amendments to the AMP must be submitted to Council for certification and must:</p> <p>a. achieve the AMP's objectives including avoiding effects on any threatened or at-risk indigenous bird species (including specifically the Westland Petrel);</p> <p>b. comply with the conditions of this resource consent;</p>

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	<p>c. have been reviewed by an appropriately qualified and experienced ecologist or ornithologist;</p> <p>d. have been provided in advance to Te Runanga o Ngāti Waewae and the Buller/Kawatiri office of the Department of Conservation for comment (and feedback received collated and submitted with the amendments to be provided to Council); and</p> <p>e. follow the certification process set out in Condition 6.0.</p> <p><i>Advice Note: any disturbance or relocation of avifauna may require a permit from the Department of Conservation under the Wildlife Act (1953).</i></p>
18.14	<p>a. The Consent Holder must engage a suitably qualified expert(s) to undertake all monitoring of avian species from the commencement of consent until at least one year following the cessation of mining activities on this site.</p> <p>b. The monitoring must be carried out in accordance with the monitoring requirements in the AMP.</p>
18.15	<p>An annual bird management report must be provided to the Consent Authority, Te Runanga o Ngāti Waewae, the Buller/Kawatiri office of the Department of Conservation in Westport, the West Coast Penguin Trust, Paparoa Wildlife Trust, the Community Liaison Group and Waka Kotahi NZ Transport Agency Environment and Sustainability Team (via:environment@nzta.govt.nz), no later than 30 June each year. The report must include the following matters:</p> <p>a. The timing and duration of any mining within 100m of the coastal lagoon Canoe Creek Lagoon vegetation and SNA Site PUN-W034;</p> <p>b. Results of seasonal bird surveys at the site;</p> <p>c. Timing of nest detection surveys and observations relating to nesting or other behaviours observed within the area to be mined;</p> <p>d. Efforts to deter any attempts at nesting within the area to be mined and the outcome of those efforts;</p> <p>e. Species attempting to nest within the area to be mined (including threatened and at risk species);</p> <p>f. Date of first nesting attempts (if any) for threatened and at risk species within the area to be mined;</p> <p>g. Number and location of nesting attempts by threatened and at risk species within the area to be mined;</p> <p>h. Date any pest control commenced, the location of traps and bait stations, the number of pest captures, the amount of bait consumed and any relevant observations;</p> <p>i. Outcome of individual nesting attempts by threatened and at risk species within the area to be mined;</p> <p>j. Results of annual kororā surveys on Pakiroa Beach, the implications for mine operations and any management actions undertaken;</p> <p>k. Number and location of any grounded Westland Petrel and any birds found dead on site;</p> <p>l. Management undertaken and the outcome for any grounded Westland Petrel collected;</p> <p>m. Number, dates and location of any mining operation or MHC haulage vehicle strikes or near misses involving the Westland Petrel or Korora;</p> <p>n. Autopsy outcomes for any dead Westland Petrel or Kororā collected;;</p> <p>o. The findings of any lighting audits undertaken during the year and steps taken to resolve any issues identified;</p> <p>p. A summary of any revisions made to the AMP and the reasons for the changes;</p> <p>q. The date and duration of any operational shut-downs; and</p> <p>r. The results of the quarterly walk-through surveys of birds using the lagoon area.</p>
19.0 Planting	
19.1	<p>a. As soon as practicable following the commencement date of this consent, and prior to the commencement of mining, the Consent Holder must construct bunds and complete planting and fencing in general accordance with the “Landscape Mitigation Planting Plans” prepared by Glasson Huxtable Landscape Architects dated January (Schedule 5); including:</p> <p>i. a 1.8m high, 13.0m wide permanent bund with planting along the bund’s crest and eastern side, parallel to State Highway 6 for visual screening;</p>

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	<ul style="list-style-type: none"> ii. a <u>156.0m</u> wide planting strip with fencing adjacent to the eastal lagoon<u>Canoe Creek Lagoon</u> edge; iii. a 10.0m wide band of planting along the open coastline with fencing in the south-west corner; iv. planting of the western and northern edges of the Clean Water Facility, between the <u>Canoe Creek Lagoon</u> eastal lagoon and Clean Water Facility ponds, v. a minimum 3.0m wide strip of planting with fencing along the northern bank of Collins Creek, and the southern bank of Collins Creek (except where the Creek is directly adjacent to the southern site boundary or riparian planting already exists); vi. a 3.0m wide strip of planting with fencing along the southern bank of the northern drain; vii. a planted strip along the north-eastern boundary of the site and adjacent to the neighbouring property at 3323 Coast Road; and- viii. <u>A minimum 10.0m wide strip of planting on the northern boundary from the eastern extent of Rusty Pond to the western extent of the Mine Disturbance Area.</u> <p>b. All planting must be fenced to exclude livestock from the planted areas. Temporary fencing may be erected around the planting in Condition a(iv) for the duration of mining, and stock must be permanently excluded when the additional planting is undertaken under Condition 19.4.</p>
19.2	<p>As soon as practicable following the construction of the temporary stockpile near the processing plant, the Consent Holder must complete planting of the stockpile area as shown in the “Landscape Mitigation Planting Plans” prepared by Glasson Huxtable Landscape Architects dated January 2024 (Schedule 5).</p> <p><i>Advice Note: Planting may not be able to be undertaken during dry periods of the year, and as soon as practicable may be the start of the planting season following the stockpile construction. Disturbed area and erosion and sediment control practices will require this area to be stabilised if not planted immediately.</i></p>
19.3	<p>Within 12 months of (but not prior to) the completion of mining, the processing plant and buildings must be removed with the exception of the Heavy Mineral Concentrate Storage Shed, and the bund areas rehabilitated into pasture.</p>
19.4	<p>No later than 12 months after the completion of mining, the remaining areas of the proposed wetland area (Clean Water Facility and Future Wetland Extension) shown in the “Landscape Mitigation Planting Plans” prepared by Glasson Huxtable Landscape Architects dated January 2024 (Schedule 5) must be constructed and planted.</p>
19.5	<p>The Consent Holder must source plants required for the planting and wetland area from within the Punakaiki Ecological District or North Westland Ecological Region in order of preference. Where this is unable to be achieved, the Consent Holder must notify the Consent Authority and work with the Consent Authority and a suitably qualified practitioner to determine an appropriate alternative plant source.</p>
19.6	<p>a. The wetland construction, (<i>Clean Water Facility and Future Wetland Extension</i>), eastal lagoon<u>Canoe Creek Lagoon</u> edge and Collins Creek and Northern Boundary Drain riparian planting must be undertaken and managed in accordance with a Wetland Construction and Riparian Planting Plan (WRRP) prepared by a suitably qualified ecologist. The WRRP must distinguish between those areas to be planted prior to mining, and areas to be planted at the completion of mining.</p> <p>b. The objectives of the WRRP are:</p> <ul style="list-style-type: none"> i. To create or enhance habitat for indigenous species along the Site’s existing coastal edge and within Canoe Creek Lagoon; ii. Encouraging natural regeneration of indigenous species by fencing off planted areas and having effective weed and animal pest management; iii. To vegetate the constructed wetland in the Clean Water Facility, both banks of Collins Creek (except where Collins Creek is directly adjacent to the southern site boundary or riparian planting already exists), the Northern Drain, and the coastal planting with <u>ecologically appropriateeco-sourced</u> species and restore indigenous vegetation to at least 50% cover at 1m height as demonstrated in plots across the planted areas; iv. Manage exotic pest plants (particularly woody weeds identified in this plan) over the planted areas to a level of less than 5% cover as demonstrated by monitoring plots

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	<p>across the planted areas;</p> <p>v. Improve terrestrial and wetland habitat quality and create corridors for wildlife movement;</p> <p>vi. Encourage natural ecosystem processes including the regeneration and dispersal of indigenous fauna and flora;</p> <p>vii. Improve water quality and aquatic habitats in Collins Creek and the Northern Drain.</p> <p><i>Advice Note: All Management Plans are required to adhere to the requirements of Condition 6.0.</i></p>
19.7	<p>The WRRP must include:</p> <p>a. A description of the site;</p> <p>b. A description of the riparian planting required by Conditions 19.1;</p> <p>c. A final wetland design that, when the planting required in Condition 19.1(a)(iv) and 19.4 are combined, achieves an area of 1.9ha with the following habitats:</p> <p>i. An island of 2,000m²</p> <p>ii. At least 5,000m² open water up to 2m deep</p> <p>iii. At least 5,000m² of shallow water (0.5m deep)</p> <p>iv. At least 5,000m² of water 0.5 m – 2 m deep planted primarily in raupō</p> <p>v. At least 1,000m² of wet edge planting comprised primarily of rushes and sedges (<i>Juncus</i> spp., <i>Carex</i> spp.) and shrubs such as mikimiki (<i>Coprosma propinqua</i>)</p> <p>vi. A plant density of no less than 5,000 stems per hectare.</p> <p>d. Wetland construction methodology, including details of the pre-mining and post-mining areas of the constructed wetland;</p> <p>e. Site preparation requirements for the wetland and riparian planting;</p> <p>f. Planting methodology for planting wetland, riparian and coastal areas;</p> <p>g. Monitoring and maintenance requirements to ensure the survival and ecological functioning of the constructed wetland, including pest and weed control to achieve Condition 19.8;</p> <p>h. A timeline for the planting which aligns with conditions 19.1 to 19.4.</p>
19.8	<p>All planting must be maintained for the duration of the consent. Any plants that are dead, diseased, fail to thrive or are damaged, including by a storm event, must be replaced with a same or similar eco-sourced plant species within the following planting season.</p>
19.9	<p>Notwithstanding Conditions 19.1-19.8 above, the plant species <i>Metrosideros umbellata</i> (southern rata), and <i>Laurelia novae-zelandiae</i> (pukatea) must not be used on site.</p>
19.10	<p>The existing mature flax located adjacent to the stock stand-off pad which is located in the northeastern part of the Site must be retained for the duration of mining activity for visual screening purposes.</p>
19.11	<p>At the completion of mining and before the expiry of this consent, the consent holder must arrange for a section 108(2)(d) Resource Management Act 1991 covenant in favour of Grey District Council which is to be registered on the Certificate of Title 447182 (RS 2847) affecting the area shown as Proposed Covenant Area identified on the Planting Covenant Area Plan enclosed as Schedule 6. The covenant must provide for the following:</p> <p>a. In respect of the Proposed Covenant Area (2.88ha) identified on the Planting Covenant Area plan prepared by Tai Poutini Resources dated 15 March 2024, the area must be fenced to exclude livestock, and no pastoral farming must occur within the wetland area.</p>
20.0	Water supply
	<p>Sufficient water supply must be provided on the site in accordance with the NZ Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008.</p>
21.0 Accidental Discovery Protocol	
21.1	<p>In the event of any disturbance of Koiwi Tangata (human bones) or Taonga (artefacts, including pounamu) the Consent Holder must:</p> <p>a. Cease any further excavation within 50m of the disturbance for a period of at least 24 hours; and</p> <p>b. Immediately advise Consent Authority of the disturbance; and</p> <p>c. Immediately advise the Te Rūnanga O Ngāti Waewae, or their authorised representatives of the disturbance; and</p> <p>d. Immediately advise Heritage New Zealand Pouhere Taonga and the New Zealand Police.</p>

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21.2	If the Consent Holder identifies any archaeological discoveries or potential areas or sites of historic value, the Consent Holder must immediately notify the Consent Authority and a representative of Heritage New Zealand Pouhere Taonga.
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General Conditions to Apply to all WCRC Consents	
22.0 Method of Mining	
22.1	The consent holder must only carry out mining activities within the mining area shown on the attached map titled "TiGa Consent Application" prepared by Tai Poutini Professional Services Ltd dated 18 January 2024 attached as Schedule 1.
22.2	The maximum combined surface area of un-rehabilitated disturbed land in the application area must not exceed 8.0 hectares <u>at any one time</u> .
22.3	The mining and associated activities under this consent must not cause or induce erosion or slope instability outside the application area.
22.4	Mining activities must not occur within 100m of the Canoe Creek Lagoon within the first 12 months of mining operations commencing.
23.0 Erosion and Sediment Control Plan	
23.1	The Consent Holder must operate in general accordance with the Erosion and Sediment Control Plan labelled 'Barrytown Mineral Sand Operation Erosion and Sediment Control Plan and Water Management' (ESCP) prepared by Ridley Dunphy Environmental Ltd, dated January 2024. The objectives of the ESCP are: <ul style="list-style-type: none"> a. To use established guidelines and practices to minimise sedimentation of waterbodies adjacent to the mining area; b. To assist with compliance with the water quality parameters in Condition 25.0.
23.2	A Site Specific Erosion and Sediment Control Plan (SSESCP) must be prepared and reviewed annually and submitted to the Consent Authority with the Annual Work Programme, reflecting the water management measures proposed for construction and mining for the following 12 months, and adhering to principles of the Erosion and Sediment Control Plan in Condition 23.1 above. The SSESCP must include: <ul style="list-style-type: none"> a. Location of the work; b. Contour information; c. Erosion and Sediment Controls (ESCs); d. Chemical treatment requirements, design and details; e. Internal catchment boundaries; f. Details of earthworks and ESC construction methods; g. Contingency measures; h. ESC design details; i. A programme for managing non-stabilised areas; j. The identification staff who will manage ESCs; k. The identification of staff who monitor compliance with consent conditions; l. A chain of responsibility for managing erosion and sediment control issues; and m. Methods and procedures for decommissioning ESCs (if applicable)
24.0 Water Management Plan	
24.1	The Consent Holder must ensure: <ul style="list-style-type: none"> a. Pre-mining median water levels in piezometers PZ-19, PZ-02, PZ-03, PZ-04 and PZ-05 are maintained when mining <u>(including abstracting water)</u> is occurring within 100m of the southern boundary b. Pre-mining median water levels in piezometers PZ-08, PZ-09, PZ-17, PZ-10, PZ-11 and PZ-12 are maintained when mining <u>(including abstracting water)</u> is occurring within 100m of the northern boundary c. Pre-mining median water levels in Canoe Creek Lagoon are maintained by ensuring pre-mining median water levels in PZ-06, PZ-07, and PZ-08 are maintained when mining <u>(including abstracting water)</u> is occurring within 100m of the western boundary d. The flow in Collins Creek is not reduced by more than 10% of the MALF as the creek approaches low flow condition. <p><i>Advice Note: Pre-mining median water levels are determined by calculating the median water level over the previous 12 months.</i></p> <p><i>Advice Note: Collins Creek MALF may be determined as follows:</i></p> <ul style="list-style-type: none"> a. <i>Estimated MALF as obtained from the New Zealand Rivers Maps, or</i>

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	Hydrologically calculated MALF from the Collins Creek Downstream measurement site following the acquisition of 5 complete hydrological years of verified data.
24.2	Mining must not commence until 12 months of groundwater monitoring data has been obtained in order to determine the pre-mining median water flows and levels required to be achieved under condition 24.1.
24.3	If water monitoring required by Condition 26.0 detects a reduction in groundwater levels or surface water flows below the thresholds in Condition 24.1, the Consent Holder must investigate the cause of the reduction to determine whether it is a result of mining, and immediately follow the actions set out in the MMP to rectify the change.
24.4	Mining must not occur within 100m of any surface water body or wetland until the Consent Holder has demonstrated through the provision of an Annual Hydrological and Water Quality Report, as required by Condition 26.5, that it can successfully employ management and mitigation methods outlined in the WMP and MMP to avoid adverse effects on surrounding water bodies and groundwater levels.
24.5	<p>a. The Consent Holder must establish all water management infrastructure, and operate the mine in general accordance with a Water Management Plan (WMP) and Monitoring and Mitigation Plan (MMP) prepared by a suitably qualified hydrologist. The objectives of the Water Management Plan are:</p> <ol style="list-style-type: none"> i. Pre-mining median water levels in boundary piezometers PZ-02, PZ-03, PZ-04, PZ-05, PZ-06, PZ-07, PZ-08, PZ-09, PZ-10, PZ-11, PZ-12, PZ-17, and PZ-19 must be maintained; ii. The rate of surface water inflow to Canoe Creek Lagoon from Collins Creek is not reduced by more than 10% of the Collins Creek Mean Annual Low Flow (MALF); iii. The flow in Collins Creek is not reduced by more than 10% of the MALF as the creek approaches low flow conditions; iv. Flow consistent with the drain's intermittent hydrological function and with dry weather flows is maintained in Northern Boundary Drain downstream of piezometer PZ-10 during periods when Collins Creek approaches within 120% of its MALF; v. The quality of water discharged to receiving waters will not cause adverse impacts on instream ecology or visual clarity; vi. The rate of take of water from Canoe Creek is not greater than 10% of the Creek's MALF; vii. Potential adverse ecological impacts associated with discharge of naturally present toxic metals and phosphorus in downgradient surface waters are avoided; viii. The pre-mining surface drainage patterns are restored such that the catchment areas for the Northern Boundary Drain and Canoe Creek Lagoon are not changed significantly; ix. The soil profile restoration, land contouring and surface drainage installed during mine rehabilitation does not increase the rate of groundwater drainage at the site. <p>b. The objectives of the Monitoring and Mitigation Plan are to:</p> <ol style="list-style-type: none"> i. Ensure that adverse effects on ground and surface water levels in adjacent water bodies are avoided, by employing monitoring and mitigation methods at or within the boundary of the mining disturbance area. ii. Ensure that potential water quality impacts associated with mining activities are identified as quickly and clearly as possible via monitoring. iii. Identify actions that will be undertaken to avoid, remedy or mitigate water quality effects through implementation of appropriate actions in a timely manner where required. <p><i>Advice Note: All Management Plans are required to adhere to the requirements of Condition 6.0.</i></p>
24.6	The WMP must include a description of the water management methods for the site, including: <ol style="list-style-type: none"> a. A description of the baseline monitoring and the receiving environment; b. The proposed mine disturbance area; c. A description of all site activities with the potential to cause hydrological impacts;

Appendix 1: Conditions of Consent (September 2024)

	<p>d. The water management actions that will be implemented to avoid hydrological effects, including:</p> <ul style="list-style-type: none"> i. The Canoe Creek water intake ii. The mine pit dewatering system iii. The water treatment train, including settling infrastructure, and other mitigation measures to achieve the required water quality outcomes in Condition 26.0 iv. The mine infiltration system to return treated mine water to groundwater and maintain groundwater levels, including infiltration trenches and/or injection wells as required v. The discharge from the water treatment ponds to surface waters vi. The design, construction and operation of the Canoe Creek infiltration basin <p>e. Operational water level and water quality monitoring requirements for the duration of the activity;</p> <p>f. Groundwater level thresholds and actions to be taken should these thresholds be exceeded;</p> <p>g. Surface water body flow threshold for Collins Creek and actions to be taken should that threshold be exceeded;</p> <p>h. Actions to be taken if water quality thresholds are exceeded;</p> <p>i. Final Rehabilitation requirements to avoid adverse hydrological impacts on waterbodies post-mining;</p> <p>j. Audit checklists;</p> <p>k. An organisational chart showing staff and contractor positions and responsibilities for plan implementation; and</p> <p>l. Relevant training and induction procedures and schedules.</p>															
24.7	<p>The WMP must be updated on an annual basis and must be submitted to the Consent Authority for certification in accordance with condition 6.0. The annual update is required to:</p> <ul style="list-style-type: none"> a. reflect the proposed mining operations for the following 12 months; and b. provide any additional or amended monitoring and mitigation requirements in order to reduce the potential for adverse hydrological and/or water quality effects. 															
Conditions to Apply to WCRC Discharge Permit																
25.0 Method of Discharge during mining activity																
25.1	<p>During mining, all contaminated stormwater and other contaminated site water within the site must be directed into the Mine Water Facility, and either recirculated for use in the processing plant, or discharged to the 'Central Drain' for further treatment in the Clean Water Facility in the northwestern corner of the application site.</p>															
25.2	<p>During mining, treated mine water is only permitted to be discharged directly to the drain beyond Pond 4, or to Collins Creek or the Northern Drain or to the Canoe Creek infiltration basin if:</p> <ul style="list-style-type: none"> a. metal and metalloid water quality parameters in Table A below are complied with at the Pond 4 monitoring sites (as required by Condition 26.2) and the sites shown in Schedule 8: Canoe Creek Lagoon, Collins Creek Downstream, N Boundary Drain and Canoe Creek Downstream. ; and b. the non-metal water quality parameters in Table B below are complied with at the Pond 4 monitoring sites (as required by Condition 26.2) and the locations defined in Table B; and c. in the circumstances of Condition 25.5 below. <p>Table A - metals and metalloids</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Threshold mg/L</th> <th>Dependency</th> </tr> </thead> <tbody> <tr> <td>Aluminium</td> <td>0.62^B</td> <td>Hardness, pH, Dissolved Organic Carbon</td> </tr> <tr> <td>Arsenic</td> <td>0.013</td> <td>As arsenic (V)</td> </tr> <tr> <td>Boron</td> <td>0.94</td> <td>NA</td> </tr> <tr> <td>Cadmium</td> <td>0.0002^D</td> <td>Hardness</td> </tr> </tbody> </table>	Parameter	Threshold mg/L	Dependency	Aluminium	0.62 ^B	Hardness, pH, Dissolved Organic Carbon	Arsenic	0.013	As arsenic (V)	Boron	0.94	NA	Cadmium	0.0002 ^D	Hardness
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Chromium	0.0033 ^D	Hardness, as chromium (III)
Copper	0.0039 ^E	Hardness, pH, Dissolved Organic Carbon
Iron	1.0	As total fraction
Lead	0.0034 ^D	Hardness
Manganese	1.9	NA
Nickel	0.011 ^D	Hardness
Zinc	0.008 ^D	Hardness

^A dissolved fraction, unless stated

^B at hardness = 25 g/m³, pH = 7.0, Dissolved Organic Carbon = 1.0 g/m³

^C 95%-ile trigger value

^D at hardness = 30 g/m³

^E at hardness = 25 g/m³, pH = 7.0, Dissolved Organic Carbon = 2.0 g/m³

Table B – Non-metals

Parameter	Threshold	Notes/Monitoring Location
Total Suspended Solids	20 mg/L	Applies to discharges to Collins Creek, Northern Boundary Drain or to the overland flow path to Canoe Creek Lagoon. Does not apply to the discharge from Canoe Creek infiltration basin. Monitoring locations are Canoe Creek Lagoon, Collins Creek Downstream, Northern Boundary Drain, shown in Schedule 8.
Turbidity	20 NTU	Applies to discharges to Collins Creek, Northern Boundary Drain or to the overland flow path to Canoe Creek Lagoon. Does not apply to the discharge from Canoe Creek infiltration basin. Monitoring locations are Canoe Creek Lagoon, Collins Creek Downstream, Northern Boundary Drain, shown in Schedule 8.
Visual clarity	Conspicuous visual change	In the receiving water bodies above based on visual inspection at the upstream and downstream monitoring sites (see advice note 3 below). Monitoring locations are Canoe Creek Lagoon Upstream, Canoe Creek Lagoon, Collins Creek Upstream, Collins Creek Downstream, Northern Boundary Drain Upstream, Northern Boundary Drain Downstream shown in Schedule 8.
	Relevant NPS-FM (2020) attribute state for visual clarity	No change in the attribute states of the receiving surface water bodies, as an annual median and a 95%-ile, versus the baseline states. See advice note 2 below. Monitoring locations are Canoe Creek Lagoon, Collins Creek Downstream, Northern Boundary Drain, Canoe Creek Downstream shown in Schedule 8.
Dissolved Reactive Phosphorus (DRP)	Relevant NPS-FM (2020) attribute state	No change in the attribute states of the receiving surface water bodies, as an annual median and a 95%-ile, versus the baseline states. See advice note 2 below. Monitoring locations are Canoe Creek Lagoon, Collins Creek Downstream, Northern Boundary Drain, Canoe Creek downstream shown in Schedule 8.

Advice Notes:

a. *Water quality monitoring conditions to establish the ability to discharge under this condition are contained in Condition 26.0 below.*

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	<p>b. The attribute state for visual clarity and DRP must be either a) defined via at least 12 months of baseline monitoring in Collins Creek, Northern Boundary Drain, Canoe Creek and Canoe Creek Lagoon; or b) assumed to be of pristine water quality (A Band). In the case of a), the monitoring data and attribute state assessment must be submitted to WCRC for approval at least 4 weeks prior to the start of mining operations.</p>															
25.3	<p>The Consent Holder must ensure that discharges to surface and groundwater do not contain any contaminants other than suspended sediments, naturally occurring elements and metals, and water treatment chemicals in accordance with Conditions below:</p> <p>a. The use of any water treatment chemical(s) is/are permitted provided they are used in accordance with its Material Safety Data Sheet(s) (MSDS), <u>and are confirmed as appropriate for the receiving environment by a suitably qualified ecotoxicologist.</u></p> <p>b. The Consent Holder must notify the Consent Authority in writing and provide the respective MSDS of any water treatment chemical(s) used in accordance with the above condition before it is used.</p>															
25.4	<p>The Consent Holder must take all practicable measures to prevent uncontaminated stormwater entering the mine workings and disturbed areas to reduce the volume of water passing through the mining pond/settling pond system, and to improve the efficiency of the water reticulating system.</p>															
25.5	<p>Treated mine water is only permitted to be discharged overland from the Canoe Creek infiltration basin to Canoe Creek if the following rainfall events take place, as taken from the <u>West Coast Regional Council rainfall gauge at the Westport Aerodrome or a weather meteorological</u> station erected on site:</p> <p>a. The rainfall exceeds 50 mm in any 24-hour period immediately prior to the discharge (https://cliflo.niwa.co.nz/pls/niwp/wstn.stn_details?cAgent=7342);</p> <p>b. The rainfall exceeds 100 mmm in any contiguous 7-day period immediately prior to the discharge. ↕</p>															
<h3>26.0 Water Monitoring</h3>																
26.1	<p>a. The Consent Holder must visually inspect the Mine Water Facility, Clean Water Facility and Central Drain at least once daily.</p> <p>b. Visual inspections must identify any significant sediment build up in the Mine Water Facility or Clean Water Facility, and any noticeable change in the water clarity in the Central Drain or Clean Water Facility which would indicate further erosion and sediment control mitigation measures are required to improve discharge water quality.</p> <p>c. A record of daily inspections must be kept on site and made available to the Consent Authority if requested.</p>															
26.2	<p>The Consent Holder must carry out water monitoring at the locations shown in the ESCP Overview Concept Plan (Schedule 7) and the Proposed Monitoring Network (Schedule 8), and as listed in the table below:</p> <table border="1" data-bbox="414 1550 1369 2024"> <thead> <tr> <th>Location</th> <th>Parameter(s)</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Pond 2 discharge</td> <td>Turbidity</td> <td>Continuous Automated</td> </tr> <tr> <td>Pond 4 discharge</td> <td>Turbidity</td> <td>Continuous Automated</td> </tr> <tr> <td>Pond 4 discharges to Canoe Creek Lagoon</td> <td>Flow</td> <td>Daily</td> </tr> <tr> <td>Pond 4 discharges to: 1. infiltration system 2. Infiltration basin 3. Collins Creek augmentation 4. Northern Boundary Drain augmentation</td> <td>Flow</td> <td>Continuous Automated</td> </tr> </tbody> </table>	Location	Parameter(s)	Frequency	Pond 2 discharge	Turbidity	Continuous Automated	Pond 4 discharge	Turbidity	Continuous Automated	Pond 4 discharges to Canoe Creek Lagoon	Flow	Daily	Pond 4 discharges to: 1. infiltration system 2. Infiltration basin 3. Collins Creek augmentation 4. Northern Boundary Drain augmentation	Flow	Continuous Automated
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	Central Drain – upstream of mining activity	Turbidity	Weekly
	Central Drain – upstream of Pond 3	Turbidity	Weekly
	Pond 2/4 discharge****	Monitoring Suite A*	Quarterly (metals) Monthly (Others)
	Canoe Creek Lagoon Upstream**	Monitoring Suite A* Visual clarity Surficial benthic sediment sampling for metals	Quarterly Monthly (metals) Monthly (Others)
	Canoe Creek Lagoon	Monitoring Suite A* Visual clarity Surficial benthic sediment sampling for metals	Quarterly Monthly (metals) Monthly (Others)
	Collins Creek Upstream	Monitoring Suite A* Visual clarity	Quarterly (metals) Monthly (Others)
	Collins Creek Downstream	Monitoring Suite A* Visual clarity	Quarterly (metals) Monthly (Others)
	Northern Boundary Drain Upstream**	Monitoring Suite A* Visual clarity	Quarterly (metals) Monthly (Others)
	Northern boundary Drain Downstream	Monitoring Suite A* Visual clarity	Quarterly (metals) Monthly (Others)
	Canoe Creek Upstream	Monitoring Suite A*	Quarterly (metals) Monthly (Others) (only if discharging to Canoe Creek Infiltration Basin)
	Canoe Creek Downstream	Monitoring Suite A*	Quarterly (metals) Monthly (Others) (only if discharging to Canoe Creek Infiltration Basin)
	Collins Creek Upstream	Flow	Hourly
	Collins Creek Downstream	Flow	Hourly
	PZ01, 02, 03, 04, 05, 06, 07, 09, 10, 11, 12, 13, 18 and 19	Water level	6 hourly
	Canoe Creek Intake	Flow	15 minutes
	Canoe Creek Infiltration Basin	High Water Level	Hourly
*Monitoring Suite A includes the following water quality indicators:			
<i>Dissolved metals</i>		<i>Others</i>	

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	<table border="1"> <tbody> <tr> <td>Aluminium (Q)</td> <td>EC (M)</td> </tr> <tr> <td>Arsenic (Q)</td> <td>pH (M)</td> </tr> <tr> <td>Boron (Q)</td> <td>Turbidity (M)</td> </tr> <tr> <td>Cadmium (Q)</td> <td>TSS (M)</td> </tr> <tr> <td>Chromium (Q)</td> <td>Hardness (Q)</td> </tr> <tr> <td>Copper (Q)</td> <td>Sulphate (Q)</td> </tr> <tr> <td>Iron (Q)</td> <td>Amm-N (M)</td> </tr> <tr> <td>Nickel (Q)</td> <td>NO₃-N (M)</td> </tr> <tr> <td>Lead (Q)</td> <td>Dissolved Reactive Phosphorus (M)</td> </tr> <tr> <td>Manganese (Q)</td> <td></td> </tr> <tr> <td>Zinc (Q)</td> <td></td> </tr> </tbody> </table> <p><i>** The Canoe Creek Lagoon upstream observation location must be upstream of the Collins Creek inflow and the inflow from the Pond 4 discharge, but may change over time, given the dynamic nature of the lagoon.</i></p> <p><i>*** The Northern Drain upstream site must be the lowest point in the stream which is a) upstream of any discharge and b) at which visible flow is occurring on the day of the observation. If there is no visible flow in the drain, no upstream discharge sample can be taken.</i></p> <p><i>*** With additional water treatment infrastructure installed, water may be discharged directly from Pond 2 instead of Pond 4, if water quality parameters are met.</i></p>	Aluminium (Q)	EC (M)	Arsenic (Q)	pH (M)	Boron (Q)	Turbidity (M)	Cadmium (Q)	TSS (M)	Chromium (Q)	Hardness (Q)	Copper (Q)	Sulphate (Q)	Iron (Q)	Amm-N (M)	Nickel (Q)	NO ₃ -N (M)	Lead (Q)	Dissolved Reactive Phosphorus (M)	Manganese (Q)		Zinc (Q)	
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Manganese (Q)																							
Zinc (Q)																							
26.3	<p>Notwithstanding Condition 26.2, all discharges associated with the mining operations authorised under these consents must not cause any of the following effects within any receiving waterbody measured at the downstream water quality monitoring sites in Condition 26.2:</p> <ol style="list-style-type: none"> Any conspicuous oil or grease films, scums or foams, or floatable or suspended materials, Any conspicuous change in the colour or visual clarity, Any emission of an objectionable odour, Any significant adverse effects on aquatic life, or The rendering of fresh water unsuitable for consumption by farm animals. 																						
26.4	<p>Sampling required under the conditions of this consent must be undertaken and analysed by suitably qualified personnel and the results supplied to the Consent Authority annually as part of the annual works programme.</p>																						
26.5	<p>An Annual Hydrological and Water Quality Report must be submitted to the Consent Authority with the Annual Work Programme in accordance with Condition 5.2 for review and evaluation of compliance. The report must be prepared by a suitably qualified and experienced person and include the following information:</p> <ol style="list-style-type: none"> A summary of the monitoring undertaken over the preceding 12 months. The summary must: <ol style="list-style-type: none"> Reference the specific consent conditions under which the monitoring has been undertaken to show how the conditions have been complied with; Provide tables of the water quality data collected in accordance with Condition 26.2. Discussion and evaluation of the monitoring data in relation to the relevant conditions including a summary of compliance with conditions; A summary of the actions that have been undertaken in response to any exceedance(s) of water quality limits; Records of the visual inspections that have been undertaken in accordance with Condition 26.1 and condition 26.3. 																						
26.6	<ol style="list-style-type: none"> The Consent Holder must engage a suitably qualified aquatic ecologist to carry out annual macroinvertebrate and fish surveys in Collins Creek, the Northern Boundary Drain and Canoe Creek. The proposed survey methodology, including the locations where macroinvertebrate (taxa number and composition) and fish sampling will be undertaken, the timing of the sampling, 																						

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	<p>the methods that will be used to undertake the sampling, the name of the authorised person who will undertake the monitoring and reporting methods must be submitted to the Consent Authority 20 working days prior to the survey being undertaken, for the Consent Authority to certify the survey methodology.</p> <p><i>Advice Note: If the Consent Authority refuses to certify the survey methodology, it is expected to give reasons in writing</i></p> <p>c. If the Consent AuthorityHolder refuses certification the Consent Holder must resubmit the survey methodology for certification addressing any concerns of the Consent Authority.</p> <p>d. Surveys must not be undertaken until certification is achieved.</p> <p>e. The results of the survey must be submitted to the Consent Authority within 10 working days of the results being received.</p> <p><i>Advice Note: The surveys required by this condition are to inform baseline information about aquatic biota present within the waterbodies around the consent area, and monitor long term trends in species diversity and prevalence, <u>and inform any necessary review of conditions under Condition 3.1.</u></i></p>
26.7	<p>a. Macroinvertebrate monitoring required by Condition 26.6 must be conducted using Protocol P2 and C1 from the Ministry for the Environment Macroinvertebrate Guidelines and the samples must be analysed by an aquatic ecologist experienced in macroinvertebrate sampling and identification.</p> <p>b. Monitoring must be undertaken on a day on which there has been no major flood event in the preceding week. Whenever practicable, sites that have been sampled in the past must be used.</p>
Conditions to Apply to WCRC Air Discharge Permit	
27.0 Dust Management Plan	
27.1	The Consent Holder must operate the site in general accordance with a Dust Management Plan. The objective of the Dust Management Plan is to detail the best practicable option to avoid dust nuisance being caused by construction and mining works and to mitigate any such effects should they occur.
<u>27.2</u>	<p>The Dust Management Plan must include, <u>as a minimum</u>:</p> <p>a. Potential sources of dust that may be created during the mining project, <u>including a description of the classes of particulate matter present.</u></p> <p>b. <u>A description of the receiving environment, and identification of Ssensitive receptors within 250m of in the vicinity of</u> identified potential sources of dust for targeted dust management.</p> <p>c. Dust management and mitigation methods <u>including management of stockpiles, and details of any flocculant to used for dust reduction.</u></p> <p><u>d. Dust monitoring methods, including the location of dust monitoring devices with a minimum of three to be located along the north eastern boundary of the site.</u></p> <p><u>d.e. Monitoring instrumentation methodology, setup requirements, maintenance and calibration procedures (for meteorological and particulate matter instruments), and the frequency of review of the location of monitoring equipment and calibration.</u></p> <p><u>f. Procedures for responding to dust and wind-condition based trigger levels and associated follow up investigations, actions and recording of findings.</u></p> <p><u>e.g. Training of staff and contractors in relation to dust management; and</u></p> <p><u>f.h. Methods for recording and managing complaints regarding discharges of dust, including recording the source of dust, meteorological conditions at the time the dust was observed.</u></p> <p><u>g.i. Keeping of compliance records.</u></p>
<u>27.32</u>	Vehicles travelling within the site must not exceed 15 km/hr on site at all times.
<u>27.43</u>	<p>If wind measured at the meteorological station on site exceeds 20km/hr, the Consent Holder must:</p> <p>a. limit activities that generate dust downwind of<u>toward</u> sensitive receptors identified in the Dust Management Plan;</p> <p>b. conduct frequent visual inspections of exposed earthwork areas; and</p>

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	c. assess the need for additional controls such as increase water application rates.
28.0 Air Quality Management and Monitoring	
28.1	<p>There must be no offensive or objectionable discharge of dust into air from the minerals extraction, processing and loading operations that result in an adverse effect beyond the legal boundary of the site.</p> <p><i>Advice Note: For the purpose of Condition 28.1 the Consent Authority will consider an effect that is offensive or objectionable to have occurred if an Enforcement Officer of the Consent Authority deems it so having regard to</i></p> <ol style="list-style-type: none"> <i>The frequency, intensity, duration, amount, effect and location of the suspended or particulate matter; and/or</i> <i>Receipt of complaints from neighbours or the public; or</i> <i>Relevant written advice or a report from an Environmental Health Officer of a territorial authority or health authority.</i>
28.2	Prior to the commencement of site preparation activities, a meteorological station must be installed at the site with instruments capable of continuously monitoring, logging in real time and reporting agreed representative meteorological data for the site.
28.3	<ol style="list-style-type: none"> The Consent Holder must install, operate and maintain sixfour Dust Deposition Gauges <u>in the locations shown in the Dust Management Plan.</u> Dust recorded in the gauges must not exceed a value of 4g/m²/30 days above background levels. b.<u>Records of the dust values must be kept for the duration of the Consent and provided to the Consent Authority upon request.</u> <p><i>Advice Note: Background levels are to be determined by data collected prior to the commencement date of this consent.</i></p>
28.4	<ol style="list-style-type: none"> If a breach of Condition 28.3.b is detected, the Consent Holder must notify the Consent Authority within two working days of the breach being detected. The Consent Holder must investigate possible reasons for the breach and take all necessary steps to achieve compliance in the following 30-day period.
Conditions to Apply to WCRC Water Take Permit	
29.0 Groundwater and surface water abstraction outcomes	
29.1	<p>Mine pit dewatering and associated mitigation measures must achieve the following outcomes:</p> <ol style="list-style-type: none"> Pre-mining median water levels in piezometers PZ-19, PZ-02, PZ-03, PZ-04 and PZ-05 are maintained when mining is occurring within 100m of the southern boundary; Pre-mining median water levels in piezometers PZ-08, PZ-09, PZ-17, PZ-10, PZ-11 and PZ-12 are maintained when mining is occurring within 100m of the northern boundary; Pre-mining median water levels in Canoe Creek lagoon are maintained by ensuring pre-mining median water levels in PZ-06, PZ-07, and PZ-08 are maintained when mining is occurring within 100m of the western boundary; The pre-mining median and lower flows in the Northern Drain are not reduced. The median and lower flows in Collins Creek are not reduced by more than 2 L/s; The rate of take of water from Canoe Creek is not greater than 10% of the Mean Annual Low Flow; The pre-mining surface drainage patterns are restored such that the catchments areas for the Northern Boundary Drain and Canoe Creek Lagoon are not changed significantly. <p><i>Advice Notes:</i></p> <p><i>Compliance with conditions 29.1.a to 29.1.d must be deemed to have occurred under the following circumstances:</i></p> <ol style="list-style-type: none"> <i>At least 12 months of groundwater level monitoring has been undertaken at representative locations around the site boundary and a pre-mining median groundwater level has been defined for monitoring wells PZ01, 02, 03, 04, 05, 06, 07, 09, 10, 11, 12, 13, 18 and 19</i>

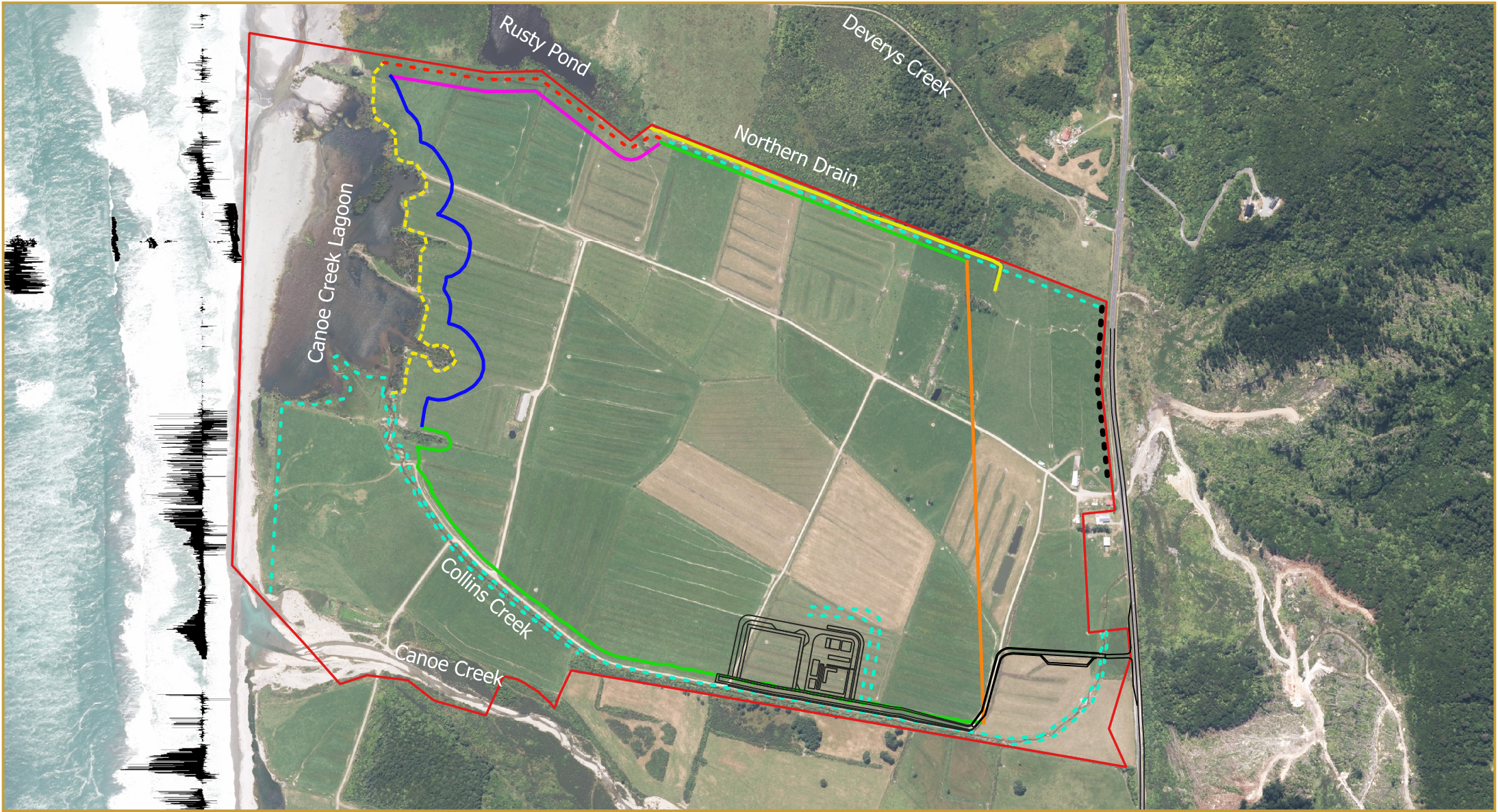
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	<p>b. <i>The above wells are monitored on a minimum daily frequency for the duration of any mining activity below the water table</i></p> <p>c. <i>The monitoring results for each well show that the average monthly water level is greater than or equal to the pre-mining median for that well.</i></p> <p><i>Compliance with condition 29.1.e must be deemed to have occurred under the following circumstances:</i></p> <p>a. <i>The average natural difference between the upstream and downstream flow in Collins Creek has been defined through at least one year of monitoring of flows upstream and downstream of the mineral sand excavation area.</i></p> <p>b. <i>Upstream and downstream flow monitoring occurs at the locations shown in Schedule 8 for the duration of any mining activity below the water table.</i></p> <p>c. <i>The average monthly flow in the downstream site is no more than 2 L/s less than the upstream site +/- the average natural difference between the upstream and downstream sites, taking into account the normal accuracy limitations of flow monitoring equipment.</i></p> <p><i>Compliance with condition 29.1.f must be deemed to have occurred if the maximum rate of take from the creek (or an adjacent infiltration gallery) is no more than 63 L/s</i></p> <p><i>Compliance with condition 29.1.g must be deemed to have occurred if the excavation area is contoured to re-establish the existing distribution of drainage such that the catchment area draining to the Northern Boundary Drain does not change by more than 15% (i.e. 1 ha).</i></p>
30.0 Canoe Creek water take	
30.1	The instantaneous surface water take from Canoe Creek must not exceed 63 litres per second.
30.2	The Consent Holder must undertake monitoring of the surface water take from Canoe Creek at 15 minute intervals and supply this information electronically to the Consent Authority every day, or at the interval instructed in writing by the Consent Authority. <i>Advice Note: the Resource Management (Measurement and Reporting of Water Takes) Amendment Regulations 2020 applies to this water take.</i>
30.3	The Consent Holder must maintain auditable records and provide data in the format of date, time and rate that is suitable for electronic storage.
30.4	<p>a. The Consent Holder must maintain the measurement device(s) in good working order so as to maintain a measurement accuracy of within $\pm 5\%$ for a fully pressurised pipe or $\pm 10\%$ for a partially pressurised pipe.</p> <p>b. The Consent Holder must provide the Consent Authority with initial written verification of accuracy from a suitably qualified person that the measurement device measures the volume of water taken to within $\pm 5\%$ for a fully pressurised pipe or $\pm 10\%$ for a partially pressurised pipe, and thereafter every five years for the term of the consent.</p>
30.5	The Consent Holder must provide the following information to the Consent Authority no later than ten working days prior to the water being taken under this consent: <p>a. The type of measurement device(s) used to undertake the continuous monitoring together with the manufacturer's statement for that device; and</p> <p>b. The location of the measurement device(s) in relation to the water take point(s).</p>
30.6	Upon notice to the Consent Holder the Consent Authority may require the Consent Holder to cease water abstraction for a period not exceeding 48 hours, in order to undertake monitoring of natural water flows.
30.7	A fish screen on any direct surface water take must be maintained to ensure, as far as practicable, that eels, fish and fry are prevented from passing through the intake or being trapped against the screen.
30.8	The water take from Canoe Creek must only be used for operational water supply purposes, and must not be used to augment surface water flows in Collins Creek or the Northern Boundary Drain.

Appendix 1: Conditions of Consent (September 2024)

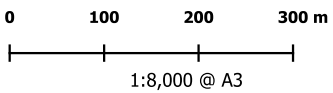
31.0 Breach of Conditions	
31.1	The Consent Holder must inform a Compliance Officer of the Consent Authority immediately if a breach of Consent Condition(s) takes place, or when they believe that a breach may take place.
<u>32.0 Reporting of monitoring information</u>	
<u>32.1</u>	<u>The meteorological and monitoring data collected under conditions 26.2, 28.2 and 30.2 must be made available to the WCRC telemetrically. If this method is not at first feasible, the data must be provided to the WCRC at a frequency and a form advised by the WCRC until such a time as it is technically feasible to telemeter the data.</u>





TiGa
Additional Wetland Mitigation Planting

Produced for: TiGa
by Luke McNeish (TPRL) on 18/09/2024



Projection: WSG84 / NZTM2000
Background Imagery: ESRI Satellite
Data Sources: LINZ, Client and or TPRL Data

Legend:

- Eastern Extent Mining Disturbance Area
- 40m Setback Coastal Lagoon Wetland Edge
- 20m Setback Northern Boundary and Collins Creek
- 30m Setback Northern Boundary
- - 10m Planting Rusty Lagoon Wetland
- - - 15m Planting Coastal Lagoon Wetland Edge
- - - Planting
- TiGa Application Area 21022023
- Bund and Planting
- Northern Drain

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