



Officer's Report

TIGA Minerals and Metals Ltd

Prepared under Section 42A of the Resource Management Act 1991



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General Information

This is an officer's report prepared under Section 42A of the Resource Management Act 1991 in relation to an application for land use consent to Grey District Council under reference LU3154-23.

From

TIGA Minerals and Metals Ltd

Site location

Barrytown Flats, State Highway 6

Report Prepared by

Perspective Consulting Ltd

15 Church Street

Timaru 7940

perspective.net.nz

mark@perspective.net.nz

Quality Control

Report for	Grey District Council
By	Perspective Consulting Ltd
Author	Mark Geddes, Director - Planner
Peer Review	Gemma Conlon, Director - Planner
Final issued date	22 December 2023
Contact	Mark Geddes
	mark@perspective.net.nz
	027 948 6575

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Introduction

General

1. This report is prepared under section 42A of the Resource Management Act 1991 (RMA) in relation to the resource consent application lodged by the TIGA Minerals and Metals Ltd (the applicant) who have applied for land use consent from Grey District Council (GDC).
2. This report is not the decision on the application and does not represent the views of GDC or the Hearings Panel. The Hearings Panel will consider this report in same way as they will consider all the other evidence in relation to the application, including from submitters and the applicant.

Qualifications and Experience of the Reporting Officer

3. I am a director and resource management planning consultant at Perspective Consulting Ltd. I have over 23 years experience as a planner, in three different countries, in both the private and public sectors. This experience includes leading major plan making and policy projects; providing expert planning evidence in the Environment Court and Council hearings; consenting a range of developments; enforcement action; and making submissions on national legislation, and national or regional policy.
4. My qualifications include a Bachelor of Resource Studies from Lincoln University, New Zealand, and a Master of Science (Spatial Planning) from Dublin Institute of Technology, Ireland (first class honours). I am a full member of the New Zealand Planning Institute.
5. I have read and am familiar with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2014, and agree to comply with it. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this report are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of Report

6. The applicant has also applied for resource consent from the West Coast Regional Council (WCRC). While resource consent is required from both local authorities this report only assesses the application in respect of the GDC's functions as a territorial authority under section 31 of the RMA.

Background

9. The applicant has informed that this is the third resource consent application that has been lodged to undertake mining at the site since the 1990s. The last resource consent application for an open cast sand mineral mine at the site was refused consent by an independent hearings panel on 10 February 2022 under reference LU2926/20. However, the fact that this was refused consent is not relevant to the consideration of the subject application, which must be considered on its own merits.
10. The subject application was lodged with WCRC and GDC on 19 April 2023. However, there were some matters that needed to be addressed before the application could be accepted. These included: a land use application form was not completed; the site's registration as a HAIL site was not addressed; the consultation undertaken was not summarised. After the applicant addressed these matters, the application was accepted on 27 April 2023.
11. Further information was requested in relation to the application on 11 May 2023. That request and the applicant's response to that request (submitted on 27 July 2023) is provided with the application and associated documentation provided to the Hearings Panel and now forms part of the application.
12. As the applicant requested the public notification of the application, it was publicly notified on 15 September 2023. A total of 357 submissions were lodged in respect of the application.

Description of the Site and Surrounding Environment

Site Location

14. The site is located on the Barrytown Flats near the western base of the Paparoa Range. It is situated approximately 30 km directly north of Greymouth, 4 km north of Barrytown and 10km south of Punakaiki Township. The approximate location of the site is indicated in Figure 1. State Highway 6 (Coast Road) adjoins the site to the east and the Tasman Sea adjoins the site to west.



Figure 1 – The approximate location of the site is indicated by a red circle. Source: DoC Maps

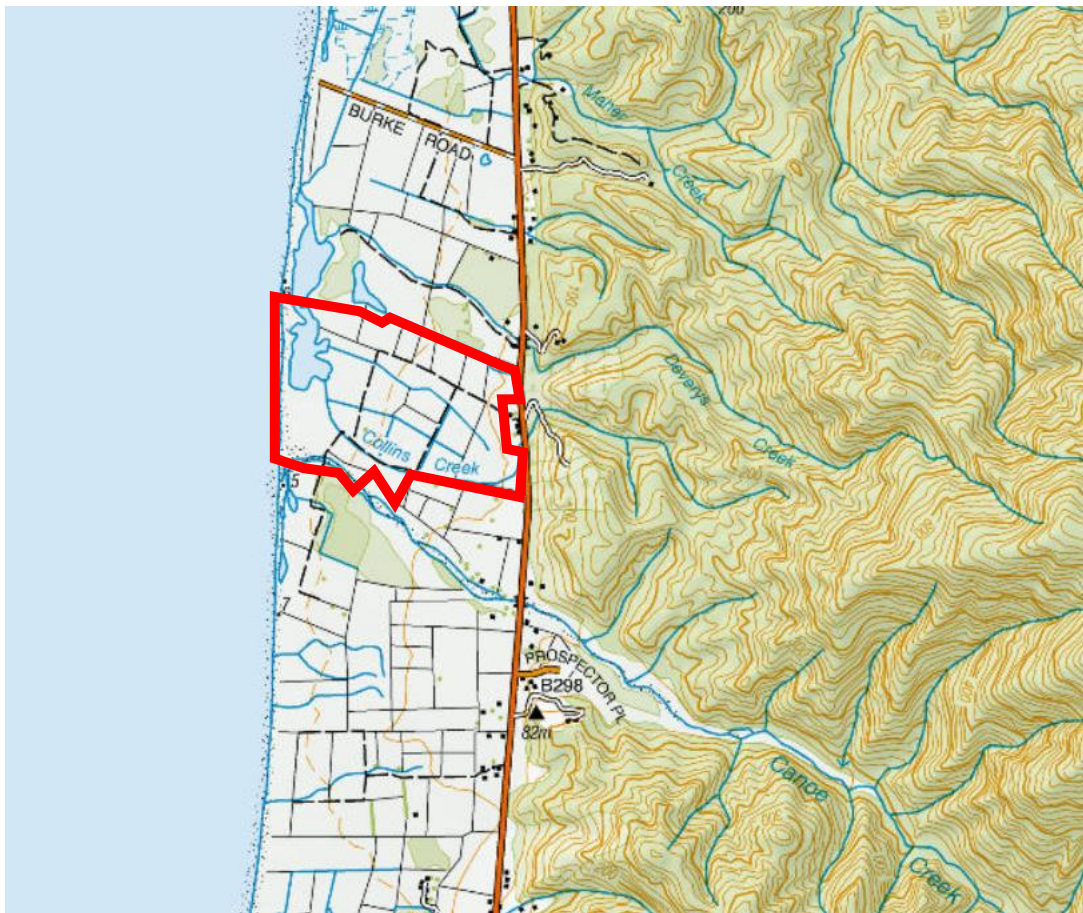


Figure 2 – Topographical map of the area. The red outline indicates the approximate outline of the site. Source: DoC Maps

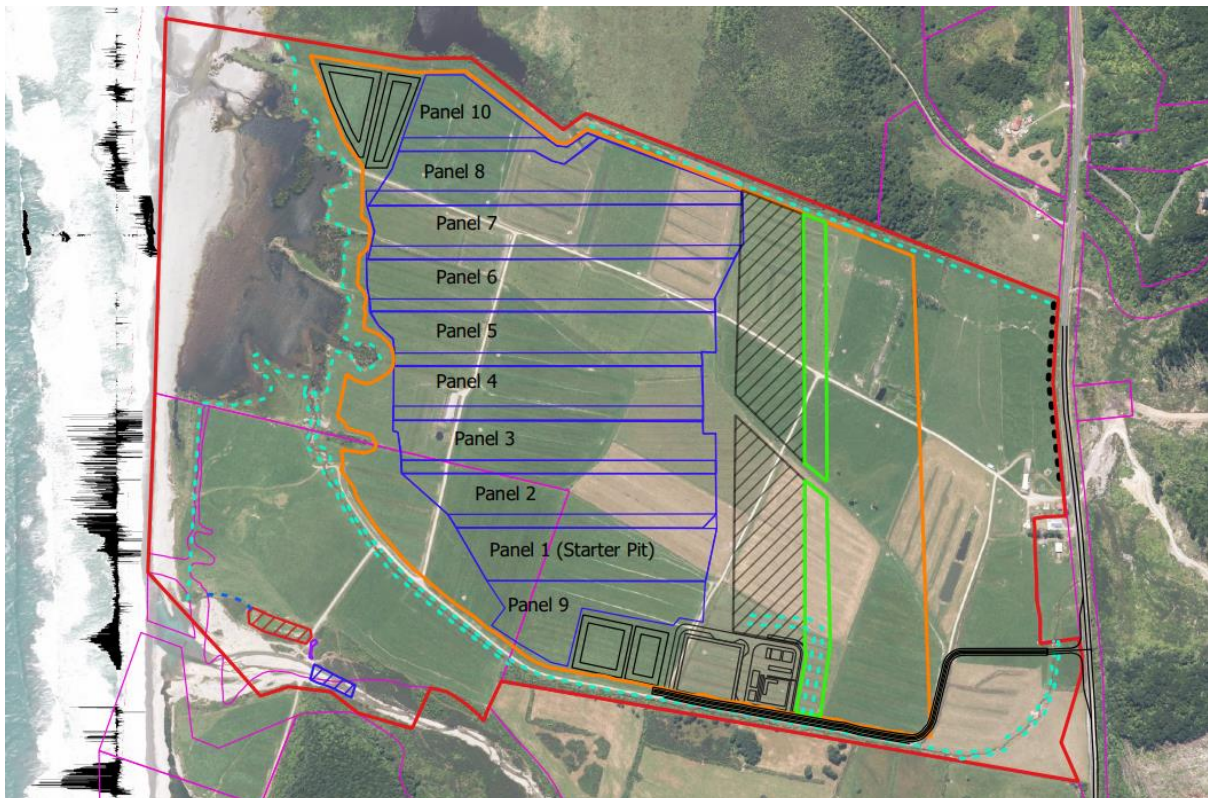


Figure 3 – Site layout plan. Source: The applicant's Attachment F received in response to the further information request

Site Description

15. This section provides a description of the site and surrounding environment. It contains information from the author's visit to the site on 24 May 2023, the application's AEE, and also includes text repeated and adapted from the 'existing environment' description of the Hearings Commissioners decision on the previous resource consent application determined on 10 February 2022.
16. The site has a total area of 115.3 ha and comprises of two titles, being legally described as Lot 1 DP 412689 and Rural Section 2847 contained in Record of Title 447182 (93.9ha) and Section 4-6 Block V Waiwhero Survey District contained in Record of Title WS2D/1035 (21.4ha). The registered owner of both properties is Nikau Deer Farm Ltd. The application states that the applicant has an access agreement in place with the landowner, which will allow mining to occur. It also states the applicant holds a mining permit¹ MP60785 to mine the site. The application states that the site is currently used for dairy runoff grazing².
17. The site's topography slopes gently down from east to west towards the sea. There is an approximate 30 m drop in the level of land between SH6 to the east and the coast approximately 1,400m to the west. While this seems significant, when viewed from SH6, the downward sloping gradient is only just perceptible, and the site appears more or less flat. This flat topography is punctuated by small depressions made by water courses, drains and humps and hollows made by historic vegetation clearance and land drainage.
18. Several waterbodies are located adjacent to or within the site including Collins Creek, Canoe Creek, Canoe Creek lagoon and wetland complex, Rusty lagoon, Deverys Creek, and Deverys lagoon and wetland complex. Collins Creek enters the site at SH6 and runs south then west before entering a substantial lagoon/wetland complex (Deverys lagoon) that exists in the western part of the site. Canoe Creek is the largest creek in the area and runs along the site's south-western corner, then into Canoe Creek lagoon, which is seasonal and was not present at the time of my site visit. The AEE (Assessment of Effects on the Environment) states that Canoe Creek has been assessed as having a high-quality aquatic environment. The AEE also states there are springs on the southern part of the property that are used by the neighbouring property for domestic and stock water. A small ephemeral stream exists in the northern part of the site and has been

¹ Mining permits are issued under the Crown Minerals Act 1991

² Dairy run off grazing is an area of pasture which is grazed by dairy cattle that are not being milked

modified so that it runs west before heading north then west again along the site's northern boundary before entering Rusty Lagoon, which is a wetland on the property that adjoins the site to the north. The site has a central drain that runs diagonally across the site from south-east to north-west direction. Several drains exist across the site that form part of the humped and hollowed drainage network that drains paddocks.

19. The site is located within the Punakaiki Ecological District. The ecological assessment submitted with the AEE states there is a range of threatened and at-risk birds within or near the proposed mining area. Approximately 3.6 km north of the site is the only known colony of tāiko/Westland petrel (at risk, naturally uncommon), with an estimated remaining population of between 4,000-6,200 breeding pairs. I understand that grounded fledgling birds disorientated by lights are commonly found in and around nearby townships and along SH6.
20. Vegetation at the site predominantly consists of pasture grass. There is a small area of flax in the middle of the site that the application states was planted for a wind break for the adjoining stock feeding pad. Several mature Kahikatea trees also exist on the site. Mr. Hardings' report³ (**Addendum 3.3**) (Mr. Harding is the peer review Ecologist) describes the ecological context of the site as an *"enclave of developed land within a landscape of largely undeveloped land: indigenous vegetation and wetlands to the north; extensive forest on the Paparoa Range to the east; Canoe Creek and the Langridge Scenic Reserve to the south; and, Canoe Creek Lagoon and the beach/sea to the west."* His report also states that *"The open-freshwater, wetland, and beach habitats of the Barrytown Flats represent the only extensive habitats of these types along a long – and otherwise steep and rocky – coastline. The significance of these habitats – even if used only occasionally – may be greater than suggested by their size and condition"*.
21. The AEE states that the soils at the site are poorly drained brown and grey soils. It also states that the overburden covering the mineral deposits, consisting of sub-soil, clay, peat or alluvium, is 0.5 m deep at the western end of the site and increases up to 8 m deep towards the east. Previous investigations indicate heavy mineral deposits are present in two bands of between 1-8 m thick, with an estimated 4.9 million tonnes within the application site⁴.
22. The only built form on the site consists of farm infrastructure including stock fences and water troughs. Farm tracks and a stock feeding pad also exists.

³ Paragraph 35 Mike Harding Peer Review

⁴ Paragraph 34 of the Hearings Panel decision on the Barrytown JV Limited application

23. The application area is located within the 'coastal environment' identified by the Te Tai o Poutini Proposed District Plan (TTPP) but is outside of the coastal marine area (CMA) as defined by the RMA. The site is zoned Rural under the Grey District Plan (GDP).
21. Barrytown Beach is located to the west of the application area but within the tile of the site and is identified in the operative West Coast Regional Coastal Plan (RCP) as *"a coastal hazard area having farmland and natural values of wetlands and coastal vegetation threatened by beach erosion, sea water inundation and vulnerable to sea level rise effects. This coastal margin is a naturally dynamic environment subject to changes in form affecting the interface between land, freshwater and coastal water."* The sea is located approximately 250 m west from the proposed mining activity (at its closest extent). The closest mining appear appears to be elevated approximately 4-6m above sea level.
22. Aerial photography of the Barrytown Flats coastal plain indicates the area was previously a lowland (coastal) forest and wetland mosaic⁵. Remnant forest stands exist to the north and south of the site and include the 'kahikatea swamp' forest block to the north. There is also land administered by the Department of Conservation (DOC) (Langridge Scenic Reserve and Canoe Creek Conservation Area) immediately to the south of the site.
23. The Paparoa Range rises to the east of SH6 and is identified as an Outstanding Natural Landscape (ONL)⁶, Outstanding Coastal Natural Character and High Coastal Natural Character area in the TTPP.
24. There is also an area identified by the TTPP as a Significant Natural Area (SNA) (PUN – W034) which encompasses the northern part of Canoe Creek lagoon, all of Deverys lagoon and Rusty lagoon.
25. The application site is within the takiwā of Te Rūnanga o Ngāti Waewae (Ngāti Waewae) who are kaitiaki and mana whenua. Canoe Creek is identified in the Operative Land and Water Regional Plan as significant to Poutini Ngāi Tahu as a wāhi taonga in relation to its use for gathering of cultural materials and as a nohoanga (traditional campsite). Mr. Harding's peer review report notes that thirteen indigenous species of bird are present

⁵ Paragraph 35 of the Hearings Panel decision on the Barrytown JV Limited application

⁶ However, note the peer review landscape architect disagrees with this classification

on the site that are listed in the Ngāi Tahu Claims Settlement Act 1998 (Schedule 97) as Taonga species.

26. Residential lifestyle development has occurred to the north-east and south-east of the site. Farmland adjoins the site to the south, while pockets of native vegetation and two wetlands interspersed with developed pasture exist to the north of the site.
27. The application's landscape assessment and the peer review of that assessment by Mr. Girvan (**Addendum 3.1**) confirm that the site is visible from adjacent properties, and several properties on SH6 ⁷, as well as from SH6 itself and the beach.
28. SH6 runs along the eastern boundary of the site and is sealed and generally flat and contains only one slight bend along the frontage of the site. SH6 is designated as a state highway under the GDP. The site currently has access to SH6 via an existing farm entrance just north of 3261 Coast Road. Average daily traffic volumes at the site vary, being at their peak during the summer tourist season, with low traffic volumes at night. A large, unprotected Rata tree is situated on the road reserve adjacent to the proposed site access. SH6 is classified as an arterial Road administered by Waka Kotahi/New Zealand Transport Agency that incorporates the Coast Road Scenic Route and contains a number of tight corners along its route.
29. To the north, SH6 runs through Punakaiki, a popular tourist destination, to Westport. Around 170 residential dwellings are estimated to be located within 100m of SH6 between the site and Westport. To the south, SH6 runs through Rapahoe, with an estimated 38 residential dwellings within 100m of the road. Large parts of Coastline between along SH6 between Greymouth have Punakaiki have high natural character.

Site History

31. The AEE provides a summary of the site's history and suggests that logging and gold mining activities at the site date back to 1867. However, no supporting evidence is provided to verify that information and it is noted that some submissions dispute this suggestion.
32. On 10 September 2009 subdivision consent was granted under ref. 2008SD1803/08 to subdivide RS 3253 into two rural allotments with Lot 1 being amalgamated with RS 2847

⁷ 3195, 3323, 3261, 3172, 3316 3094, 3094C 3320 Coast Road and RS6674

holding the remaining land as farm land. Lot 2 consists of the existing dwelling at 3261 State Highway 6, Barrytown.

33. In December 2020, a resource consent application (Ref. LU2926/20) was made for a mineral sand mining activity at the site by Barrytown JV Ltd. This application was declined by an Independent Hearings Panel in a decision dated 10 February 2022. Paragraph 302 of their decision states that the applicant provided inadequate information on the actual and potential adverse ecological, hydrological and water quality effects associated with the proposed activities. The AEE states that the subject application is similar in nature to the two previous applications, but it is not the same.
34. In August 2022 Grey District Council granted a Certificate of Compliance from Nikau Deer Farm Ltd for the erection of two large farm sheds on the site. The Certificate of Compliance authorises the construction of one 30m x 20m (600m²) shed and one 25m x 30m shed (700m²) both with building heights of 9.5m at the apex of the gable. It is unclear whether these will be constructed.

Procedural Matters

35. The Hearings Panel has already dealt with late submissions. There are no other procedural matters that I am aware of.

Description of the Proposal

General

36. The applicant seeks all resource consents necessary from GDC and WCRC to construct, operate and maintain a mineral sand mine, including associated infrastructure, over an area of approximately 63 ha for a 12-year period. Mining is only expected to take 5-7 years and therefore the 12-year period includes considerable contingency. Mining will target strandlines of accumulated heavy metallic minerals that run north–south through the site. The total disturbed area of the mine is 8ha.
37. The proposal is stage one of the applicant’s wider plans for mineral sand mining on the Barrytown flats. No details of the other stages are provided.

Pre-Mining Works

38. Pre-mining works will occur 6 months before mining commences and consist of establishing the following:
 - a. Screen bunds on the eastern part of the site adjacent to SH6.
 - b. A central drain with sediment traps along its length.
 - c. A settlement pond and water management infrastructure including a Mine Water Facility and a Clean Water Facility.
 - d. A Wet Concentrator Plant.
 - e. Access road from SH6 to the plant site.
 - f. Site office.

39. Mineralised sand from these facilities will be stockpiled in the eastern bund.

Mining Sequence

40. Mining will progress in a sequence of 300m x 100m strips (or panels) in accordance with Figure 4 of the AEE. Each strip will be mined in accordance with the sequence illustrated in Figure 5 of the AEE at a rate of approximately 5m per day, or 35m per week. The following is a summary of the proposed mining sequence:
 - a. Topsoil and overburden will be removed and stockpiled using an excavator and trucks.
 - b. Sand ore will be excavated and deposited into the in-pit mining hopper. The slurry will pass through a trommel and desliming circuit before being pumped to the Wet Concentrator Plant (Processing Plant).
 - c. Large material will be rejected from the trommel and slimes will be returned to the mine pit. This includes any pounamu.
 - d. Un-mineralised sands and tailings will be pumped back to the pit cavity, which will be progressively filled as the mine pit progresses.

41. Mining will occur at a faster rate (approximately 350 tonnes per hour of sand ore) than processing (approximately 165 tonnes per hour), and the excess ore will be stored at the processing plant and processed overnight to ensure the processing plant can run 24/7.

42. Excavated material will be processed at the Processing Plant to extract the Heavy Mineral Concentrate (HMC). Heavy minerals will be separated from the ore using a water and gravity circuit, drained of excess moisture and stored at the Processing Plant in a farm implement building with a concrete floor.

43. An Erosion and Sediment Control Plan is proposed and is to be updated annually. A Dust Management Plan is also proposed.

Buildings and facilities

31. Several buildings are proposed including buildings to accommodate the processing plant, stockpiles of mined material, staff amenities and offices, and buildings for stores and maintenance. Tanks are proposed for thickening overflow, potable water, and fire water. The processing plant and mineral storage facilities area will be housed primarily in large farm implement style buildings and cover an area of approximately 2.0 hectares. Buildings and structures will be painted in recessive colours and will not exceed 15m in height.
32. A Water Management Plan is provided that proposes water management measures to manage effects on the site's waterbodies, manage stormwater and the water required for mining processes.

Lighting

33. Lighting is proposed on vehicles and buildings to illuminate operational areas including the mine. The following mitigation measures are proposed to preserve the natural character of the coastal environment, preserve the dark night sky and mitigate adverse effects on the Tāiko colony including:
- a. Maximum 2.0 lux spill limit for adjoining properties.
 - b. Compliance with the Australian Government's National Light Pollution Guidelines for Wildlife January 2020.
 - c. Fixed lighting to be pointed downward, shielded to avoid light spill and operate primarily in the yellow-orange spectrum and be filtered to reduce light in the blue wavelength.
 - d. Lights to only illuminate the object or area intended.
 - e. Lights to be mounted as close to the ground as possible.
 - f. External lighting to be minimised on the seaward side of buildings to minimise light spill toward the coast.
 - g. External lighting to be minimised and use the lowest intensity lighting possible, while ensuring compliance with workplace health and safety requirements.

Hours of Operation

35. Hours of operation proposed are:
- a. Mining operations 0700–2200 seven days a week, except for the period of 1 December to 31 January, which will be 0630 and 2130.
 - b. Processing Plant 24 hours a day, seven days a week.
 - c. Trucking of materials 0500-2200.
36. The different hours of operation proposed between 1 December to 31 January (0630 and 2130) are to ensure mining occurs during the daytime to avoid the elevated risk period for the peak fledgling period of the Tāiko.
37. It is proposed that trucking will only occur on the northbound route during daylight hours to avoid any adverse effects on the Tāiko Colony.

Signage

38. The applicant has clarified in response to the further information request that no signage is proposed as part of the application. They expect that any signage will be able to comply with the signage rules of the GDP.

Site Access and Traffic

39. Site access will be via a newly constructed entranceway to SH6. A total of 50 heavy vehicle movements and 140 light vehicle movements are proposed per day onto SH6. Heavy vehicle movements are restricted to 50 per day between the hours of 0500-2200 going south and between the period starting 30 minutes before sunrise and ending 30 minutes after sunset each day going north. There is uncertainty at this stage whether the heavy vehicle movements will go north or south. Consent conditions are proposed to limit vehicle movements on a one-week average basis. Heavy vehicle movements are proposed to be limited to no more than 3 per hour between 0500 and 0700 each day.

Noise

40. The following noise limits are proposed at the notional boundary of any existing dwelling, except 3261 Coast Road (which has provided their written approval to the application):
- a. Daytime (0700-2200): 55 dB LAeq (15 min)
 - b. Night-time (2200-0700): 45 dB LAeq (15 min) and 75 dB LAFma

41. The written approval of 3261 Coast Road has been obtained. An Acoustic Assessment and Noise Management Plan is included in the AEE.

Hazardous Substances

42. A 40,000 litre diesel storage tank is proposed with secondary containment, along with a mobile fuel tanker. Spill kits are proposed to be available on site and refuelling will occur away from water bodies.

Landscape Mitigation

43. A Landscape Assessment and a Graphic Supplement has been included in the AEE and includes several bunds, planting strips and other planted areas to mitigate the visual effects of the proposal. The width of the landscape planting proposed along the northern side of Collins Creek is unclear with the AEE stating a 3m wide planting strip is proposed, whereas the landscape plans indicate 3m and 7m wide plantings. The applicant should clarify that matter at or prior to the hearing.

Rehabilitation and Closure

44. A Rehabilitation Plan is included that is proposed to be implemented by an annual work programme. The objective is to rehabilitate the site to enable diary grazing. The following summarises the rehabilitation plan:
 - a. The mining void will be progressively rehabilitated as it advances. Disturbed areas will be sown in grass.
 - b. Topsoil and overburden will be recovered from the eastern bund and used to fill the water treatment ponds.
 - c. The clean water facility will be reworked and converted to a wetland.
 - d. Humps and hollows will be created to ensure runoff is consistent with the previous runoff.
 - e. Fencing and internal farm roads will be created.
45. The AEE notes there will be a reduction in ground levels, except for the western paddocks that have to be kept above the water table.

Ecological Mitigation Measures

46. An Ecological Assessment and Avian Management Plan and Wetland and Riparian Planting Plan are proposed to address actual and potential ecological effects.

Resource Consent Requirements

Grey District Plan (GDP)

47. The GDP is the operative District Plan for the area. The site is located in the Rural Environment Zone under the GDP. A **discretionary activity** resource consent is required under the following rules of the GDP:
- a. Rule 19.7.8(iii) as the proposed height of buildings (15m) exceeds the 10m height limit specified by Rule 19.7.8(i)(a).
 - b. Rule 19.7.12(iii) as the volume of diesel proposed to be stored on site (40,000 litres) exceeds the 5,000 litres limit specified in Appendix 3 of the GDP.
 - c. Rule 19.7.13(iii) as:
 - i. The car parking (49 spaces) will not meet minimum numbers required under Rule 24.2.1, being 2 spaces per 100m² gross floor area for industrial buildings equating to 74 spaces required.
 - ii. The proposed car-park will not be laid out in accordance with Rule 24.2.3 that specifies minimum parking space dimensions. Note there will be a gravel surface at the site for car-parking that will not be laid out.
 - iii. The proposed access design does not comply with Rule 24.3.1 that includes diagrams that vehicle crossings must comply with.
 - iv. The proposed vehicle movements (390 per day) onto a Strategic Route exceed the maximum (100 per day) outlined in Rule 24.3.4.
 - d. Rule 19.7.16(iii) as the activity is considered a Non-Rural Activity, which will breach the following maximum standards specified in Rule 19.7.16(i) for:
 - i. floor area requirement (100m²)
 - ii. vehicle movement limits (120 total)
 - iii. noise (45-55dba L10)⁸.
48. Overall, the application is classified as a **discretionary activity** under the GDP.

Te Tai O Poutini Proposed Plan (TTPP)

49. The TTPP is the combined Proposed District Plan for the Buller, Grey and Westland District Councils. It will eventually replace the current individual district plans. The Plan

⁸ Refer to 19.7.16(i) for full details.

was publicly notified as a Proposed Plan on 14 July 2022 and hearings are now scheduled.

50. Resource consent is required for the activity under the TTPP as section 86B(3) RMA requires that rules in relation to water, air, soil, SNA⁹s and historic heritage have immediate legal effect upon public notification of the plan.
51. The site is located within the Special Purpose Mineral Extraction Zone under the TTPP and is subject to the following overlays:
 - a. Coastal Environment
 - b. Pounamu Management overlays
 - c. Coastal Tsunami Hazard (on the site, but west of the application area)
 - d. Coastal Hazard Alert
 - e. Coastal Setback
 - f. Water body.
52. Resource consents are required under the following rules that have immediate legal effect:
 - a. SASM-R7 requires a discretionary activity consent for mineral extraction activities in the Pounamu Management Area. Consent is required as the written approval of the listed Runanga's are not provided.¹⁰
 - b. Rules ECO-R2 and ECO-R5 require a restricted discretionary activity consent in relation to clearance of indigenous vegetation in the coastal environment. The application confirms non-compliance with this rule but does not state what indigenous vegetation clearance is proposed.
 - c. Rule NC-R3 requires a discretionary activity consent for the clearance of indigenous vegetation and earthworks within riparian margins. Earthworks and vegetation clearance are proposed to reinstate the existing basin for use as an infiltration basin, parts of which may be within the riparian margin of Canoe Creek.
 - d. Rule NC-R4 requires a discretionary activity consent for the buildings and structures within riparian margins. The infiltration basin is considered a structure, parts of which may be within the riparian margin of Canoe Creek.

⁹ Significant Natural Areas, or the matters addressed under section 6(c) RMA

¹⁰ Note, although it is not indicated as such by the TTPP, SASM-R7 should be classified as having immediate legal effect under section 86B(3)(d) of the RMA as sites of significance of Māori are include in the RMA's definition of 'historic heritage'.

53. Overall, the proposal is a **discretionary activity** under the TTPP.

Other Resource Consents Required

54. The AEE confirms that the following resource consents are required for this activity:

- a. Under the West Coast Regional Land and Water Plan:
 - i. A discretionary activity consent is required under Rule 16 for earthworks and vegetation clearance within 10m of a riparian margin, within the Coastal Marine Area setbacks, and exceeding earthworks volume limits.
 - ii. A restricted discretionary activity is required under Rule 56 to the take and use ground water for the purposes of mineral sand mining and processing, pit dewatering and well-point pumping.
 - iii. A restricted discretionary activity is required under Rule 55 to take and use of surface water from Canoe Creek for the purposes of mineral sand mining.
 - iv. A discretionary activity consent is required under Rules 71 and 91 for the discharge of clean dewatering water, treated mine water, process water and stormwater to land, and/or Collins Creek, the Northern Boundary Drain and Canoe Creek.
- b. Under the West Coast Regional Air Quality Plan, a discretionary activity resource consent is sought under Rule 16 as a precautionary measure to authorise unanticipated dust emissions from stockpiling mining activities.
- c. Under the National Environmental Standard for Freshwater Management a discretionary activity resource consent under regulation 45D is sought for mining activity within 100 metres of wetlands.

55. Resource consent is not required under any other plans or national environmental standards that I am aware of.

Overall Activity Status

56. Overall, a **discretionary activity** resource consent is required for the activity.

Statutory Considerations

57. This section provides a summary of the relevant statutory considerations.

58. Resource consents are managed under the RMA.

59. Section 104 RMA lists the relevant matters a consent authority may consider in determining a resource consent application. Relevant to the consideration of this application are:
- a. part 2 RMA; and
 - b. actual and potential adverse effects on the environment of allowing the activity; and
 - c. positive effects on the environment to offset or compensate for any adverse effects; and
 - d. any relevant provisions of a statutory planning document; and
 - e. any other matter the consent authority considers relevant and reasonably necessary to determine the application.
60. Section 104B RMA provides that in relation to a resource consent application for a discretionary activity, a consent authority may grant or refuse the application, and if grants the application, may impose conditions under section 108.
61. Section 108 and 108A specify requirements for conditions of resource consents.

Submissions

94. A total of 357 submissions were received, with 153 submissions in support, 194 in opposition and 9 either neutral or not stating. A large number of the submissions were pro forma or raised similar issues. A summary of the submissions is provided in **Addendum 1**. While every effort has been made to ensure this summary is accurate, there will undoubtedly be some inaccuracies due to the large number of submissions and the complexity and detail of the submissions. I have not attempted to summarise every detail, or to reflect the tone or nuances of individual submissions. The intention of the summary is to distil the key issues raised in each submission. The issues raised in the submissions assisted in identifying the potential environmental effects considered in this report. The Hearings Panel may find the search function in the summary of submissions useful in finding what submissions raised specific issues.

95. As a general observation, it was noted that most of the submitters in support of the proposal do not live in the vicinity of the site or locally, whereas most of the submissions in opposition either live in the area or have some form of association with the area.

Assessment of Effects on the Environment

96. The section of the report provides an assessment of effects on the environment of allowing the activity. However, it firstly considers the existing environment and the permitted baseline.

Existing Environment

97. Section 104(1)(a) RMA requires the consent authority to have regard to any actual or potential effects on the 'environment' of allowing the activity. This is a mandatory consideration rather than a discretionary consideration and must involve a comparison of the effects of the activity against the 'environment' as modified by:
- a. the effects on the environment as it exists at the present time; and
 - b. the future state of the environment as it may be modified by permitted activities; and
 - c. the effects of the implementation of any resource consents.
98. The present environment of the site is highly modified from its original state and predominantly consists of pasture grassland, stock fences and vehicle tracks. As noted above, the site's landform is also highly modified, having been humped and hollowed for drainage.
99. The GDP permits residential units and buildings with a height of 10m, a building coverage of 10%, a setback from internal boundaries of 5m and 10m from road boundaries. Non-rural buildings are permitted up to 100m². It is not considered fanciful that some residential, rural and non-rural buildings could be constructed on the site. Up to 20 truck movements and 100 other vehicle movements are also permitted to and from the site. Noise from non-rural activities is permitted and ranges from 45 to 55dBA L10 (depending on the time of day) and 75 dBA Lmax. Rule 19.7.9 permits light not greater than 2.5 lux spill (horizontal and vertical) onto any adjoining property.
100. The site is not subject to any resource consents but is subject to a Certificate of Compliance for the erection of two large farm sheds within the application area. The Certificate of Compliance authorises the construction of two farm buildings with a combined floor area of 1,300m² with a height of 9.5m. However, it should be noted that this differs from the proposed buildings which are 15m high. Given that the Certificate

of Compliances are for farm buildings, they are obviously not intended to be part of the application. However, they are relevant in that they provide an example of the visual effects of a building that could occur as a permitted activity.

101. In summary, the existing environment of the site is highly modified and the GDP creates an expectation that a certain level of buildings, noise and traffic effects will occur in the Rural zone.

Permitted Baseline

102. Section 104(1)(a) RMA provides that a consent authority may disregard an adverse effect of an activity on the environment if a NES or plan permits an activity with that effect. Activities permitted by the GDP have been summarised above. It is not fanciful that these activities could occur on the site. For instance, it would be plausible that there could be any manner of viable non-rural activities occur on the site with associated buildings. The adverse effects of these permitted activities are expected by the GDP and can be disregarded as part of the permitted baseline.

103. Specific detail is provided in the following assessment of effects on the environment as to what adverse effects have been disregarded as part of the permitted baseline or considered as part of the 'environment'.

Economic Effects

104. An assessment of economic effects is provided as attachment R of the application's AEE by Sense Partners. The key points from that assessment are:
- a. The proposal will generate:
 - i. 57 mining jobs and 80 indirectly jobs.
 - ii. \$6.6 million per year in wages.
 - iii. \$27.4 million per year non-wage expenditure.
 - iv. \$33.7 million per year of additional local GDP.
 - v. \$1.5 million per year in royalties.
 - vi. \$5.5 million per year in business tax revenue.
 - vii. \$1.67 million per annum in income tax revenue.
 - viii. \$63.0 million of export earnings per year once fully operational.
 - b. It will boost the Grey District's goods exports by 46% per year.
 - c. The economic benefits are significant, particularly:
 - i. In comparison with the revenue from the existing farm which is estimated to be \$125,000 per year.

- ii. This is significant given the region's other key sources of export income (international tourism) is struggling to recover from COVID-19.
 - d. The proposal will unlikely have any impact on domestic and international tourism.

- 105. Based on the above, the economic assessment concludes that there will be significant regional economic benefits to the Grey District and wider West Coast region. A number of submitters in support of the application refer to the applicant's economic assessment and to the economic benefits of the proposal.

- 106. The application's economic assessment has been peer reviewed by Property Economics Ltd in their report dated December 2023 included in **Addendum 3.4**. The key findings of the peer review are:
 - a. The Sense Partners report provides sufficient evidence that the application would constitute a regionally significant activity.
 - b. The mining operation will generate an estimated 57 jobs directly and an additional 80 jobs generated indirectly as a result of the operation.
 - c. Although they query whether the \$33.7m constitutes an appropriate estimate of the regional impact given its reliance on the national input-output tables, they believe that it will still provide a sufficiently large economic impact to constitute a regionally significant activity for the West Coast.
 - d. Economic costs (the loss of farm land and potential impacts on tourism) are considered to be minor and significantly outweighed by the economic benefits of the proposed mining operation.

- 107. With this in mind, it is clear there will be positive economic effects resulting from the proposal. This addresses several submitters points that question the extent of the economic benefits.

- 108. A number of submissions suggest that the adverse effects of the proposal outweigh the positive economic benefits purported by the applicant. However, the matters that are to be considered in processing a resource consent application under Section 104 RMA do not rely on a balancing of adverse effects against positive effects. The decision maker can give weight to any matter in Section 104 RMA and some matters, such as Section 6 RMA matters are considered environmental bottom lines that must be achieved despite positive effects. Accordingly, the decision making process does not hinge on whether positive economic effects outweigh adverse effects.

109. Some submitters suggest that the majority of the economic benefits will accrue to overseas shareholders as the applicant company is foreign owned. It acknowledged that there will be economic benefits accruing to overseas shareholders. However, despite that, the applicant's economic evidence as confirmed in the peer review notes there will be positive economic benefits from the proposal that are regionally significant.
110. Some submissions suggest that the economy of the West Coast is doing well and that employment levels are low and subsequently there is no need for economic benefits of the proposal. While the West Coast economy may be doing well, that does not remove the right for the applicant to apply for resource consent and also does not make the positive economic effects resulting from the proposal irrelevant.
111. A number of submissions have suggested the application is speculative. Despite, not necessarily agreeing with all the applicant's evidence and requiring more information, I consider there is sufficient evidence submitted with the application to confirm it is not speculative and is supported by evidence.
112. The Property Economic report addresses further matters raised by submitters.
113. With the above matters in mind, the evidence suggests there will likely be overall positive economic effects resulting from the proposal.

Effects on Tourism

122. Effects on tourism is a type of economic effect. Some submitters suggest the proposal will adversely affect tourism. Specific issues raised by submitters include the proposal will have adverse effects on:
- a. The value of West Coast tourism and its marketing, particularly the branding of West Coast tourism as 'Untamed Natural Wilderness' and the NZ 100% pure NZ marketing branding.
 - b. People using the Paparoa tracks.
 - c. The landscape as viewed from SH6.
 - d. The significant government investment made in the Dolomite Point redevelopment.
 - e. Accommodation businesses by increased traffic and noise.
 - f. Effects on the wagon tour business that uses the Barrytown beach.

123. Given the vast majority of land on the West Coast is in the conservation estate, it is difficult to see how a mine on a relatively small site (115ha) in the context of the entire West Coast could potentially affect the West Coast tourism branding of 'Untamed natural wilderness'. While some submitters suggest the site is located in a prominent location, the landscape evidence is that the landscape bunding and planting will avoid or mitigate most adverse visual effects of the proposal when viewed from SH6. The peer review report from Property Economic states that even if there is an impact on tourism, it is likely to be minor and significantly outweighed by the economic contributions of the proposal.
114. Based on the Department of Conservation DoC Maps website, the Paparoa track is, at its closest, 4km south from the site. I cannot see any evidence of any other DoC track in close vicinity of the site. Part of the Paparoa track goes from Pukakaiki to Barrytown. The landscape peer review does not raise any significant issues with views of the site from this track, particularly given the separation distance. This issue is discussed in greater detail in the landscape section of this report.
115. While the proposal will increase traffic along SH6, being 50 truck and trailer movements and 140 car movements per day, I do not consider most tourists will notice that increase in the context of the approximately 1,000 existing vehicle movements per day on SH6 cited in the applicant's transport assessment. At its peak the proposal will result in 5 truck movement per hour. Although this may be a significant increase the context of existing truck movements, it is not a lot of traffic in any context. Transport effects are addressed in the traffic and access section of this report.
116. Dolomite Point is a limestone promontory at Punakaiki. It is home to the famous pancake-shaped rock formations, blowholes and surge pools. According to DoC's website, it receives a significant number of visitors annually, some 511,000 in 2018, and DoC have invested over \$14m to create a new visitor centre for the area in Punakaiki. Some of the submissions suggest that the proposal will undermine that investment and adversely affect the visitor centre. Given the relatively low truck movements per hour and given that the visitor centre includes new and upgraded pedestrian footpaths and cycleways from Punakaiki to the visitor centre, I consider it is unlikely that there will be more than minor adverse effects on the visitor centre or people travelling to and from it. It is also noted that trucks from the mine may not go north through Punakaiki. If so, then any potential adverse effects from the trucks travelling though Punakaiki will be avoided.

117. Several submissions consider the proposal will have adverse effects on the local economy, principally visitor accommodation providers and tourism operators. However, given there are no visitor accommodation activities within the close vicinity of the site, leads me to the conclusion that adverse effects on existing visitor accommodation businesses will be less than minor.
118. However, there is an existing tourism operation in the vicinity of the site. The submission from S. Allan raises concerns about the impact on her business (Golden Sands Horse and Wagon Tours) that provides open wagon tours along Barrytown Beach, which she states relies on the natural and quiet environment of the lagoons and beach front directly adjacent to the proposed mine site and the low volume of heavy vehicles on the road. The landscape peer review considers that natural character adverse effects on the coast could be more than minor but notes the applicant has not quantified these effects. While I asked Mr. Girvan (the peer review landscape architect) whether this adverse effect could be avoided/mitigated by elevating the planting on the bund to provide immediate screening, he advised that a longer-term solution to restoring natural character which is less prone to coastal erosion. Accordingly, there may be a short-term economic adverse effect on the submitters business from this loss of natural character, but eventually (once the vegetation grows) there will be long term benefits. Noise will be generated by the proposal and could also potentially affect this business. However, as stated in the noise assessment, noise levels are largely within permitted levels.
119. In summary, it is considered with the exception of the Golden Sand Horse and Wagon Tours business, adverse effects on tourism will likely be less than minor.

Social and Wellbeing Effects

120. The AEE does not provide an expert assessment of social effects arising from the proposal. It addresses social effects stating that there will be flow on benefits to schools, sports and clubs etc, resulting from the effect of job creation and economic activity.
121. Effects on community wellbeing and effects on the social fabric of an area are cited in some submissions as a potential adverse effect of the proposal. Some submissions also state that the application, along with the previous application, has caused them distress. One submission suggests that the proposal will affect her mental health, while several other submissions cite effects on mental wellbeing as a concern.

122. It is not completely clear in the submissions as to what constitutes 'community wellbeing' and how community social fabric will be affected. Some submissions appear to cite concerns about the potential cumulative effect of the proposal, including effects from dust, noise, light pollution, heavy traffic and vibration effects subsequently effecting community wellbeing and the health of individuals. All these matters have been considered below separately, as has cumulative effects.
123. In principle I agree with the submitters that some adverse effects on the environment can subsequently give rise to adverse effects on individual well-being. This is why adverse effects of noise, light and dust etc are often termed 'nuisance effects'. However, in my experience, the impact on individual wellbeing varies greatly between individuals and also is dependent on the extent and characteristics of those adverse effects. Given the impact on individual wellbeing varies greatly between individuals, this assessment focuses on the extent and characteristics of adverse effects rather than how they would adversely affect any particular individual.
124. The submission from J Hellyer (238) states that the proposal lacks social licence to operate. Social licence is not a relevant resource management matter.
125. Despite not having expert evidence on this matter, I agree with the applicant that there will likely be positive social effects arising from the proposal that will principally arise from employment generation and subsequently from bringing additional people to the area. However, the environmental effects of the proposal could also potentially cause social effects. It is clear that most of the submitters who live in the vicinity of the site oppose the development. Accordingly, it is possible that the mine could cause ongoing social effects, particularly if the mine continues to be a divisive matter in the community and that this is held against new employees and their families. However, this is outside of my expertise to comment on and therefore, I can only conclude, at this stage that the social effects arising from the proposal will be uncertain. There has been no expert evidence presented by the applicant nor the submitters regarding social effects. The Hearings Panel could commission a report or request further information in relation to providing an assessment of the social effects of the proposal under sections 41C or 92 RMA should they consider it a relevant matter.

Cultural Effects

126. The site is within the takiwā of Te Rūnanga o Ngāti Waewae (Ngāti Waewae) who are kaitiaki and mana whenua. The site is not identified as a site or area of significance to Māori in the GDP but is within the TTPP's Pounamu Management overlay. Regard must

be had to any relevant provision of a Proposed District Plan in accordance with section 104 RMA.

127. The TTPP states that Pounamu is a taonga of Poutini Ngāi Tahu, owned by Poutini Ngāi Tahu; and is widespread across parts of the West Coast. In respect of mineral extraction activities in the Pounamu Management overlay, Rule SASM-R7.3 of the TTPP requires the written approval of the relevant rūnanga prior to commencing. This provision has been submitted on and is therefore subject to challenge.
128. The AEE addresses the matter of Pounamu extraction stating that *‘Pounamu will not be extracted during the mineral sand process and will be returned to the pit as oversized material and returned directly to the pit’*. This statement is itself a contradiction as on the one hand it states that Pounamu will not be extracted, but then says it will be returned to the pit, suggesting that it would be extracted. Further information was requested from the applicant to clarify this matter. They advised that the extraction method involves passing material through a trommel so that oversized material gets returned directly to the pit. However, they deem it appropriate to have an accidental discovery condition (condition 22.1). Condition 22.1 involves ceasing any further excavation within 50m of the disturbance for a period of at least 24 hours; and immediately advising the consent authority, Te Rūnanga O Ngāti Waewae, Heritage New Zealand Pouhere Taonga and the New Zealand Police.
129. The AEE mentions a Pounamu Management Plan but does not provide any further details. Further information was also sought on this matter and the applicant’s response states:

“There is an overarching Ngāi Tahu Pounamu Resource Management Plan dated 2002, and a specific Ngāti Waewae Pounamu Resource Management Plan which sits within this. Only Ngāi Tahu are permitted to extract pounamu, as they retain ownership which was provided under the Pounamu Vesting Act. The Pounamu Resource Management Plan acknowledges that Pounamu discovery during mining operations is managed primarily by the Crown Minerals Act 1991. In addition to the requirements of the Crown Minerals Act, the Pounamu Resource Management Plan requires the use of an accidental discovery protocol. Therefore the application requires the adoption of an accidental discovery protocol whereby if pounamu is discovered it cannot be removed without the approval of the Ngāi Tahu and the relevant Rūnanga. The proposal is consistent with these management plans by volunteering an accidental discovery protocol in relation to Pounamu.”

130. I see no issue with the proposed accidental discovery protocol as it provides for kaitiakitanga.
131. The AEE states the applicant has consulted with Te Rūnanga o Ngāti Waewae but does not include a record of that consultation (presumably as consultation was continuing at the time of lodging the application). A submission was received from Te Rūnanga o Ngāti Waewae (no. 222). It states its support for the application is based on the mitigation measures proposed in the application and the additional more recent measures proposed on 4 September 2023. However, it is not apparent to me what the recent measures proposed on 4 September 2023 are and whether there has been any material change to the proposal or the conditions of consent. This is something I recommend the Hearings Panel requests the applicant clarify, ideally prior to the hearing. Any material change to the application and conditions could subsequently affect the advice from reporting officers.
132. The submission from Ngāti Waewae notes the Applicant will look to avoid the mixing of waters and is no longer proposing to use water from Canoe Creek to augment flows in Collins Creek and the Northern Drain. This is reflected in Condition 30.8.
133. The Ngāti Waewae submission also supports sampling and monitoring of the discharge and the receiving waters and the placement of triggers and limits within consent conditions to demonstrate that adverse impacts on local wai are not occurring throughout the term of the consent.
134. As previously stated, there are indigenous species on the site listed in the Ngāi Tahu Claims Settlement Act 1998 (Schedule 97) as Taonga species. The impact on these species is addressed below under the natural habitats, ecosystems and biodiversity section of this report.
135. In conclusion, it is considered that the actual and potential adverse effects on cultural matters are likely to be less than minor.

Historic Heritage

136. There are no listed heritage features on the site.
137. Most of the listed archaeological features in the vicinity of the site are well separated from the proposal and therefore will not be affected by the development. The accidental discovery protocol proposed by the applicant as condition 22.1, along with

the archaeological authority process will address the accidental discovery of archaeology. Accordingly, I am confident the actual and potential adverse effects on historic heritage will be less than minor.

Landscape, Visual and Natural Character Effects

138. The AEE includes a detail landscape and visual assessment prepared by Glasson Huxtable Landscape Architects, which was updated in response to the further information request. This has been peer reviewed by Mr. Rhys Girvan, a landscape architect from Boffa Miskell. Mr. Girvan's report dated 21 September 2023 is attached as **Addendum 3.1**, along with an addendum to that report that considers the landscape and visual matters raised in submissions, which is dated 15 November 2023.

139. Mr. Girvan's report dated 21 September 2023 concludes that:

“Overall, it is considered the Assessment provides a reasonably clear and valid understanding of the physical landscape and consequent landscape and visual effects. Notwithstanding this, there are some shortcomings, particularly in terms of identifying perceptual and associative landscape values and qualifying natural character effects during operation which I consider should be addressed. Beyond these, I consider the overall conclusions of the landscape and visual effects and long-term natural character effects remain reasonably sound and plausible in the context of the modified working rural landscape within which they will occur.”

140. After considering the submissions Mr. Girvan's addendum report supports his original conclusion but states:

“With respect to natural character, I consider submissions raise valid concerns which have yet to be addressed, both in terms of levels of effect during operation and in terms of opportunities for restoration and associated measures necessary to ensure effective rehabilitation.”

141. One of the areas of disparity between Mr. Girvan's report and the applicant's landscape assessment is the description of the landscape effects. Page 8 of Mr. Girvan's report provides a table identifying what he considers the landscape effects of the development will be in comparison to the applicant's landscape assessment. The effects are divided into effects during mining and effects after completion. The landscape effects identified by Mr. Girvan range from:

- a. less than minor to more than minor adverse effects during operation; and

- b. less than minor adverse effects to low positive effects after completion.
142. The highest level of effects described are more than minor adverse effects on the site's landform and natural character including Canoe Creek Lagoon, while minor adverse effects will occur on landscape character. However, this level of effect only occurs during the operational period (up to 12 years) and reduces to less than minor adverse and positive after completion.
143. In terms of how to consider the adverse effects on the natural character of the coastal environment, I am guided by Policy 13 of the NZ Coastal Policy Statement (NZCPS), which requires:
- a. adverse effects on outstanding natural character to be avoid;
 - b. significant adverse effects are to be avoided;
 - c. avoid, remedy or mitigate other adverse effects.
144. However, it difficult to judge the application against this policy as Mr. Girvan's addendum report states that the applicant's revised Assessment does not identify the nature or level of natural character effects during operation and identifies that there will *"not be any adverse long-term effects on natural character"*. Mr. Girvan's report goes on to make several relevant points on this matter, stating:
- a. *"The extent to which natural character effects and opportunities for restoration will occur in these areas remains unclear.*
 - b. *I consider draft consent conditions do not effectively maintain or enhance natural character in response to matters raised by submissions and including preserving the natural darkness of the night sky and proposed rehabilitation requirements.*
 - c. *In general terms, I agree that natural character effects within the Mining Disturbance Area will remain relatively limited given the nature of existing modification apparent within this area.*
 - d. *I consider the proposed pattern of planting often appears unresponsiveness to dynamic coastal processes including an ability to adapt to the natural movement of water as described.*
 - e. *I consider there are further areas and opportunities to promote enduring natural elements, patterns and processes and maintain, enhance and restore natural character in response to the proposed application.*
 - f. *I support conditions addressing natural character effects and expanding areas where natural character is restored during operation."*

145. Accordingly, Mr. Girvan's evidence confirms effects on natural character will be limited and additional mitigation would be appropriate. A revised landscape plan is recommended to be sought from the applicant that promotes additional restoration of natural character and setbacks from the coast and wetlands in a manner that is more responsive to the dynamic coastal processes. This request is consistent with Policy 14 of the NZCPS that promotes the restoration of natural character including through consent conditions.
146. This condition is also consistent with Policy 6 of the NZCPS which amongst other things requires development to be setback from the coastal marine area and other water bodies, where practicable and reasonable, to protect the natural character, open space, public access and amenity values of the coastal environment. The mine is well setback from the coastal marine area, approximately 150m at its closest point. However, it is not well setback from the coastal wetlands. In an e-mail dated 13 November 2023 from Mr. Girvan in response to a question regarding compliance with this policy, he states:

"The bases or rationale for this setback is not explained including any understanding of expected erosion rates or the anticipated changes in the dynamic form of the Canoe Creek Lagoon during the life of the application. As a more general comment, I consider the proposed linear pattern of planting which responds to the current landscape features within the Site often appears unresponsiveness to dynamic coastal processes including an ability to adapt to the natural movement of water as identified. Ongoing changes would be anticipated along this dynamic coastal interface.

Given the above, I consider the 20m setback is likely an absolute minimum and support an outcome which seeks further opportunities to restore natural character between the proposed mine and the CMA during operation."

147. In terms of the potential effects on the natural character of the site's two rivers, I am also guided by Chapter 7A of the Operative Regional Policy Statement. Policy 4 of this chapter states *"Allow activities which have no more than minor adverse effects on natural character"*. Mr. Girvan has clarified (pers comm) that the streams are already modified and will be fenced and planted, so the more than minor natural character effects he refers to in his report relate to the larger site within the coastal environment, not the streams. From this I take it that he has no issue with any effects on the site's streams. Accordingly, I consider the adverse effects on the streams natural character align with Policy 4.

148. In terms of the acceptability of other potential landscape effects I am guided by the two objectives of Section 19.3 of the Grey District Plan's Rural Environmental Zone. These objectives both ...*"enables people and communities to carry out a variety of activities..."* and seek *"The retention of the character of the rural environment in which existing amenities include its openness and spaciousness, natural features and presence of indigenous vegetation"* (sic). These objectives are further expressed by the anticipated environmental results under Section 19.6 that state:
- *"Maintenance and enhancement of the natural character and amenity of the rural environment while providing for a diverse range of activities.*
 - *Use, development and protection of resources within the District, providing that the scale of each activity and its effects, both short and long-term, are appropriate to its environment and community needs."*
149. Post project completion the proposal will retain the site's openness, spaciousness, natural features and indigenous vegetation. The site will be more or less reinstated and the majority of the landscape plantings will remain providing some enhancement. Even during the operational period much of the site's openness, spaciousness, natural features and indigenous vegetation will remain. The landscape evidence confirms that there will be some less than minor effects, but to a certain extent effects are expected to occur in the Rural Environmental Zone, which anticipates a variety of activities. The limited duration of the activity provides further mitigation. Accordingly, I consider the landscape and visual effects generally align with what is expected in Objective 19.3 and its anticipated environmental results.
150. Mr. Girvan describes the highest level of landscape and visual effects on neighbouring properties as minor. However, this reduces to less than minor post completion. Again, I consider the landscape and visual effects generally align with what is expected in Objective 19.3 of the Grey District Plan.
151. Paragraph 30 of Mr. Girvan's report considers there is a discrepancy between the applicant's landscape assessment that explicitly states the 200-metre State Highway 6 setback will remain and the landform plan prepared by Palaris (July, 2023) that indicates mining within this area. Given this discrepancy, the applicant needs to confirm adherence to this setback and if not, the landscape assessment should be revised accordingly. It should be noted the visual effects identified in Mr. Girvan's report assume this 200-metre offset is maintained. He also considers that adverse effects would likely increase if this setback were reduced.

152. Mr. Girvan's addendum report responds to some matters raised in the submissions (not already discussed). A summary of his comments is provided below:
- a. In terms of adverse effects on views from the Croesus Track and Paparoa Track, he states viewing distance will ensure adverse effects will be very low in the context of the broad panorama of the coastal environment.
 - b. In terms of adverse effects from lighting on the night sky, he supports the draft conditions regarding lighting, but considers these should also include reference to the natural darkness of the night sky within the coastal environment and as perceived from neighbouring properties.
 - c. In terms of the adverse effects of the bund when viewed from SH6, he states the effect of bunds will principally be limited to transient views observed along SH6 and have been assessed as being low adverse effects in this context.
153. With the above matters in mind, I conclude the actual and potential adverse effects on landscape, visual and natural character effects are likely to range from minor positive effects to more than minor adverse effects. As natural character effects will be more than minor during operation, changes should be requested to the landscape plan to reduce adverse effects on natural character. Conditions on lighting should also be amended to reference the natural darkness of the night sky.

Overshadowing and Access to Sunlight

154. The height of the proposed processing buildings will be 15m, 5m higher than the 10m height limit permitted by the GDP. However, it is considered any overshadowing or loss of sunlight to existing or proposed buildings will be less than minor considering:
- a. the setback of the proposed buildings from neighbouring sites (approx. 30m);
 - b. the permitted baseline of 10m building located within 5m from boundaries;
 - c. there are no existing residential buildings or activities located near the proposed buildings.

Effect on Infrastructure

155. Except for SH6, which is addressed below, there is no infrastructure on the site or adjoining the site that will be potentially affected by the proposal, including no drinking water supplies protected under section 104G RMA.

Traffic and Access

156. The application proposes to access the site via an upgraded vehicle crossing to SH6. The position of this accessway was moved further north along SH6 in response to the further

information request. The Transport Assessment submitted with the application prepared by the Novo Group states that the proposal will generate the following traffic:

- a. five truck and trailer movements and 19 car movements per hour at peak times;
- b. 50 truck and trailer movements and 140 car movements per day;
- c. 390 equivalent car movements per day.

157. It is helpful to compare these proposed vehicle movements to the vehicles movements that are permitted by the GDP for non-rural activities under its Rule 19.7.16, which permits up to 20 truck trips and 100 other vehicle trips. It should be noted that Rule 19.7.16 provides a threshold beyond which the GDP requires resource consent for the activity so that effects can be specifically considered. It is not an absolute rule that cannot be contravened. While the proposed vehicle movements are well above what is permitted by Rule 19.7.16, this rule is noteworthy in that it creates an expectation that there will be vehicle movements from non-rural activities. As a useful comparison it is also worth mentioning that two or three non-rural activities could be established along this section of SH6 each with 20 truck movements and 100 vehicle movements per day as a permitted activity that would collectively exceed the vehicle movements proposed in the application.

158. The key conclusions from the application's transport assessment are:

- a. the site will be self-sufficient with regards to car-parking and loading, such that there will be no on-street parking / loading occurring;
- b. the proposed access is anticipated to operate safely and efficiently;
- c. the low passing volumes and good visibility mean that vehicles exiting the site will be able to do so safely;
- d. the effects on the wider road network are considered to be acceptable.

159. While the Novo Group report has not been subject to an independent peer review, Waka Kotahi NZ Transport agency have reviewed the application in making their submission.

160. Potential adverse effects on SH6 were raised by numerous submissions. Issues raised included:

- a. adverse effects on the carriageway of SH6;
- b. adverse effects on traffic safety;
- c. adverse effects on pedestrians and cyclists including school children and recreationalists using the road;
- d. adequacy of the transport assessment;

- e. implications for the development if the road network is compromised by an earthquake;
 - f. requests for a traffic management plan to manage safety effects on school children using the SH6.
161. Submitters have stated they regularly use this section of SH6 that runs past the site for recreational activities, including walking and cycling, and for local functional activities, including kids walking home from the school bus and cycling for utility. They have also said that since the advent of the Paparoa Track and the marketing of the West Coast as a tourism destination, there has been an increase in cyclists using this section of SH6. Numerous submissions have suggested that SH6 is in a poor condition and believe the trucks from the proposal will exacerbate and subsequently create traffic safety issues.
162. Waka Kotahi have made a submission on the application (submission no. 138). They have taken a neutral position (neither support, nor opposed). Their submission confirms that SH6 in this location is an arterial road under the One Network Road Classification with a posted speed limit of 100km/hr and carries approximately 951 vehicles per day. They also confirm the role of Waka Kotahi is to ensure the safe, effective, and efficient operation of SH6. In terms of the relief sought, they have requested:
- a. amendments to conditions;
 - b. clarification on which vehicle crossing will be used to access the site and state only one vehicle crossing location should be provided;
 - c. to be included as an interested party in the annual bird management report;
 - d. that any signage adjacent to or directed towards SH6 complies with their policy manual for Third Party Advertising Signs (2022) and the Grey District Plan rules. Signage will not be permitted within the state highway corridor, unless approved by Waka Kotahi.
163. Waka Kotahi considers both road accessway layouts are suitable provided the final design is approved by Waka Kotahi and subject to the following amendments to advice notes of condition 14.2 (text underline is new, text shown strike though is to be deleted):
- 14.2(i) The detailed design for the vehicle crossing. In developing the detailed design, the consent holder will need to consult ~~with~~ the Waka Kotahi NZ Transport Agency, including the Regional Safety Engineer and Network Manager ~~appointed state highway maintenance contractor for the West Coast (Fulton Hogan) and a Waka Kotahi Safety Engineer (Jodie Enright).~~

14.2(ii) A Construction Traffic Management Plan that has attained approval from the Waka Kotahi NZ Transport Agency Network Manager. ~~appointed state highway maintenance contractor for the West Coast (Fulton Hogan).~~

18.2 An annual bird management report shall be provided to Environmental Planning Team Leader Grey District Council, Te Runanga o Ngāti Waewae, and, the Buller/Kawatiri office of the Department of Conservation in Westport, and Waka Kotahi NZ Transport Agency Environment and Sustainability Team (via:environment@nzta.govt.nz) no later than June each year which includes: site inspection summaries, record of presence of any at risk and threatened bird species, and the avoidance and mitigation measures undertaken on the Site

164. I have no issue with these amendments.

165. Upon receipt of the Waka Kotahi submission, I asked Waka Kotahi to address the submitters concerns about the impact of severe weather events on SH6, the impact of traffic from the proposal (particularly trucks) on the carriageway of SH6; and the safety of traffic, pedestrians and cyclists.

166. On 18 October 2023 Shana Dooley from Waka Kotahi responded to some of these concerns stating:

“The weather and damage to the state highways is separate matter from the Barrytown sand mining proposal. Weather events will occur whether the proposed activity is operating or not. When there is significant damage to the state highway from a weather event, it is managed through Waka Kotahi funding. It is only an issue if the activity results in direct effects on the state highway infrastructure that may exacerbated by the activity, e.g. increased flooding, erosion, etc.

Heavy commercial vehicles, like the heavy vehicles in the proposal, pay appropriate road user charges for additional wear and tear on state highways than lighter vehicles and through commercial licencing fees. Therefore, these are not matters that are raised during the RMA process. The focus is on whether the activity can achieve safe and efficient access to and from the state highway. In this instance, with the vehicle crossing design proposed, it is considered that the activity is unlikely to have adverse effects on the state highway.”

167. After receiving some conflicting advice from Waka Kotahi multi-nodal team in relation to potential adverse effects on cyclists, I received the following comments from Waka Kotahi on 23 November 2023:

“As discussed, the experts from our Multi-modal team have differentiating views as to how trucks/vehicles react when cyclists are on the road in locations such as this on the West Coast. Every vehicle passing a cyclist on a road where this is limited shoulder does result in some potential safety risk no matter the road, but the behaviour of a cyclists and/or the motorist can differentiate between people and whether they have received specific training. Generally, this is a complex matter to understand and we don’t have any input from a Behaviouralist Expert to provide us advice to pass on. Unfortunately the advice that was passed on may not be helpful to come to a view on this matter and it may need to be explored further if required.”

168. Given that road safety issues can potentially have fatal consequences, and that pedestrian and cyclist safety is not addressed in detail in the application’s transport assessment, further information should be requested on this matter.
169. Other than that, and subject to the amended conditions from Waka Kotahi, I am satisfied that the actual and potential traffic and access effects of the proposal will be appropriately managed.

Hazardous Substances

170. A 40,000-litre diesel storage tank is proposed with secondary containment, along with a mobile fuel tanker. The AEE states that *“the storage of diesel is occurring well within the property boundaries and away from any residential activities, which will avoid any human health risk associated with such storage.”* In response to a further information request, the applicant has clarified that the diesel storage tank is located in the office area, adjacent to the plant.
171. Conditions are offered to require secondary containment and reporting and to manage refuelling and accidental discharge. Considering these conditions and the fact that hazardous substances are also managed under the Hazardous Substances and New Organisms Act 2006, it is considered actual and potential adverse effects are likely to be less than minor.

Radiation

172. The potential impact on humans and animal health and the environment from radiation emissions as a result of mining is a relevant resource management matter for the WCRC to address.

Climate Emissions

173. Several submissions raise concerns about the carbon emissions from the proposal. This is a discharge to air and accordingly is within the jurisdiction of the Regional Council. Please refer to the officer's report from the West Coast Regional Council.

Contaminated Land

174. While the entire site is identified by the WCRC as being a contaminated site, the WCRC has clarified that they have updated their contaminated site register and have confirmed the contamination is located on a neighbouring site. It should be noted that there is a technical issue preventing the WCRC from updating their maps. Accordingly, the contaminated land is not relevant to the application.

Natural Hazards

175. The TTPP identifies that part of the site is covered by the following natural hazard overlays:

- a. Coastal Tsunami Hazard;
- b. Coastal Hazard Alert;
- c. Coastal Setback.

176. The Draft variation to the TTPP, while only draft, provides updated LiDAR coastal hazard information and identifies parts of the site, in addition to that identified in the TTPP as being subject to coastal hazards. Refer to Figure 4.



Figure 4– The updated LiDAR flood hazard model illustrated in the Draft variation to the TTPP. The red ovals indicate the areas of draft coastal alert areas that are in addition to that indicated in the TTPP.

177. However, no new buildings are proposed in these areas. Only some ponds and mining panels are located within the existing and draft TTPP Coastal Hazard Alert Areas. As such I do not consider these activities (themselves) to be sensitive (at risk) to coastal hazards. However, that is not to say that the activities will not cause or create adverse effects associated with natural hazards. The TTPP only controls buildings on the Coastal Hazard Alert Area. The Coastal Tsunami Hazard is located on the beach front of the site well west of the application area.

178. Mr. Harding (the peer review ecologist) and a number of the submitters has raised concerns about the potential impact on the area’s ecology in the event of a seismic event or coastal inundation. The submission from L. Harris (submission no. 11) questions what mitigation is proposed in the event of a natural hazard disaster and what guarantees are there to ensure clean up in the event of a natural disaster.

179. Although I am not an expert in natural hazards, I think it is reasonable for me to conclude that there is no way the applicant can avoid a major seismic event. It is also reasonable to conclude that such an event would cause significant adverse effects to

ecology across a vast area. Accordingly, avoidance is not an option, but remediation is possible. Remediation could be achieved through a management plan that would address any adverse effects resulting from a major seismic event. This could be required by way of condition and secured by an appropriate bond.

180. In respect of coastal inundation, it is also noted that a coastal inundation event, whether it is a storm surge or tsunami would likely have wide and significant adverse effects on the areas ecology that cannot be avoided or controlled by the applicant. The closest part of the mine will be over 200m from the existing beach front and 20m away from the coastal lagoon. That setback provides some mitigation of the potential effects from coastal inundation as does the site's sloping topography that rises approximately 30m from the coast to SH6. As shown by the cross sections in Figures 8-10 in Attachment O of the rehabilitation plan submitted with the application, the ground level of most of the western part of the site will be higher than the exiting ground level, thereby reducing the potential for inundation. However, this should be clarified by the applicant as other parts of the AEE state that grounds levels will be lower. Another mitigating factor is the proposed mining methodology that minimises the open area of the mine and progressively rehabilitates the site. In relation to this matter, the applicant's further information response quotes the application's Geotech report that states:

"The coastal lagoon, Collins Creek, Northern Drain and property boundaries are at low to very low risk of being adversely affected due to mining during operations and for the finished landform."

"The pit will be only open at the mining front and gets backfilled as the mining voids advances. The void (that facilitates lateral spread) is exposed for a very short duration. Combined with the very low likelihood of a "catastrophic" event, the potential for extensive damage away from the pit is intuitively Very Low.

181. All these factors mitigate the risk of coastal inundation of the active mine area. However, there will still be some residual risk, which could be further mitigated by a management plan that could be required by way of condition. The management plan would ensure there is a suitable response to manage the adverse effects of a natural hazard event and mitigate impacts on the area's ecology.
182. Notwithstanding and assuming the ground level of the western part of the site is being raised as a result of the rehabilitation (refer to figures 8-10, Attachment O of the AEE), the proposal could potentially displace coastal inundation flood waters onto adjoining properties. While there are no dwellings or built form on the neighbouring properties

near the coast that would be affected by that potential water displacement, there are wetlands and waterbodies on the adjoining properties that could potentially be affected by increased displacement of flood waters. The extent and nature of these effects are not addressed in the application and should be addressed in the applicant's evidence. Other than the applicant's Geotech Report, there is no other expert evidence on this matter submitted by the parties.

183. Subject to receiving a satisfactory natural hazards management plan, I consider that that actual and potential effects from natural hazards will likely be minor.

Land Stability

184. In relation to land stability the AEE states that land disturbance activities have the potential to cause land instability effects on adjoining properties, if not appropriately managed. The AEE includes a geotechnical assessment of the proposal. Key findings of that report include:

- a. The open pit is expected to be stable for the proposed configuration with no substantial ground displacement due to instability expected > 5m from the pit crest based on this study.
- b. The coastal lagoon, Collins Creek, Northern Drain and property boundaries are at low to very low risk of being adversely affected due to mining during operations and for the finished landform.
- c. The resulting "engineered landform" is considered resilient from a geotechnical perspective considering earthquake, coastal process and weather.
- d. There is a low to very low risk of adverse interaction with coastal processes for the proposed finished landform.

185. In order to avoid potential land stability issues, the AEE proposes mining activities to be setback 20m from all internal boundaries and water features surrounding the site, as well as a 200m setback from the State Highway boundary (with the exception of the construction of the access and roadside bund).

186. The applicant originally proposed a condition of consent (21.3) which requires that there is no erosion or slope instability outside of the application area. A further condition also required a pre-mining survey to be carried out on the two nearest properties. However, in response to a further information request on this matter, the applicant clarified that was included in error and there will be no pre-mining survey. The applicant states:

“Initially, the applicant was proposing to mine closer to the State Highway, and at this point it was deemed sensible to include a pre-mining survey to ensure that there was no differential settlement identified on neighbouring properties. As a result of the inland extent of the mine being reduced, there is no longer considered a need for a pre-mining survey.”

187. None of the submissions raised land instability as an issue. However, the WGA peer review of the hydrology assessment commissioned by WCRC raises concerns about the stability of the pit wall within the 20m boundary setbacks which may be affected by the operation of infiltration trenches. With this statement in mind, there remains uncertainty regarding the viability of the proposed management measures to mitigate groundwater and surface water effects and subsequently the effects on the adjoining ecosystems. The applicant should respond to this issue in their evidence.
188. Other than that, I am satisfied with the applicant’s response in relation to stability issues, particularly considering the setbacks and that there is no built form in close proximity on neighbouring sites. Accordingly, the proposal’s potential adverse effects on the stability of adjacent properties are likely to be less than minor in nature.

Noise and Vibration

189. Actual and potential noise effects will occur from the establishment and operation of the proposed mine. An acoustic assessment was prepared by Marshall Day Acoustics (MDA) and submitted with the AEE. This is accompanied by several consent conditions that have been proposed to manage potential noise effects including conditions 15.3 and 17.1 to 17.6.
190. The MDA acoustic assessment has been peer reviewed by Mr. Darran Humpheson of Tonkin Taylor (T&T) in correspondence dated 5 May 2023. In summary, that peer review finds:
- a. It is reasonable to assess the pre-mining and post-mining construction activities against the noise limits of NZS 6803:1999 Acoustics – Construction noise. The noise limits of NZS 6803:1999 Acoustics – Construction noises are likely to be comfortably complied with.
 - b. While the noise from the processing plant has not been modelled, it is located within a building and therefore given the attenuation provided is likely to be sufficiently quieter than other equipment associated with processing operations.

- c. It is reasonable to predicted noise levels at all receivers from all phases of mining will be below 55 dB LAeq.
- d. It is likely that the 55 dB limit may be exceeded at 3261 Coast Road in the worst-case scenario. However, the written approval of that property has been obtained.
- e. Some potential exceedances of the night-time noise limits (52 db LAeq) are noted to be possible when mining is undertaken during the night-time period from 6:30 to 7 am in December and 31 January.
- f. The applicant has proposed a condition requiring noise measurements prior to this work to demonstrate that the night-time limits can be complied with. I have provided alternative wording in their recommended conditions to address this requirement.
- g. Daytime truck movements are likely to be masked by existing traffic noise levels and no additional restrictions are required.
- h. Nighttime truck movements have been limited to no more than 3 per hour between 0500 and 0700 each day.

191. In response to questions from the writer about the lack of a drop in noise limits as per the GDP's Sunday 10pm to 7am 45 db L10 limit, Mr. Humpheson clarified on 26 September 2023 by e-mail that:

"there is likely to be more or less constant noise each day of the week and provided noise levels remain in the order of 50 dB then effects will be no more than minor."

192. I accept Mr. Humpheson's comments that noise effects will be no more than minor. As advised by Mr Humpheson (pers comm) the 45 db noise limit of the GDP is very quiet and is inappropriate given that it will be frequently exceeded by wind and other natural sounds.

193. The policies under 19.4 of the GDP provides some context to this matter and include:

19.4.3 "A wide range of activities are carried out in a manner that avoids, remedies or mitigates adverse effects, including those referred to in Policies 4 – 5.

19.4.5 "Activities should not adversely affect the amenities of the rural area or adjoining properties in terms of such matters as effluent disposal, noise, traffic generation, air emissions, odour, shading and visual impact".

194. My interpretation of Policy 19.4.5, is that activities should have only low or minor adverse effects. It would be non-sensical to interpret this policy that activities should have no adverse effects. If that was the case, nothing would be allowed to occur. Policy 19.4.5 should be interpreted in the context of the zone rules and standards, some of which permit activities with adverse effects e.g. noise standards. In my experience, rural zones are working environments where activities have adverse noise effects from primary production. Without this, the zone would cease to fulfil its purpose. The key matter, as per policy 19.4.3, is that the activities are carried out so they out avoid, remedy or mitigate adverse effects. In respect of the subject proposal, the MDA noise assessment and conditions avoids and mitigates adverse effects. Accordingly, I support the conclusion of Mr. Humpheson, that the noise effects from the proposal will be no more than minor.
195. In the same e-mail from Mr. Humpheson referred to above, he also requested the six monthly noise monitoring requirement of condition 17.4 be changed to a three monthly noise monitoring requirement. He also recommends that the typo in condition 12.1 that refers to *'mining activities from 01 December to 31 January – 0630-0930'* is amended to be *'0630-2130'*.
196. I have no issue with either of these proposed amendments and particularly support the six month noise monitoring period under condition 17.4 being replaced with a three month period. While the increased frequency of the noise monitoring will come at an increased cost for the applicant, it is appropriate considering the near constant nature of the noise emissions to ensure regularly that they are compliant with the noise limits. That will provide greater assurance to the Council and neighbours that compliance is being achieved.
197. Mr. Humpheson's e-mail on 26 September 2023 also commented on the use of LAeq noise metric instead of the L10 metric used by the GDP. In summary, his e-mail states:
- "Use of LAeq(15 min) represents best practice and will tend to be more sensitive to periods of elevated noise compared to the L10 metric in the operative plan (15 min assessment period compared to 15/9 hours). Therefore LAeq (15min) is more restrictive than LA10 (15hr)."*
198. Based on this advice, I agree that it is more appropriate to use the LAeq metric rather than the GDP L10 metric. Neighbours of the site will note that this will better protect their amenity.

199. The submission from G and G Langridge (submission no. 188) states that the impact of noise on stock husbandry and stock welfare are not addressed in the application. This is correct. In correspondence from Mr. Humpheson dated 15 November 2023, he states that:

“Although there is no guidance on levels of noise suitable for avoiding stress in livestock, it is our opinion that the relatively low level of noise from the site activities is unlikely to adversely impact livestock. There are no identified impulsive noise sources which cause a startle reaction.”

200. A number of submissions comment on the noise and vibration from trucks travelling along SH6. However, the memo from Mr. Humpheson dated 15 November 2023 states that the *“truck movements would increase traffic noise level by less than 1 db which is not a perceptible increase”*. Accordingly, the evidence is that this noise effect will be less than minor.

201. In relation to vibration the memo from Mr. Humpheson dated 15 November 2023 states that:

“There are no New Zealand standards applicable to annoyance or damage from road traffic vibration. In most cases where significant vibration is identified, the cause is a defect in the road surface, such as a pothole, rutting, or a poor transition to a manhole cover or between sections of road surface. It is therefore important that the road pavement surface is well maintained. Generally, road traffic vibration will not be perceptible at distances greater than 20 m from the active carriageway, even with minor defects in the road surface. It is highly unlikely that minor building damage such as cracking of plaster linings will occur due to vibration caused by vehicles. We recommend that the finalised NMP should include reporting of any defects in the road surface near the site to the relevant road controlling authority.

Vibration may be experienced from low frequency sound incident on the building causing rattling of windows and doors if loosely fitted in the frames. This can cause regenerated noise from the movement of these loose elements of the building. Low frequency sound is usually associated with the likes of engine braking and hard acceleration. Both of these factors are addressed in the NMP and therefore the likely occurrence of regenerated noise is low.”

202. Therefore, the evidence indicates that vibration should not be a significant issue, subject to a condition requiring the amendment of the noise management plan to include reporting on road defects.

203. Overall, the evidence indicates that noise and vibration effects will likely be no more than minor.

Erosion and Sedimentation

204. The AEE includes an Erosion and Sediment Control Plan. I consider that erosion and sedimentation effects are primarily effects on water quality and therefore within the jurisdiction of the WCRC. The exception to this is dust effects and sedimentation of roads. Dust is dealt with in the proceeding section of this report.

205. In terms of sedimentation of roads, the Erosion and Sediment Control Plan proposes 'stabilised construction entranceways', which it describes as *'a stabilised pad of aggregate placed on a filter base and are located where construction traffic will exit or enter a construction site'*. It states that *'they help to prevent site entry and exit points from becoming a source of sediment and also help to reduce dust generation and disturbance along public roads'*. The Erosion and Sediment Control Plan goes on to state that:

- a. That stabilised entrances will be utilised with SH6.
- b. The processing plant location and associated access roads will all be aggregate stabilised and as such will in themselves act as stabilised entrance ways.
- c. No vehicles will be allowed to leave the project site unless tyres are clean and vehicles will not contribute to sediment deposition on public road surfaces.

212 The above makes it clear that suitable measure are in place to avoid sedimentation on road. No submissions have raised sedimentation of the road as an issue. I note that section 1.5 of the erosion and sediment control states that it will be continually reviewed. With these matters in mind, I consider that sedimentation effects on the road will likely be less than minor.

Dust

213 Dust is both an air quality effect, a nuisance and amenity effect and an effect on the quality of the natural environment. Air quality effects and effects on the quality of the environmental are within the remit of WCRC, while nuisance and amenity effects are within the remit of the GDC. Adverse dust effects were an issue raised by several submitters.

- 214 A Dust Management Plan (DMP) was intended to be submitted with the application but was omitted. The applicant provided the DMP in response to the further information request. DMP was included in the information publicly notified and therefore does not raise a procedural issue. In summary, key aspects of the DMP:
- a. identify dust sources;
 - b. records background monitoring results;
 - c. identify sensitive receptors;
 - d. provides management measures;
 - e. describes dust inspections and monitoring
 - f. describes training, reporting and review processes.
- 215 The DMP does not provide an assessment as to the level or extent of adverse dust effects on sensitive receptors, including the adjoining wetlands. This should be provided to understand any actual and potential dust effects.
- 216 The DMP states that it will be reviewed and updated during the sites operation to reflect significant changes associated with construction techniques, mitigation, monitoring results or the natural environment. It also states that if the proposed mitigation methods are unsuccessful in controlling dust emissions and cause adverse effects on receptors beyond the site, the activities causing the discharge shall be suspended until adequate mitigation can be put in place. While the DMP has not been independently peer reviewed and I am not an expert in dust management, it appears to provide an appropriate adaptive management process to manage actual and potential dust effects. Notwithstanding, the applicant should address the following issues with the DMP:
- a. Consideration should be given to mapping sensitive receptors in the DMP to assist with implementation and monitoring.
 - b. The background monitoring results do not appear to be compared with the Ministry for the Environment's Good Practice Guide for Assessing and Managing Dust recommended level 4g/m²/30 days.
 - c. It does not include a reporting process to the Council regarding the implementation of the contingency process.
 - d. There is no requirement to keep a daily log of dust monitoring inspections and make them available for Council inspections.
 - e. A record of complaints is only provided to WCRC upon request. Grey District Council is not included. Providing a record of complaints to both Councils will assist their statutory obligations to monitoring the compliance of the consent and accords with the MfE guide mentioned above. The record of complaints should include the location, date and time of complaint, a description of weather conditions (notably

wind speed and direction), any identified cause of the complaint, and the corrective action taken.

- f. There is a lack of clarity as to when dust monitoring will occur and its frequency. Section 12 of the DMP specifies as a minimum dust monitoring will occur once a year. This seems infrequent and not responsive to any complaints. Monitoring results should be provided to both local authorities.

217 Further information was also requested in relation to whether there was any characteristics of the dust, such as colour, radiation or other that may mean that a lower dust trigger level (than specified in the MfE's Good Practice Guide for Assessing and Managing Dust) is appropriate. That guide states that the '*deposited dust trigger level may not be appropriate for all circumstances*'. It also states that highly visible dust, such as black coal dust, will cause visible soiling at lower concentrations than many other dusts. The applicant responded to this request by stating:

"As noted in the Radiation memorandum provided in Attachment T to the AEE, the material found at the site, both in situ and once concentrated into Heavy Mineral Concentrate is not deemed to be radioactive in terms of the Radiation Safety Act 2016. There are no unique characteristics of any potential dust generated by the activity which would mean that a lower dust trigger level would be appropriate."

218 ESR was engaged to peer review the applicant's radiation memorandum. The peer review is contained in **Addendum 3.5**. It recommends that additional sampling and testing using radionuclide analytical techniques is carried out and that the radiological risks are re-evaluated with a more comprehensive assessment. Accordingly, it is unclear until additional sampling is carried out, as to whether there are any characteristics of the dust that may mean that a lower dust trigger level (than specified in the MfE's Good Practice Guide for Assessing and Managing Dust) is appropriate. Although this is matter for the WCRC, as radiation relates to effects on the quality of the environment, it is a matter that should be considered in the dust assessment and dust management plan. The radiation testing will need to be carried out before the dust assessment as it will inform the dust assessment. Accordingly, the following comments are general comments made on the DMP and subject to the receipt of further information.

219 As stated in the introduction of the DMP, there are 20 conditions that relate directly or indirectly to dust management. There are five conditions that relate directly to dust management, which in summary require:

- a. Compliance with the Dust Management Plan.

- b. Vehicles not to exceed 15 km/hr on site.
- c. No offensive or objectionable discharge of dust.
- d. Installation of a meteorological station at the site.
- e. Installation of two Dust Deposition Gauges and dust not to exceed a value 4g/m² /30 days above background levels.

220 The soil stabilisation and the stabilised construction entranceways proposed in the Erosion and Sediment Control Plan will also assist in dust suppression.

221 Subject to the applicant providing an acceptable dust assessment and addressing the issues I have raised with the DMP, I think it is reasonably likely the amended Dust Management Plan and the proposed conditions will manage dust effects so that there will be less than minor adverse effects on sensitive receptors. This assumption is primarily based on the fact that the site has a generally damp climate, the proposal is for a wet mining operation, and that operations are generally well setback from neighbouring dwellings. However, it should be noted that this is only from a territorial authority's perspective in relation to the amenity and nuisance effects of dust. The WCRC may have a different perspective on dust matters.

Natural Habitats, Ecosystems and Biodiversity

222 The AEE and the further information response has included the following documents prepared by Ecological Solutions in relation to natural habitats, ecosystems and biodiversity:

- a. Barrytown Mineral Sand Mine Ecological Effects Assessment (Bramley et al, April, 2023).
- b. Wetland Construction and Riparian Planting Plan (Bramley & Bodley, 2023a)
- c. Barrytown Mineral Sand Mine Avian Management Plan (Bramley & Bodley, 2023b)
- d. Correspondence in response to the further information request (Bramley, June 2023).

223 These documents have been peer reviewed by Mr. Mike Harding, Environmental Consultant in a report dated 3 December 2023.

224 Mr. Hardings' report raises several concerns about the ecological assessment provided with the application. The key concerns are summarised below for the benefit of the Hearings Panel:

Assessment Methodology

- a. The EIANZ¹¹ methodology used is not endorsed by DoC, MfE or the Ecological Society of NZ and suppresses project impacts and is therefore problematic.

Potential Adverse Effects at the Location

- a. Ecological values ascribed to some vegetation/habitats are too low and not fully understood.
- b. Potential effects described in the ecological assessment are too low.
- c. The duration of the avifauna survey (1 year) cannot be relied upon to conclude that species will not be present during the 12-year mining period.
- d. The importance of the site's habitats for mobile/migratory bird species and fauna (e.g., Lepidoptera) is unclear.
- e. The avifauna management plan will likely mitigate, but not necessarily avoid adverse effects on avifauna.

Potential Adverse Effects on Adjacent Areas

- a. A 20m separation between mining activities and fauna habitat will likely be insufficient. A wider buffer (100m) should be provided to reduce this risk.
- b. There is evidence that the mining activity may cause the displacement of Australasian Bittern from what is regarded as the best habitat in the ecological district, and that the loss of one individual would affect the Bittern population. Bittern are listed as threatened/nationally critical species and are extremely sensitive to disturbance. It is also evident that Bittern are difficult to detect, and sensitive to disturbance. The risk to Bittern could be mitigated by providing a buffer of 100m (instead on 20m) between the lagoon margin and mining operations.
- c. The limited period of data collection (1 year) and the possibility that other – discreet or cryptic species, may be occasionally present, mean that it is not possible to be certain that all adverse effects on avifauna utilising habitats directly adjacent to the site will be avoided.
- d. It is difficult to determine whether the avifauna management plan would avoid or only mitigate adverse effects on tāiko. In the absence of certainty, it would be prudent to at least restrict mine operations to daylight hours between November and January (inclusive), to reduce the risk of artificial light disorienting tāiko. The avoidance of adverse effects on tāiko is especially important considering the species has a threat status of 'at risk; naturally uncommon.'

¹¹ Environmental Institute of Australian and New Zealand

- e. The submitters state the Royal spoonbill (at risk and naturally uncommon) and kotuku/white heron (threatened/nationally critical) use the Canoe Creek Lagoon habitat. That latter was observed during the site visit. Disturbance of these species by mining activities would be an effect; it is less clear whether the magnitude of any adverse effects on the species (instead of on individuals) would be more than minor.
- f. A significant potential adverse effect of the mine operation is mortality of kororā/Little blue penguin (at risk/declining) caused by mine traffic on the Coast Road. There is insufficient data in the application to determine this effect. Information from submitters indicates that this effect may be high. To help avoid adverse effects on kororā, it would be prudent to restrict mine traffic on the Coast Road to hours of daylight outside the dawn and dusk periods for the July to December period.
- g. It is not clear that the Canoe Creek Lagoon and its margins have been surveyed comprehensively for species of conservation concern.
- h. The EEA is optimistic to assume a survey of vegetation on the property adjoining to the north is not necessary because the proposal will not affect biodiversity. This is inconsistent with the NZCPS's precautionary approach.
- i. The possible effects of altered hydrology on adjacent wetlands could not be assessed without better information on the character and composition of the plant communities at those wetlands. If there is any mining-induced alteration to hydrology (especially water levels) at adjacent wetlands, there remains a risk that there will be adverse effects on indigenous biodiversity.
- j. A possible adverse effect on adjacent vegetation and habitats is collapse of the pit wall, particularly if the injection wells fail. This could cause significant adverse effects on adjacent vegetation/habitat through erosion and dewatering of the Canoe Creek Lagoon and other wetlands. The EEA provides insufficient information to assess this effect as there is no habitat survey of adjoining sites.
- k. The open-freshwater, wetland, and beach habitats of the Barrytown Flats represent the only extensive habitats of these types along a long – and otherwise steep and rocky – coastline. The significance of these habitats – even if used only occasionally – may be greater than suggested by their size and condition.
- l. The occurrence risk, and possible effects from natural hazards, does not appear to have been adequately addressed in the application.
- m. The risk of storm events leading to inundation of the mine, and consequent erosion and/or dewatering of adjacent areas does not appear to have been adequately addressed in the application.

- 225 The submissions raise the following concerns about the potential ecological effects of the proposal:
- a. Effects on biodiversity, notably the Tāiko, Bittern, Kororā.
 - b. Effects on wetlands.
 - c. Inconsistency with Policy 11 NZCPS.

226 The suggested lack of sufficient information is firstly considered. In respect of the statutory framework, subsections 104(6) and (7) RMA address the adequacy of information with resource consent applications, stating:

(6) *“A consent authority may decline an application for a resource consent on the grounds that it has inadequate information to determine the application.*

(7) *In making an assessment on the adequacy of the information, the consent authority must have regard to whether any request made of the applicant for further information or reports resulted in further information or any report being available.”*

227 In my opinion Section 104(6) imposes a burden on an applicant to supply adequate information. The power in Section 104(6) RMA is a discretionary power and should, as with all powers, be exercised reasonably and proportionately considering the circumstances of the case.

228 It is noted that the first application for mineral mining on this site was refused on the grounds of insufficient information. The further information request for the subject application attempted to request sufficient information, but the applicant’s response has not, according to Mr. Harding, provided adequate information. In some respects, I acknowledge the applicant is in a difficult situation. They cannot survey adjoining land if they cannot gain access to that land. However, the applicant has also refused a request from Council to commission a report on the ecological values of the adjoining land, stating that it would take a significant amount of time and would add little value to the assessment. The applicant states the main reasons for this position is that their hydrological assessment establishes that the hydrology of the wetland will not be affected, and the ecological assessment already undertaken by the applicant would have detected secretive species. While the applicant relies on the hydrological assessment to establish that the hydrology of the wetland will not be affected, there are concerns expressed in the WGA peer review of the hydrology assessment as to

viability of the proposed management measures to mitigate the identified groundwater and surface water effects. The WGA report states that:

“A key concern with respect to the geotechnical assessment of the pit wall stability remains whether the injection wells proposed by Kōmanawa as part of the mine water management and effects mitigation system can be operated within 20 m buffer zones along the mine northern and southern boundaries without leading to pit wall stability issues. Any ground movement initiated along these boundary zones is likely to be further exacerbated by the operation of infiltration trenches within the same buffer zones. The viability of the proposed management measures to mitigate the identified groundwater and surface water effects depends on the ground stability within these buffer zones.”

- 229 With this statement in mind, there remains uncertainty regarding the viability of the proposed management measures to mitigate groundwater and surface water effects and subsequently the effects on the adjoining ecosystems.
- 230 Mr. Harding remains unconvinced that the ecological assessment would have detected secretive species, species of conservation concern and that there will be no effects on fauna and flora as suggested by the applicant. Mr. Harding describes that latter as “an optimistic assumption”, which appears to be a reasonable comment given the uncertainty concerning the water management measures raised by WGA.
- 231 While I am not an ecologist, I can see there is little in the way of natural habitat on the site, compared with the large amounts of natural habitat on adjoining land to the north. Therefore, if the fauna survey was only carried out on the site, I can understand Mr. Harding’s perspective that it could have missed secretive species on the adjoining land to the north.
- 232 Further, when conducting my site visit, I witnessed a White Heron land on the site. This species was not identified as being present on the site by the applicant’s ecological assessment, although is mentioned in the Zukowski and Conservation Volunteers NZ submissions as being present in the area. Accordingly, it is unclear from the applicant’s ecological assessment as to whether the White Heron is a regular visitor to the site, or what effect the activity might have on it. It was clear from my site visit that the White Heron was sensitive to noise, as it took flight immediately after a loud bang was heard from an adjoining property.

233 Although gaining access over private property has been an issue with the applicant, it may be possible for the Hearings Panel to obtain permission from the adjoining landowners to conduct an ecological survey on this land. However, it should be noted that there is no provision in the RMA to require access to survey adjoining land for the purposes of a resource consent application. Mr. Harding's evidence suggests the following additional survey data that would assist in the assessment of potential adverse effects of the proposed activity:

- a. Descriptions of plant communities, including a comprehensive list of indigenous species in each plant community/vegetation type, at locations adjacent to the site (the property) that may be affected by hydrological changes.
- b. Avifauna surveys at habitats adjacent to the site, with a particular focus on cryptic or secretive species, such as matuku and fernbird. Subsequent, ongoing monitoring of avifauna at locations adjacent to the site – in addition to those at the site - would provide valuable information for the future assessment of effects.
- c. Survey of mobile invertebrate fauna at and in the vicinity of the site.

234 Mr. Harding also suggests the applicant's assessment on avifauna does not appear to adequately assess the potential adverse effects of the noise of mine machinery and vehicles on avifauna at adjacent habitats.

235 As stated above, Mr. Harding's report suggests the lack of information is inconsistent with the precautionary approach advocated by the NZCPS and the NPS-IB. NZCPS provides for a precautionary approach when the effects of an activity are uncertain, stating:

1. *“Adopt a precautionary approach towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse.*
2. *In particular, adopt a precautionary approach to use and management of coastal resources potentially vulnerable to effects from climate change, so that:*
 - a. *avoidable social and economic loss and harm to communities does not occur;*
 - b. *natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur; and*
 - c. *the natural character, public access, amenity and other values of the coastal environment meet the needs of future generations.”*

- 236 In response to this policy, Mr. Harding's evidence states that the incomplete information about indigenous biodiversity at adjacent habitats means the effects on indigenous biodiversity are "uncertain;" and, those effects could cause "significant" damage to indigenous biodiversity. As stated above, he also comments that loss of one individual bittern suggests that the effects could be significant and notes that the applicant's survey have observed bittern in the lagoon area. His report makes it clear that it is impossible to know what the potential effects are on secretive fauna species or un-surveyed plant species without knowing what those species are. Accordingly, the precautionary approach is justifiable from a policy and evidential perspective.
- 237 NZCPS also contains another relevant policy that dictates the approach to ecological matters. Policy 11 of the NZCPS is the pertinent policy in respect of indigenous biodiversity in the coastal environment and aims to protect indigenous biological diversity in the coastal environment by avoiding adverse effects of activities on indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists; and taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened.
- 238 In reference to Policy 11 of the NZCPS, Mr. Harding's evidence states that tāiko, kororā, matuku, royal spoonbill, kotuku and South Island pied oystercatcher are listed as 'threatened' or 'risk' species. The submission from the Director General of Conservation confirms Tāiko are listed as a threatened taxa by the International Union for Conservation of Nature and Natural Resources. Mr. Harding's evidence goes onto state that the avoidance of adverse effects on Tāiko is especially important considering the species has a threat status of 'at risk; naturally uncommon,' with the qualifiers OL (one location), CD (conservation dependent) and CR (conservation research needed). Mr. Harding is also concerned about the potential adverse effects on Kororā from traffic from the proposal which he describes as a significant potential adverse effect. He also suggests the effects on just one individual Bittern could affect their population. Mr. Harding's report states that it is difficult to know whether the Avifauna Management Plan would avoid, or just mitigate effects on the Tāiko. He notes that the methods proposed to discourage nesting do not avoid effects, instead, the purpose of the actions is to have an effect: displacement of birds from potential nest sites. Further, I note that the procedure for the discovery of dead Tāiko seems to acknowledge the potential of the activity to have fatal effects on Tāiko. This seems to be a remediation measure, which is inconsistent with the Policy 11 NZCPS approach of 'avoids' effects. Mr. Harding's report states that *"a more appropriate response to the presence of 'at risk' or 'threatened' avifauna at the mine location would be to cease mining activity"*.

- 239 Given that the proposal (at this stage) fails to meet Policy 11 of the NZCPS, a precautionary approach as advised by Mr. Harding should be applied. Ideally, this would involve obtaining more information before determining this consent so that any actual and potential effects can be closely considered. If consent was granted without this information, Mr. Harding suggests that the mine should not operate during darkness to avoid effects on Taiko and be setback 100m from adjacent indigenous vegetation and habitat to avoid/mitigate adverse effects on flora and fauna.
- 240 Mr. Harding's report suggests that the 100m setback (as opposed to a shorter or longer setback) came from the Avian Management Plan and the Commissioners decision from the previous application. He also notes that noise, light and movement/activity are key effects on avifauna with regards to considering the length of this setback and that there is insufficient information about noise in the application.
- 241 The appendix to Mr. Harding's report includes a list of species identified as being present on the site or in the surrounding area and which are also listed as Taonga species under Schedule 97 of the Ngai Tahu Claims Settlement Act 1998 (NTCSA). Section 288 of the NTCSA provides that the '*Crown acknowledges the cultural, spiritual, historic, and traditional association of Ngāi Tahu with the taonga species.*' However, section 290 of the NTCSA appears to strictly limit any weighting to be given to this crown acknowledgement under other Acts, other than what has already been provided for under the NTCSA, which principally stipulates duties for the Minister of Conservation. While Section 7 RMA lists Kaitiakitanga as a matter all decision makers need to have particular regard to, I note that Section 3.3 of the NPS-IB puts the onus on local authorities to provide for tangata whenua to exercise kaitiakitanga for indigenous biodiversity. It does not put any responsibility on applicants or consenting authorities. Accordingly, the listing of taonga species appears to be largely irrelevant.
- 242 The potential risks from natural hazards raised by Mr. Harding have been addressed in the natural hazards section of this report.
- 243 With the above matters, in mind, I consider that the adverse effects of the proposal on natural habitats, ecosystems and biodiversity are unclear but could potentially have significant effects. In the absence of adequate information, the precautionary approach (including increased setbacks and no nighttime operation during November to January) is required to avoid these potential effects.

Lighting

- 244 The AEE proposes several measures to mitigate the effects of artificial lighting. These have been summarised in the proposal description of this report. Potential adverse effects from lighting include effects on the:
- a. Natural character of the coastal environment, rivers and wetlands.
 - b. Rural character of the area.
 - c. Amenity and glare on neighbouring properties.
 - d. Views of the night sky.
 - e. Wildlife including in particular the Tāiko.
- 245 Several submissions raise lighting as a concern, particularly the adverse effects of lighting on adjoining residents and the Tāiko.
- 246 While the proposed mitigation measures aim to manage lighting effects, there is a lack of certainty with aspects of the lighting proposal. Accordingly, further information was sought from the applicant, particularly around evidencing that the proposed lighting will comply with the Australian Government's National Light Pollution Guidelines for Wildlife. Note there is no New Zealand Light Pollution Guideline.
- 247 In response to the further information request, the applicant states (in summary):
- a. The only non-fixed lighting will relate to vehicles and moving machinery, which will be lit as required to operate and as per the machinery design. When the machinery is not operating it will be turned off.
 - b. At this point in time, there is only high-level information available about the proposed fixed lighting at the site.
 - c. Mining will not occur beyond 10pm at night.
 - d. Lighting has been considered in the development of the proposal, in particular the processing plant does not include any windows which would allow light to spill and night movements would be directed south to avoid directly passing the Tāiko colony. External doors have been oriented away from the coastline to avoid illumination in this direction.
 - e. Exterior lighting will be motion sensitive and limited to areas traversed by personnel, such as doorway entries and pedestrian paths between buildings.
 - f. All lights will be shielded, pointed downward and have blue light filtered to reduce light in the blue wavelength.
- 248 The following conditions are offered by the applicant in response to the further information request:

- a. *“The Consent Holder must provide a detailed lighting plan to the Consent Authority 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.*

- b. *Within 20 working days of the 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 as per the detailed lighting plan required by Condition 16.3. The results and confirmation of compliance with conditions 15.1 and 15.2 must be submitted to the Consent Authority within 10 working days of receipt of the audit.*

- c. *If the lighting audit establishes compliance with conditions 16.1 and 15.2 is not achieved, the Consent Holder must investigate and implement additional mitigation required to achieve compliance. The Consent Holder must submit a report to Consent Authority within 10 working days of the audit detailing the mitigation measures that will be implemented and must undertake a further compliance monitoring report within 10 working days of any mitigation measure being implemented to demonstrate the effectiveness of that mitigation.”*

249 First, I should state that the applicant needs to clarify whether the conditions 16.4 and 16.5 correctly refer to conditions 15.1 and 15.2 or whether they should refer to conditions 16.1 and 16.2.

250 Second, I am not concerned about the impact of the lighting on neighbouring properties. The proposed consent conditions will ensure that the GDP lighting standard (19.7.9) will be complied. As the effects will be within that standard, they can be dismissed as part of the permitted baseline.

251 However, while application proposes significant measures to mitigate the effects of lighting, including restricted hours of operation, seasonal hours of operation and restricted vehicle movements, lighting from the activity could still affect indigenous fauna. For instance, mining will still occur in the hours of darkness during some months of the year and there will still be lighting from vehicles, buildings and external health and safety lighting. Despite the applicant’s proposal to adhere to the Australian Government’s National Light Pollution Guidelines for Wildlife, Mr. Harding (the peer review ecologist) requests that there is no night time operation during November to

January due to the potential adverse effect on avifauna and the mine should be setback from the adjoining wetlands. He also suggested that loss of one individual bittern could be significant. With these matters in mind, I would recommend amending the conditions to impose further limits regarding night time operation and setbacks as per Mr. Harding request and to ensure adverse effects on fauna are avoided.

Soil Effects

252 Mining can potentially effect soil fertility and the future productive potential of land. Despite the site's soil not being identified as highly productive land, safeguarding the life-supporting capacity of soil is part of the purpose of the RMA and therefore must be considered.

253 The application proposes the progressive rehabilitation of the site including the reinstatement of soils. Conditions are proposed that require:

- a. Stripping of soil ahead of operations.
- b. Stockpiling of soil for progressive rehabilitation and final mine closure rehabilitation.
- c. Protection of stockpiled soil from erosion.
- d. No burying of topsoil or removal from the site.
- e. Revegetation of topsoil.

254 Paragraph 3.77 of the AEE states that:

“rehabilitated land will be returned into the farming area as soon as possible to allow for the landowner to have input into the continued redevelopment of the land and to regain soil fertility. Mining will also allow for improvement to be made to the farmland during the rehabilitation process.”

255 With these matters in mind and subject to the proposed conditions, I consider it is unlikely that there will be any long-term effects on the site's soil productivity. The recontouring of the site, revegetation and new fencing will likely improve the site's productive potential through pasture renewal and better drainage.

Mining Methodology

256 Several submissions including the submission from the Conservation Volunteers of NZ suggest that the mining method is unproven in New Zealand. However, there is no evidence submitted to suggest that the mining methodology will not work. I suspect if the mining methodology does not work then operations will be extremely limited.

- 257 The submission from D. Morris suggests that burying the slime in the pit will become a liquefaction hazard and that the organic flocculant will not work. The issue regarding organic flocculant is a water quality issue for the WCRC to address.
- 258 The Geotech report from RDCL submitted with the application states that the tailing storage void has a low liquefaction risk. It also states that:
- a. the property is underlain by fine sand and is likely susceptible to some form of liquefaction.
 - b. Therefore, the liquefaction risk of the tailings is less than the natural risk of the site's soils.
- 259 There is no expert evidence contrary to the Geotech report. Accordingly, I have no reason to believe that the mining methodology will create adverse effects on the environment.

Site Rehabilitation

- 260 The rehabilitation of the site has been summarised in the proposal section of this report. The AEE includes a detailed rehabilitation management plan (attachment O), the objectives of which are to:
- a. Create a landform with a similar contour and profile at final mine closure.
 - b. Establish vegetation cover on all areas disturbed by mining activity; and
 - c. Protect freshwater values associated with Collins Creek and the Canoe Creek Lagoon from the effects of erosion and sediment generation.
- 261 Conditions 2.1, 4.1, 5.1-5.3, 6.1-6.7, 9.1-9.3 and 13.3 are proposed by the applicant are relevant to the rehabilitation.
- 262 Some of the submissions question whether the applicant will comply with the conditions, including the rehabilitation of the site.
- 263 I am satisfied that the rehabilitation plan and the associated consent conditions provide for the orderly rehabilitation of the site that will help mitigate and remedy several adverse effects on the environment.
- 264 A \$160,000 bond is proposed to secure compliance with the conditions including the rehabilitation plan. The applicant was requested to describe the methodology used to calculate the proposed bond and how it relates to the proposed development. In response, the applicant states:

“The methodology used to calculate the proposed bond is based on the proposed maximum disturbed area, and using the West Coast Regional Council’s bond calculation, which recommends setting a bond for mining at \$20,000 per hectare, where mining is at a depth greater than 10m. In this instance the maximum depth of mining is actually less than 10m. Based on 8ha disturbed, an appropriate bond sum has been determined to be \$160,000. This methodology was the subject of questioning at a resource consent hearing for mineral sand mining, and was deemed adequate to achieve site remediation in that instance. This could be confirmed with the West Coast Regional Council who have considerable experience in administering bonds on mining operations on the West Coast and the cost of remediation.”

265 Mr. Tony Ridge from WCRC has advised that the Council do not have an official bond calculation amount. They have some in-house notes regarding bonds, but they apply to the run of a mill alluvial gold mine operation and accordingly are not appropriate for the subject application.

266 The calculation of the bond is important as the bond might be the only means by which the Councils can address any non-compliance matters cost effectively, or in the event the applicant company cannot for some reason implement the consent conditions. Instead of the \$160,000 bond proposed by the applicant, I consider the bond should be calculated independently and objectively by an advisor with expertise in calculating mine bonds with no relationship to the applicant. The advisor should be mutually accepted by both parties. If there is disagreement about the bond calculation, it should be referred to arbitration. I have suggested a suitable bond condition in **Addendum 2**.

Property Values

267 Several submissions mention the proposal will have an adverse effect on their property values. Adverse effects on property values are considered double counting of other adverse effects on the environment and are therefore not considered further.

Activities on the Surface of the Water

268 The applicant has clarified in response to the further information request that there will be no activities on the surface of the water. The water intake structure for Canoe Creek will be located within the bed of the river and as such is a matter for the Regional Council to consider.

Carbon Emissions

269 Several submissions raise a concern about carbon emissions emanating from the development. Given this is a discharge to air, this is a matter for the Regional Council to address.

Health and Safety

270 The submission from S. Allan (submission no. 87) requests a job safety analysis report and job hazard analysis report. While I am not sure what these are, I assume the submitters are referring to health and safety matters. I am confident that the health and safety legislation will appropriately manage health and safety onsite. Transport health and safety effects are addressed in the traffic and access section of this report.

271 Fire and Emergency New Zealand (FENZ) (submission no. 147) are concerned about the ability of the activity to respond to a fire. They request conditions requiring:

- a. Sufficient water supply be provided in accordance with the NZ Fire Service Firefighting Water Supplies Code of Practice SNZ PAS 4509:2008.
- b. Preparation of a Site Emergency Management Plan in consultation with FENZ to include procedures to manage the risk from and contingency for: fire, mining explosion, forecast extreme weather events and flooding.

272 I agree with the request from FENZ and the preparation of a Site Emergency Management Plan is consistent with my earlier recommendation regarding a condition requiring a management plan that would address the response to any adverse effects resulting from a natural hazard.

Future Mining Development

273 The submission from J. Cayill states that hypothetical approval of the further application becomes more likely if the subject application is granted.

274 In response, I firstly note that the consideration of any future development is irrelevant to the consideration of the subject application. Secondly, any future application will be considered on its merits and it may have factors materially different to the subject application that affect how the application is considered and determined.

Positive Effects

275 The proposal will have positive effects on the environment, many of which have been discussed above. Positive effects include:

- a. Supply of heavy metals;
- b. Regional economic effects;
- c. Social effects;
- d. Improvement of the existing farming operation;
- e. Enhancement of riparian and coastal vegetation;
- f. Enhancement of natural character.
- g. Construction of an additional wetland area.

276 While there will be some positive effects of allowing the activity, it is noted that the application does not propose any measures to specifically offset or compensate for adverse effects as per Section 104(1)(ab) RMA.

Cumulative Effects

277 Cumulative effect are effects which arise over time or in combination with other effects. Aspects of the environment, including sensitive receptors (neighbours and wildlife) do not experience affects in isolation but in combination. As the proposal will have multiple effects on the environment and will occur over a 12-year operation period, cumulative effects are particularly relevant to the assessment of this application.

278 Most of the adverse effects of the activity on neighbouring properties have been assessed as being no more than minor. While adverse effects can cumulate to be collectively more than the sum of their parts, I think in this case the combination of these effects, including landscape, noise, dust, traffic and lighting effects, even considering the 24 hour operational and extended 12-year duration of the activity, will have only a minor adverse effect on the amenity of neighbouring properties when compared against what can occur as a permitted activity. While mining is not permitted by the GDP, it is not considered fanciful that some residential, rural and non-rural buildings could be constructed on the site opposite the neighbours and generate a similar level of adverse effects. Note the GDP also permits:

- a. Up to 20 truck movements and 100 other vehicle movements a day.
- b. Noise from non-rural activities from 45 to 55dBA L10 depending on the time and day of the week.
- c. Light not greater than 2.5 lux spill (horizontal and vertical) onto any adjoining property.

279 However, there is an exception to this. Indigenous fauna will also experience cumulative effects of the proposal includin effects from noise, activity/movement, light, dust, altered hydrology, effects from the implementation of the Avian Management Plan

(discouraging nesting etc). The ecologist peer review considers there is a lack of information about the proposal potential effects on ecology, including cumulative effect and that potential adverse effects could be significant.

Assessment of alternatives

280 Schedule 4 RMA requires a description of any possible alternative locations or methods for undertaking the activity if it is likely that the activity will result in any significant adverse effect on the environment.

281 In respect of alternative site locations, minerals can only be worked where they occur and therefore a description of alternative locations is non-sensical.

282 However, and as discussed above, the ecological peer review recommends that the proposal does not operate during the hours of darkness and is setback 100m from any wetlands. This alternative location and method will ensure adverse effects are avoided and mitigated on ecosystems and important avifauna.

283 Other than that, I am comfortable the applicant has considered a variety of alternative methods in developing the proposal. This includes the truck movements and hours of operation and many of the proposed mitigation measures.

Conclusion

284 In conclusion, I consider the actual and potential adverse effects in relation to the activity vary from less than minor to being potentially significant. While there will be some significant positive effects resulting from the proposal, it is difficult to see without more information how these will offset or compensate for the potentially significant adverse effects.

Assessment of Statutory Planning Documents

285 The relevant statutory planning documents under section 104(1)(b) RMA are considered below.

National Environmental Standard (NES)

286 There are no national environmental standards that are applicable to the territorial authority's assessment of the application.

- 287 For the avoidance of doubt the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health 2011 does not apply as the site is not listed as a HAIL site. Note that while the entire site is identified by the WCRC as being a contaminated site, the WCRC has clarified that they have updated their contaminated site register and have confirmed the contamination is located on a neighbouring site.
- 288 The National Environmental Standards for Freshwater Regulations 2020 does not apply to territorial authorities¹², but is applicable to the WCRC assessment of the application.

Other Regulations

- 289 No other resource management or natural and built environment regulations are relevant. I am not aware of any other relevant regulations.

National Policy Statement for Freshwater Management 2020 (NPSFM)

- 290 The NPSFM came into force in 2020 and has not been given effect to by most of the West Coast planning documents except the TTPP. The NPSFM¹³ applies to all freshwater and receiving environments including estuaries and the wider coastal marine area (to the extent they are affected by freshwater). As the site contains and adjoins an estuary that is potentially affected by freshwater, the NPSFM is applicable to the territorial authority's assessment of the application.
- 291 The only objective of the NPSFM is to ensure that natural and physical resources are managed in a way that prioritises:
- a. first, the health and well-being of water bodies and freshwater ecosystems
 - b. second, the health needs of people (such as drinking water)
 - c. third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.
- 292 Te Mana o te Wai is a key concept in the NPSFM and refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community.

¹² Refer to Regulation 5(b) of that NES.

¹³ Refer to section 1.5 of the NPSFM

- 293 While the NPSFM is relevant to the territorial authority's assessment of this application, most of its provisions are more applicable to the WCRC's assessment. The only provision pertinent to the territorial authority assessment is Section 3.5 that requires local authorities to take an integrated management approach that:
- a. Recognises the interconnectedness of the whole environment;
 - b. Recognises the interactions between freshwater, land, water bodies, ecosystems.
 - c. Requires local authorities to manage freshwater, and land use and development, in catchments in an integrated and sustainable way to avoid, remedy, or mitigate adverse effects, including cumulative effects, on the health and well-being of water bodies, freshwater ecosystems, and receiving environments.
- 294 This is relevant to the proposal in terms of whether its management of water avoids, remedies or mitigates adverse effects (including cumulative effects) on the terrestrial flora and fauna in the adjoining estuarine wetlands. As stated in this report's assessment of natural habit effects, Mr. Harding's report concludes that there is insufficient information about the adverse effects on the adjoining wetlands and that if there is any mining-induced alteration to hydrology, there remains a risk that there will be adverse effects on indigenous biodiversity. Accordingly, he recommends a precautionary approach is taken and the mine setback 100m from the wetland.
- 295 Section 1.6 of the NPSFM addresses the level of information required in decision making about freshwater. It states that local authorities must use the best information available at the time, which means, if practicable, using complete and scientifically robust data. It also states that local authorities should:
- a. Take all practicable steps to reduce uncertainty (such as through improvements to monitoring or the validation of models used).
 - b. Must not delay making decisions solely because of uncertainty about the quality or quantity of the information available; and
 - c. If the information is uncertain, must interpret it in the way that will best give effect to the NPSFM.
- 296 The Hearings Panel could request more ecological survey information from the applicant. However, I understand the survey work would have to be carried out over a period of months if not years and therefore would not be consistent with the above requirement to not delay decisions solely because of uncertainty. Therefore clause c. above applies, which means the available information must be interpreted in a way that will best give effect to the NPSFM. Given the objective of the NPSFM is to ensure that natural and physical resources are managed in a way that firstly prioritises the health and well-being of water bodies and freshwater ecosystems, it is my recommendation

that the uncertainty has to be addressed in a way that gives the Hearings Panel a lot of confidence that the health and well-being of the freshwater ecosystem will be protected. As per Mr. Harding's recommendation, this could be addressed by setting back the mine 100m from the wetland.

National Policy Statement on Indigenous Biodiversity 2023 (NPSIB)

- 297 The NPSIB was published in July 2023 and as such none of the West Coast plans or policy statement have given effect to it.
- 298 The NPSIB applies to indigenous biodiversity in terrestrial environments. Section 1.4 of the NPS clarifies the relationship between the NPSIB and other national policy statements, stating:
- a. Both the NZCPS and the NPSIB apply in the terrestrial coastal environment.
 - b. If there is a conflict between the NPSIB and the NZCPS, the latter prevails.
 - c. If there is a conflict between the provisions of the NPSIB and the NPSFW or the NESFW, the latter prevail.
- 299 The objective of the NPSIB is:
- a. To maintain indigenous biodiversity across NZ so that there is at least no overall loss in indigenous biodiversity after the commencement date; and
 - b. To achieve this:
 - (i) through recognising the mana of tangata whenua as kaitiaki of indigenous biodiversity; and
 - (ii) by recognising people and communities, including landowners, as stewards of indigenous biodiversity; and
 - (iii) by protecting and restoring indigenous biodiversity as necessary to achieve the overall maintenance of indigenous biodiversity; and
 - (iv) while providing for the social, economic, and cultural wellbeing of people and communities now and in the future.
- 300 Policy 7 of the NPSIB states that SNAs are protected by avoiding or managing adverse effects from new subdivision, use and development. As stated earlier, there is an SNA identified by the TTPP on the site which encompasses the northern part of Canoe Creek lagoon, all of Deverys lagoon and Rusty lagoon. The interpretation section of the NPSIB confirms that 'SNAs' include SNAs identified in proposed plans/policy statements until it is determined to be not an SNA by an ecologist engaged by the local authority.

- 301 Clause 3.10 of the NPSIB states that each of the following adverse effects on an SNA must be avoided, except as provided in Clause 3.11:
- a. loss of ecosystem representation and extent:
 - b. disruption to sequences, mosaics, or ecosystem function:
 - c. fragmentation of SNAs or the loss of buffers or connections within an SNA:
 - d. a reduction in the function of the SNA as a buffer or connection to other important habitats or ecosystems:
 - e. a reduction in the population size or occupancy of Threatened or At Risk (declining) species that use an SNA for any part of their life cycle.
- 302 Clause 3.11 provides a different policy test for mineral extraction that provides significant national public benefit that could not otherwise be achieved using resources within New Zealand. I consider this exemption does not apply to the application as the sand resource being mined is not unique to the site and is found in other parts of New Zealand. Also, Property Economics advises in an email on 15 December 2023 that they do not consider the mine will meet the threshold of being nationally significant. Accordingly, Clause 3.10 of the NPSIB applies.
- 303 As previously mentioned, Mr. Harding’s peer review considers that there is insufficient information to determine whether the proposal could adversely affect ecosystem function of the adjoining wetlands. Therefore, at this stage I cannot assess the application’s alignment with Clause 3.10.
- 304 Policy 3 of the NPSIB is therefore pertinent which states *“A precautionary approach is adopted when considering adverse effects on indigenous biodiversity.”* Clause 3.7 provides more detail stating: *“Local authorities must adopt a precautionary approach toward proposed activities where:*
- a. the effects on indigenous biodiversity are uncertain, unknown, or little understood; but*
 - b. those effects could cause significant or irreversible damage to indigenous biodiversity.”*
- 305 Mr. Harding’s report considers that these criteria are met and therefore a precautionary approach of setting the mine back from the wetland is necessary.
- 306 Turning to the impacts on biodiversity outside the SNA, Policy 8 of the NPSIB states the importance of maintaining indigenous biodiversity outside SNAs is recognised and provided for. Clause 3.16 provides further detail stating that any significant adverse

effects on indigenous biodiversity outside the SNA must be managed by applying the following effects management hierarchy:

- a. adverse effects are avoided where practicable; then
- b. where adverse effects cannot be avoided, they are minimised where practicable; then
- c. where adverse effects cannot be minimised, they are remedied where practicable; then
- d. where more than minor residual adverse effects cannot be avoided, minimised, or remedied, biodiversity offsetting is provided where possible; then
- e. where biodiversity offsetting of more than minor residual adverse effects is not possible, biodiversity compensation is provided; then
- f. if biodiversity compensation is not appropriate, the activity itself is avoided.

307 However, clause 3.16 appears to conflict with Policy 11 of the NZCPS that seeks to avoid adverse effects on indigenous taxa that are listed as threatened or at risk. As stated above, where conflict exists between the NPSIB and the NZCPS, the latter prevails. This means Policy 11 of the NZCPS is not relevant. In any case, it is unclear whether the proposal passes the effects management hierarchy of Clause 3.16 as Mr. Harding states that there is insufficient information about the ecology of adjacent properties. If the proposal leads to mortality of at risk species such as Tāiko, it cannot be said that adverse effects are avoided, minimised or remedied. There is no proposal to offset or compensate for this potential adverse effect.

308 Policy 13 seeks that the restoration of indigenous biodiversity is promoted and provided for. Clause 3.21(4) confirms that local authorities must consider requiring conditions for restoration or enhancement on resource consents in relation to activities in areas prioritised for restoration. Clause 3.21(2) provides the following areas must be prioritised for restoration in plans:

- a. SNAs whose ecological integrity is degraded:
- b. threatened and rare ecosystems representative of naturally occurring and formerly present ecosystems:
- c. areas that provide important connectivity or buffering functions:
- d. natural inland wetlands whose ecological integrity is degraded or that no longer retain their indigenous vegetation or habitat for indigenous fauna:
- e. areas of indigenous biodiversity on specified Māori land where restoration is advanced by the Māori landowners:
- f. any other priorities specified in regional biodiversity strategies or any national priorities for indigenous biodiversity restoration.

309 In correspondence received by Mr. Harding on 12 December 2023, he states that Clause (b) may apply, and Clauses (c) and (f) do apply. Specifically in respect of these Clauses he states that:

- a. *whether clause (b) applies depends on whether it is interpreted to include areas at which these ecosystems were formerly (but no longer) present”.*
- b. In relation to clause (c), that *“The mine location does provide an important buffering function, and could be restored to connect existing vegetation/habitat.”*
- c. In relation to clause (f), *“I haven't read the regional biodiversity strategy. Lowland/coastal forest is a national priority for restoration.”*

310 I think the only way to interpret use of the words ‘formerly present ecosystems’ in clause (b) is that they are no longer there. Therefore, it does apply.

311 Mr. Harding goes onto states that *“priority areas at the site are the lagoon/coastal boundary, though restoration of indigenous vegetation across the whole site would be justified/appropriate as it would reinstate coastal forest and would provide connectivity between existing hill country forest and the coastal lagoon.”*

312 It is noted that Mr. Girvan also recommends restoration planting, albeit to restore natural character. Restoration of indigenous vegetation across the whole site to reinstate coastal forest would obviously come at a considerable cost to the consent holder. However, it is noted that mining the site is very profitable for the applicant and therefore in that sense the cost is justified. Restoration of the whole site would also mean that the land could no longer be used for farming and would potentially conflict with the consent holder’s agreement with the landowner. However, I expect that agreement could be revised. As Mr. Harding suggests there would be ecological benefits to restoring the site in that it would provide connectivity between existing hill country forest and the coastal lagoon. It would also enhance the landscape and provide for carbon sequestration and as such potentially provide an income for the landowner. To assist the Hearings Panel on this matter, I have asked the applicant and Mr. Harding to provide further information on this matter.

313 In summary, I consider the proposal, does not compare favourably with the NPSIB. As required by its Policy 3, a precautionary approach is required to be taken. If the advice of Mr. Harding is followed (being a 100m setback; restricted operation hours; and restoration), the proposal would better align with the NPSIB.

New Zealand Coastal Policy Statement 2010 (NZCPS)

- 314 The NZCPS is applicable as the entirety of the site is identified as being part of the Coastal Environment by the TTPP. It is not located within the coastal marine area.
- 315 Policy 2 is relevant and provides for opportunities in appropriate circumstances for Māori involvement in decision making in relation to resource consent applications. The applicant has engaged with Ngāti Waewae, who, subject to conditions support the application.
- 316 The first part of Policy 3 requires a precautionary approach be adopted towards proposed activities whose effects on the coastal environment are uncertain, unknown, or little understood, but potentially significantly adverse. This precautionary approach has been adopted in considering the impacts on biodiversity and has informed the recommendation for restricted nighttime operations and a 100m setback from the wetlands. Policy 3 is discussed further below in the context of Policy 11.
- 317 The second part of Policy 3 of the NZCPS requires, in particular, the adoption of a precautionary approach to the use and management of coastal resources potentially vulnerable to effects from climate change, so that, amongst other things, natural adjustments for coastal processes, natural defences, ecosystems, habitat and species are allowed to occur. As stated early, the parts of the site that will be raised as a result of recontouring could potentially displace coastal inundation onto adjoining properties, the effects of which I have recommended are assessed by the applicant. This recommendation is also informed by the need to take a precautionary approach.
- 318 Policy 6 amongst other things requires development to be setback from the coastal marine area and other water bodies, where practicable and reasonable, to protect the natural character, open space, public access and amenity values of the coastal environment. As stated, the mine is well setback from the coastal marine area, approximately 150m at its closest point. However, it is not setback from the coastal wetlands and as recommended by Mr. Girvan a revised landscape plan should be sought to explore opportunities to protect natural character.
- 319 Policy 6 also requires, where appropriate, buffer areas from sites of significant indigenous biological diversity. As previously stated, Mr. Harding recommends increased setbacks from the wetlands. This recommendation aligns with Policy 6.
- 320 Policy 11 is pertinent to the application and states:

“To protect indigenous biological diversity in the coastal environment:

- a. avoid adverse effects of activities on:
 - i. indigenous taxa that are listed as threatened or at risk in the New Zealand Threat Classification System lists;*
 - ii. taxa that are listed by the International Union for Conservation of Nature and Natural Resources as threatened;*
 - iii. indigenous ecosystems and vegetation types that are threatened in the coastal environment, or are naturally rare;*
 - iv. habitats of indigenous species where the species are at the limit of their natural range, or are naturally rare;*
 - v. areas containing nationally significant examples of indigenous community types; and*
 - vi. areas set aside for full or partial protection of indigenous biological diversity under other legislation; and**

- b. avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on:
 - i. areas of predominantly indigenous vegetation in the coastal environment;*
 - ii. habitats in the coastal environment that are important during the vulnerable life stages of indigenous species;*
 - iii. indigenous ecosystems and habitats that are only found in the coastal environment and are particularly vulnerable to modification, including estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass and saltmarsh;*
 - iv. habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes;*
 - v. habitats, including areas and routes, important to migratory species; and*
 - vi. ecological corridors, and areas important for linking or maintaining biological values identified under this policy.”**

321 In terms of interpretation of this policy, I interpret ‘avoid effects’ to mean there are no effects. The term ‘Taxa’ is defined in the glossary of the NZCPS as *“Named biological classification units assigned to individuals or sets of species (e.g. species, subspecies, genus, order, variety).”* Therefore, combining these key phrases means that Policy 11 directs there are no adverse effects on the species addressed in subclause (a).

322 Mr. Harding confirms the Tāiko and South Island pied oystercatcher¹⁴ are listed as ‘at risk’ species in the New Zealand Threat Classification System lists. The Director General of Conservation submissions states that the Tāiko is listed as threatened by the

¹⁴ Previously not mention but also present on the site

International Union for Conservation of Nature and Natural Resources, and appear from my reading of that list, to have a sub-categorisation as 'endangered'. Mr. Harding states that it is difficult to know whether effects on the Tāiko will be avoided or just mitigated. I agree and it is noted that the avian management appears to mitigate and remediate adverse effects on Tāiko, rather than avoid effects. That is not consistent with Policy 11 of the NZCPS, nor is it consistent with the precautionary approach required by Policy 3 of the NZCPS. In my view a precautionary approach should focus on avoiding adverse effects rather than mitigating or remediating adverse effects. Therefore, more information is necessary to ascertain compliance with Policy 11.

- 323 Policy 11 also seeks to avoid significant adverse effects and avoid, remedy or mitigate other adverse effects of activities on a range of environments including estuaries, lagoons and coastal wetlands. Mr. Harding considers that there is incomplete information to determine the extent of the adverse effect on the wetland biodiversity and therefore more information is also required to ascertain compliance.
- 324 Policy 13 is also relevant and seeks to preserve the natural character of the coastal environment and to protect it from inappropriate subdivision, use, and development. It also requires the avoidance of:
- a. adverse effects on outstanding natural character;
 - b. significant adverse effects;
 - c. avoid, remedy or mitigate other adverse effects.
- 325 The landscape peer review has confirmed that the natural character of the site is not significant and that there are no significant adverse effects. However, as stated by Mr. Girvan, the extent of natural character adverse effects remains unclear. Accordingly, I cannot assess compliance with Policy 13 until the applicant provides an assessment of coastal natural character.
- 326 Policy 14 seeks to promote restoration or rehabilitation of the natural character of the coastal environment. Mr. Girvan considers there are opportunities to restore natural character at the site that need to be explored further by the applicant. This recommendation aligns with Policy 14.
- 327 The Paparoa Range behind the site is identified as an Outstanding Natural Landscape (ONL). However, Mr. Girvan's report points out that its classification as an ONL has subsequently been reviewed and is no longer considered to be outstanding, whilst retaining recognition as an area of high natural character.

- 328 Policies 21, 22 and 23 will be addressed in the s.42 RMA report for WCRC.
- 329 Policy 25 is relevant and states that in areas potentially affected by coastal hazards over at least the next 100 years, avoid redevelopment, or change in land use, that would increase the risk of adverse effects from coastal hazards. As discussed, the applicant needs to address any increase in site levels and the potential adverse effects of displacement of coastal inundation onto adjoining land.
- 330 Overall, while the proposal aligns with some policies of the NZCPS, there is significant uncertainty about its compliance with some key policies. Changes to the proposal are required to align the proposal with the NZCPS.

Regional Policy Statement (RPS)

- 331 The RPS for the West Coast was made operative in July 2020. It has not been updated to give effect to the NPSIB. As far as I understand it, there is no Proposed RPS.
- 332 Policy 1 (Chapter 4) of the RPS is relevant and seeks to sustainably manage the West Coast's natural and physical resources in a way that enables a range of existing and new economic activities to occur, including activities likely to provide substantial employment that benefits the long-term sustainability of the region's communities. The proposal aligns with this policy.
- 333 Policy 1 (Chapter 5) of the RPS is similar and seeks to recognise the role of resource use and development on the West Coast and its contribution to enabling people and communities to provide for their social, economic and cultural wellbeing. However, as stated in the explanation and the anticipated environmental results, this is subject to Part 2 RMA, including safeguarding the life-supporting capacity of resources, and avoiding, remedying or mitigating adverse effects on the environment. The recognition of resource use and development aligns with the proposal. At this stage, it is unclear whether the proposal avoids, remedies or mitigates effects on the environment and is consistent with Part 2 RMA.
- 334 In relation to indigenous biodiversity, Policy 2 (Chapter 7) states that activities shall be designed and undertaken in a way that does not cause:
- a. The prevention of an indigenous species' or a community's ability to persist in their habitats within their natural range in the ecological district, or
 - b. A change of the threatened environment classification to category two or below at the ecological district level; or

- c. Further measurable reduction in the proportion of indigenous cover on those land environments in category one or two of the threatened environment classification at the ecological district level; or
- d. A reasonably measurable reduction in the local population of threatened taxa in the Department of Conservation threat classification categories 1 – nationally critical, 2 – nationally endangered, and 3a – nationally vulnerable.

335 In relation to these matters, correspondence from Mr. Harding dated 12 December 2023 states that:

- a. “The activity could prevent an indigenous species' ability to persist in their habitat, such as disturbance (noise/light/movement) displacing matuku/bittern (for example) from the lagoon/wetland habitat. There is insufficient information to be certain.
- b. (b) and (c) don't apply, as indigenous vegetation is largely absent at the site.
- c. (d) is unlikely to apply, as it would be very difficult to define "reasonably measurable reduction", and it applies only to threatened taxa (matuku/bittern and kotuku/white heron).”

336 The use of the word ‘or’ after each clause in Policy 2 seems to suggest either clause can be used, which seems non-sensical. In any case, Policy 2 appears in conflict with Policy 7 and clause 3.10 (2) of the NPSIB because the latter requires all adverse effects of new activities to be avoided or managed (including certain adverse effects on SNAs to be avoided) whereas the RPS lists only specific effects. The RPS is more permissive than NPSIB Clause 3.10 (2). Policy 2 of the RPS also seems to conflict with the NZCPS, because Policy 11 of the NZCPS requires the avoidance of adverse effects on 'at risk' taxa.

337 Policy 3 (Chapter 7) provides for an effects management hierarchy, which if cannot be met allows for offsetting and compensation under Policies 4 and 5. Policy 7 provides a similar approach for development within land areas or water bodies containing indigenous biological diversity that does not meet any of the significance criteria in Appendix 1 or 2 of the RPS. While this approach is consistent with the NPSIB to managing biodiversity outside an SNA, as noted earlier the NPSIB in this regard appears to conflict with Policy 11 of the NZCPS that seeks to avoid adverse effects on indigenous taxa that are listed as threatened or at risk. As stated above, where conflict exists between the NPSIB and the NZCPS, the latter prevails.

338 It is uncertain whether the proposal aligns with Chapter 7A of the RPS that seeks to protect the natural character of wetlands and rivers and their margins. As stated, Mr.

Girven says there is uncertainty about natural character adverse effects and therefore this is a matter that requires clarification from the applicant.

339 It is also uncertain whether the proposal aligns with Policy 1 (Chapter 8) of the RPS that seeks to avoid, remedy or mitigate adverse effects on fresh and coastal water quality and aquatic ecosystems. As stated previously, more information is needed.

340 Chapter 9 of the RPS addresses the coastal environment. Notably it has a slightly different approach to Chapter 7, as Policy 1 (chapter 9) seeks to avoid adverse effects on 'significant indigenous biological diversity'. The definition of 'Significant indigenous biological diversity' states "when used in Chapter 9 Coastal Environment, means the biodiversity described in Policy 11 of the NZCPS". Accordingly, on the face of it, this policy is more or less than same as the Policy 11 of the NZCPS. However, Policy 3 affects the interpretation of Policy 1 by providing for development in the coastal environment, which:

- a. Maintains or enhances the social, economic and cultural well-being of people and communities; and
- b. Requires the use of the natural and physical resources in the coastal environment; and
- c. Has a technical, functional or operational requirement to be located within the coastal environment; and
- d. Recognising that minor or transitory effects associated with development may not be an adverse effect within those areas described in Policy 1.b); and
- e. By allowing development where the adverse effects are no more than minor within those areas described in Policy 1.c)

341 This approach appears to be in conflict with Policy 11 of the NZCPS, which has an avoidance policy. As previously stated, the NZCPS should prevail as its dominant in the statutory planning hierarchy. In any case, it is uncertain whether the proposal meets Policy 1 as it is unclear as to what the adverse effects on significant indigenous biodiversity will be.

342 The other part of Policy 1 seeks to avoid significant adverse effects and avoid, remedy or mitigate other adverse effects on indigenous biological diversity, natural character, natural features and natural landscapes. As stated earlier, while the effects on natural character are not thought to be significant, it is unclear as to the exact extent of natural character effects. It is also unclear what the effects on indigenous biodiversity will be.

343 In summary, while the proposal has some alignment with the RPS, it does not align with all its policies. Further, key policies of the RPS are in conflict with the higher order documents and therefore it is the policy of these higher order documents that must prevail.

Regional Land and Water Plan

344 The West Coast Region Land and Water Plan was made operative on 27 May 2014. It is more relevant to the assessment of the Regional Council consents and is therefore assessed in the WCRC s.42A report.

Regional Air Quality Plan

345 The Regional Air Quality Plan (RAP) was made operative in 2002. The RAP is under review but is on hold pending changes to the National Environmental Standard for Air Quality.

346 The only relevant policy of the RAP regarding dust seeks to ensure that any discharge of dust does not occur at a volume, rate or in a manner that could cause an offensive or objectionable effect, including the significant restriction of visibility or the soiling of property.

347 As the AEE does not provide an assessment as to the level or extent of adverse dust effects on sensitive receptors, I cannot assess compliance with this policy at this stage. I have asked the applicant to provide an assessment of dust effects.

Regional Coastal Plan (RCP)

348 Regional coastal plans manage activities in the coastal marine area and related parts of the coastal environment. The proposal is not located in the coastal marine area but is located in related parts of the coastal environment.

349 The RCP for the West Coast was approved in 2000 and has not been updated to give effect to the NZCPS. Accordingly, it is out of date and as a consequence little weight can be given to its provisions. The Proposed Regional Coastal Plan (PRCP) was notified in 2016 but was put on hold in 2020 and has not progressed to hearings. Therefore, little weight can also be given to its provisions.

350 The most relevant provisions of the RCP are considered briefly and in summary seek to:

- a. Minimise the visual impact of structures on natural character¹⁵.
 - b. The possibility of sea level rise should be taken into account¹⁶
 - c. Require the removal of any structure that is redundant.¹⁷
 - d. Manage noise adverse effects on amenity values, ecosystems, use of the coastal marine area, adjacent land and public health. ¹⁸
- 351 There are no noise rules in the RCP.
- 352 The need to consider the possibility of sea level rise lends support to the recommendation of this report for a management plan to address natural hazards.
- 353 The proposed remediation of the site is consistent with the RCP provisions that seeks to remove redundant structures.
- 354 The provisions of the PRCP are very similar to the RCP and in summary seek to:
- a. To provide for structures to be located within the coastal marine area, while managing effects.¹⁹
 - b. Consider sea-level rise when designing new structures.²⁰
 - c. Provide for extraction of natural material in appropriate places while managing adverse effects.²¹
 - d. Consider buffers/setbacks or limits on activities that propose to remove natural material.²²
 - e. Use indigenous species for any vegetation planting.²³
- 355 The proposal is consistent with the PRCP provisions that seek to provide for extraction of natural materials and structures. The recommendations regarding increasing the setback of the activity are consistent with the PRCP as is the recommended management plan to address natural hazards.

¹⁵ Policy 8.4.1

¹⁶ Policy 8.4.3

¹⁷ Policy 8.4.4

¹⁸ Objective 12.3.1

¹⁹ Objective 5.2.1

²⁰ Policy 5.3.7

²¹ Objective 6.2.1

²² Policy 6.3.3

²³ Policy 7.3.2

356 In summary, while the proposal aligns with some aspects of the RCP and PRCP, it is considered that little weight should be given to these documents considering that the RCP is out of date and the PRCP has not progressed through the planning making process.

Grey District Plan (GDP)

357 The GDP was made operative in 2005 and remains the operative district plan for the Grey District.

358 The entirety of the site is located in the GDP's Rural zone. Chapter 19 of the GDP provides objectives²⁴ and policies²⁵ for the Rural zone which state:

Objectives:

1. *The management of resources in the rural environment in a manner that enables people and communities to carry out a variety of activities while ensuring that the resource base is sustainable for future generations and maintaining the life supporting capacity and healthy functioning of ecosystems.*
2. *The retention of the character of the rural environment in which existing amenities include its openness and spaciousness, natural features and presence of indigenous vegetation.*

Policies

1. *Activities should not significantly reduce the long-term potential or availability of the natural and physical resource.*
2. *New activities should not adversely impact on the operation of established activities provided that any effect generated by the established activity does not give rise to a nuisance that would not normally be expected in a rural working environment.*

²⁴ Objectives 19.3.1 and 19.3.2

²⁵ Policies 19.4.1-5

3. *A wide range of activities are carried out in a manner that avoids, remedies or mitigates adverse effects, including those referred to in Policies 4 - 5.*
4. *Patterns of subdivision and development should ensure that the openness of the rural environment is retained. The bulk and location of structures should not effect the character of the rural area or affect the amenities of adjoining properties.*
5. *Activities should not adversely affect the amenities of the rural area or adjoining properties in terms of such matters as effluent disposal, noise, traffic generation, air emissions, odour, shading and visual impact*

359 These objectives and policies are commented on sequentially below:

- a. While the proposal enables people and communities to carry out a variety of activities, it is unclear whether it will provide for the life supporting capacity and healthy functioning of ecosystems. There is also potential for the proposal to have significant adverse effects on avifauna.
- b. The proposal will have adverse effects on the character, amenity and openness of the area that range from less than minor to more than minor, but reducing to no adverse effects when the site is remediated back to its present state. Coastal natural character effects are uncertain as they have not been quantified.
- c. The proposal will reduce the long-term potential or availability of mineral sand resources at the site.
- d. The proposal will not have more than minor adverse effects on established activities.
- e. Generally adverse effects are avoided, remedied or mitigated with the exception of adverse effects on the coastal natural character and ecology, which will require amendments to the application.
- f. The landscaping and bunding will have a negative effect on the openness of the site, but post completion that openness will be retained. The bulk and location of structures will only have minor effects on the rural character of the area and amenities of adjoining properties.
- g. Policy 5 is non-sensical as it would be impossible for any activity to have no adverse effects on amenity, noise, traffic and visual impact. I interpret this policy as requiring development to have low or only minor adverse effects. Generally, the proposal has only minor adverse effects on these aspects of the environment, with the exception of effects on natural character.

360 Chapter 4 of the GDP addresses landscape matters and lists the west facing slopes of the Barrytown hills behind the flats between Razorback Point and Seventeen Mile Flat to the east of SH6 as an outstanding natural landscape (ONL). This ONL does not include the site, with these hills being situated to the east. Chapter 4 does not contain any rules, but its objectives and policies are a relevant consideration to any discretionary activity. The objectives and policies of Chapter 4 seek the protection of outstanding natural features and landscapes from inappropriate subdivision, use and development. The landscape assessment and peer review are confident that the proposal will not adversely affect the ONL to the rear of the site and therefore the proposal does not offend the provisions of Chapter 4. Further and as previously stated, Mr. Girvan considers these hills are not an ONL.

361 Chapter 5 of the GDP addresses significant indigenous vegetation and significant habitats of indigenous fauna (SNAs). It acknowledges the presence of Westland black petrels south of the Punakaiki River and states that they are the only mainland-breeding colony of this bird. The only relevant objective and policy of Chapter 5 state:

Objective

“The protection and where possible enhancement of areas of significant indigenous vegetation and habitats of indigenous fauna.

Policy

To avoid, remedy or mitigate adverse effects on the ecological integrity, functioning and habitat values and natural character of areas of significant indigenous vegetation and habitats of indigenous fauna.”

362 No SNAs are incorporated into the GDP and it relies on a general vegetation clearance rules to implement the above objective and policies. While the proposal does not contravene any of the GDP’s rules it is noted the TTPP includes a SNA (PUN – W034) which encompasses the northern part of Canoe Creek lagoon, all of Deverys lagoon and Rusty lagoon. As any rules in relation to SNAs or water have immediate legal effect, and as the provisions of an operative plan are relevant to the consideration of any resource consent, it means the above objective and policy are relevant to this application. As previously stated, it is unclear what impact the proposal will have on the adjoining wetlands without more comprehensive information. Accordingly, it is unclear whether the above objective and policy will be implemented or not.

363 Chapter 6 of the GDP addresses waterways and their margins and seeks to avoid, remedy or mitigate adverse effects of activities on natural character. As discussed, Mr.

Girvan considers that opportunities to protect natural character could be further explored by the applicant. I agree and this should be requested by way of condition.

364 Chapter 7 of the GDP addresses the coastal environment, which it states is an undefined term that includes the coastal marine area, all tidal waters and foreshore above the mean high-water springs, dunes, beaches, areas of coastal vegetation, areas subject to coastal erosion and flooding, salt-marshes, and estuaries. The objective of chapter 5 seeks to:

“To preserve the natural character of the coastal environment and the protection of it from inappropriate subdivision, use or development.”

365 The policies of Chapter 5 are relevant and in summary seek to:

- a. Consider the natural values and risks when considering development in the coastal environment.
- b. Require development within the coastal area to take place in modified areas.
- c. Only allow development in unmodified areas if adverse effects can be managed.
- d. Improve public access.

366 In relation to these provisions, it is acknowledged the existing coastal environment of the site has been modified by farming. However, given the proximity of the activity to the wetlands and coastal marine area, Mr. Girvan recommends more planting in the area besides Canoe Creek and the coast and that further opportunities should be explored to protect natural character. Only subject to these matters being addressed could the proposal said to ‘preserve the natural character of the coastal environment’ as required by the above provisions.

367 Chapter 9 of the GDP addresses natural hazards, the objective of which states:

“the adverse effects of natural hazards on people, property and the environment are avoided, or mitigated”

368 The relevant policies state:

- a. *“Development should not occur in areas that are prone to natural hazards, unless the applicant has shown adequate avoidance or mitigation of natural hazards.*
- b. *An assessment by an appropriately qualified person will be required, where appropriate, for resource consent applications.”*

- 369 As stated, I have recommended the applicant address the potential adverse effects from the displacement of coastal inundation on biodiversity values in their evidence. Only once that is received can I assess compliance with the above policies. Subject to a satisfactory response being received, I have also recommended a management plan to ensure there is a suitable remediation if a natural hazard does occur.
- 370 Chapter 10 addresses tangata whenua matters. The objectives of that chapter in summary seek to:
- a. Manage resources important to Tangata Whenua.
 - b. Provide access to traditional food gathering sites.
 - c. Protect culturally significant sites.
- 371 As discussed, the applicant has consulted Ngāti Waewae who appear to have reached agreement with the applicant in making a submission (no. 222) in support of the application. Accordingly, it appears that their concerns have been addressed and the provisions of Chapter 10 have been met.
- 372 Chapter 11 of the GDP addresses hazardous substances, the objective of which seeks to prevent or mitigate the actual and potential effects arising from the storage, use, disposal and transportation of hazardous substances. Considering the proposed conditions and the provisions Hazardous Substances and New Organisms Act 2006, the proposal will align with the provisions of Chapter 11.
- 373 Chapter 12 of the GDP addresses transport matters, the relevant objective of which seeks *“The safe and efficient use of the District’s transport infrastructure”*. The most relevant policy states *“Access, off-street parking and loading, and the intensity of activities should not adversely affect vehicle and pedestrian safety and efficiency.”* As stated earlier, the Waka Kotahi submission raises no substantive issue with the proposal. However, the applicant needs to address the potential adverse traffic safety effects on cyclists and pedestrians.
- 374 Chapter 14 of the GDP seeks to protect heritage sites and places, including archaeological sites. Although, the GDP does not contain rules to manage archaeological sites, the proposed accidental discovery protocol, along with the archaeological authority process should ensure that any accidental discovery of archaeological is managed appropriately.
- 375 Chapter 15 of the GDP addresses financial contributions. The most relevant policy seeks to *“ensure that the costs of avoiding, remedying and mitigating or offsetting the adverse*

effects of any activity on the environment including the provision or upgrading of services and infrastructure, are met by developers.” However, neither GDC or Waka Kotahi have requested a financial contribution.

376 In summary, while the proposal aligns with some provisions of the GDP, more information is needed to establish compliance with some of its provisions, or it needs to be amended to align with its provisions.

Te Tai o Poutini Plan (TTPP)

377 The TTPP is the combined Proposed District Plan for the Buller, Grey and Westland District Councils. It was notified on 14 July 2022 and I understand hearings have commenced or soon to commence, although no decisions have been made to date. I also understand that no rules are operative under section 86F of the RMA as all parts of the plan have been submitted on. Accordingly, and as there is still scope for significant changes to the provisions of the TTPP through the decisions on submissions, little weight can be placed on its provisions. The rules of the TTPP that have immediate legal affect are addressed below.

378 The entirety of the site is located in the TTPP’s Special Purpose: Mineral Extraction Zone (MINZ). The site is also subject to the following overlays:

- a. Coastal Environment
- b. Pounamu Management overlays
- c. Coastal Tsunami Hazard (on the site, but west of the application area)
- d. Coastal Hazard Alert
- e. Coastal Setback
- f. Water body.

379 The introduction to the MINZ states that the zone covers areas where there are mineral extraction activities that are currently authorised, (including by way of resource consent). This raises a question as to how the site qualified for this zoning considering that no resource consent has been granted for the activity to date.

380 The purpose of the MINZ is articulated in objectives MINZ O1 and O2 as being to enable mineral extraction in recognition of the contribution these activities make to economic and social wellbeing, while minimising adverse effects on the environment, the community, and sites of significance to Māori.

- 381 Mineral extraction and processing that intends to be active within the next 12 months are classified as a permitted activity in the MINZ and are subject to several standards, including the requirement for a mineral extraction plan, monitoring report and bond. However, it is noted that these rules are subject to the overlay provisions which may change the consent status. None of the rules of the MINZ have immediate legal effect.
- 382 No consents are required in relation to the Coastal Environment overlay, the Coastal Tsunami Hazard, the Coastal Hazard Alert overlay, the Coastal Setback overlay, or the waterbody overlay.
- 383 While the TTPP indicates that rule SASM-R7 which relates to mineral extraction activities in the Pounamu Management Area overlay does not have immediate legal effect, sites of significance of Māori are included in the RMA's definition of 'historic heritage' and classified as having immediate legal effect under section 86B(3)(d) of the RMA. However, as stated, the accidental discovery protocol should appropriately manage effects on SASM-R7.
- 384 As already stated, restricted discretionary activity consents are required under rules ECO-R2 and ECO-R5 in relation to clearance of indigenous vegetation in the coastal environment. These rules have immediate legal effect. Matters of discretion incorporate a range of matters including: operational need; effects on ecosystems; intrinsic values; and the relevant policies. Policy 6 is relevant and seeks (in summary) to avoid activities which will:
- a. Prevent an indigenous species being able to persist in their habitats;
 - b. Result in a degradation of the threat status, further measurable loss of indigenous cover or disruption to ecological processes, functions or connections in land environments in category one or two of the Threatened Environment Classification at the Ecological District level; and
 - c. Reduce the local population of threatened taxa in the DoC Threat Categories 1 – 3a -nationally critical, nationally endangered and nationally vulnerable.
- 385 Mr. Harding has provided me with comment on these matters and states:
- a. In respect of clause (a), the activity could prevent an indigenous species' ability to persist in their habitat, such as disturbance (noise/light/movement) displacing matuku/bittern (for example) from the lagoon/wetland habitat. There is insufficient information to be certain and also uncertainty around the catastrophic failure through earthquake/coastal inundation.
 - b. In respect of clause (b), the site is not within a category 1 or 2 threatened land environment.

- c. In respect of clause (c) that depends on whether the activity will reduce the population of matuku/bittern or kotuku/white heron, which again is highly uncertain given the lack of information.
- 386 So far as the coastal environment is concerned, Policy 6 seems to conflict with Policy 11 of the NZCPS, which seeks to avoid adverse effects on indigenous taxa. As previously stated, the NZCPS policy prevails.
- 387 Discretionary activity consents are also required under Rules NC–R3 and NC–R4 for clearance of indigenous vegetation and earthworks within riparian margins and for buildings and structures within riparian margins. The relevant objectives of the natural character chapter seek to preserve natural character while providing for appropriate development and providing for activities that have a functional need to locate in the riparian margins subject minimising natural character effects. As already stated, Mr. Girvan suggests there are opportunities for enhancement of natural character that should be required by way of condition to align with this, and other similar policies.
- 388 The strategic directions chapter of the TTPP is also relevant and seeks to enable mineral extraction in the mineral extraction zone, while managing adverse effects on a range of values, including the values of SNAs, native fauna, waterbodies, the coastal environment, and the wellbeing on the community. However, it subsequently allows for adverse effects to be addressed by alternative mitigation measures such as biodiversity offsetting and environmental compensation. These policies are also not consistent with NZCPS Policy 11.
- 389 The transport chapter requires a restricted discretionary activity consent for high trip generating activities under rule TRN-R14. Note this rule does not have immediate legal effect and therefore no consent is required for the subject application. However, it is relevant in terms of the approach to the issue. For mining, high trip generated activities are defined under Table TRN 6 as greater than 30 movements per day. The proposal exceeds this standard. TRN-P1 is the most relevant policy and states the road and rail networks shall:
- a. Be maintained or enhanced to provide safe and efficient transportation; and
 - b. Consider the needs of all transport users and modes of transport; and
 - c. Minimise effects on adjoining properties including the impacts of vibration, noise and glare.

- 390 TRN-P7 is also relevant and seeks to support increased cycling and walking by, amongst other things providing for off-road pedestrian and bicycle facilities to complement facilities located within the road network. The applicant needs to address the impact of the proposal on pedestrian and cyclist safety before this policy can be considered further.
- 391 The earthworks chapter of the TTPP seeks to provide for earthworks to facilitate development, while managing adverse effects. It also requires use of accidental discovery protocols to mitigate the potential risk to earthworks to archaeological sites. The proposal generally aligns with this policy.
- 392 The Light chapter of the TTPP seeks both to enable artificial outdoor lighting and to maintain the character and amenity values, does not affect health and safety, protects views of the night sky, and fauna. A light standard of 2 lux is required from 10.00pm to 7.00am. The proposal complies with that standard and includes a host of other mitigation measures. However, as discussed there is still serious concerns about the adverse effects of the lighting on the avifauna, particularly Tāiko. Accordingly, there is doubt whether the proposal would be consistent with policy (LIGHT-P3) that seeks to minimise adverse effects on the significant habitats of light sensitive native fauna and the species themselves. I am also concerned whether the policy LIGHT-P3 is consistent with Policy 11 of the NZCPS that aims to avoid adverse effects on threatened indigenous taxa.
- 393 The noise chapter of the TTPP seeks to provide for noise generating activities, while not compromising community health, safety and wellbeing and protecting the community from significant noise. The noise peer review confirms the proposal will comply with the noise standards of the TTPP. Accordingly, the proposal complies with this standard.
- 394 In summary, while the proposal is consistent with some provisions of the TTPP, it is not consistent with all its provisions, particularly concerning ecological values and natural character.

Weighting of Statutory Planning Documents

- 395 The weighting of the statutory planning documents is an important consideration as some of the relevant plans/policy statements are:
- a. not operative; or
 - b. have not been updated to give effect to higher order documents; or
 - c. are in conflict with higher order documents.

396 I recommend the following weighting is applied:

- a. Full weighting can be given to the NPS-FW, NPS-IB and NZCPS, noting that there are some conflicts between the NPS-IB and the NZCPS, where upon the NZCPS prevails.
- b. Less weight can be given to the RPS, RCP and GDP as some of their provisions conflict with the higher order documents and have not been updated to give effect to all the relevant higher order documents.
- c. Less weight can be given to the PRCP or TTPP as they have not been sufficiently progressed through the plan making process and some of its provisions conflict with higher order documents.

397 The Regional Land and Water Plan is not relevant to the territorial authority's assessment, while Regional Air Quality Plan contains only a few relevant provisions.

Part 2 RMA (Purpose and Principles)

398 This section of the report contains an assessment of the proposal against Part 2 RMA, which contains its purpose and principles.

Section 5 RMA (Purpose)

399 Section 5 RMA states the purpose of the act is to promote the sustainable management of natural and physical resources. Subsection 5(2) RMA states 'sustainable management' means:

“managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—

- (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
- (b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.”*

400 It is considered the proposal is consistent with the purpose of the RMA by:

- a. Enabling people and communities to provide for their social and economic well-being;

- b. The rehabilitation of the site will sustain the potential of the site’s soil resource to meet the reasonable foreseeable needs of future generations.

401 However, it is considered the proposal would require amendments to be consistent with the provisions of section 5 that seek to safeguarding the life-supporting capacity of ecosystems and avoid, remedy or mitigate adverse effects on ecosystems.

Section 6 RMA (Matters of National Importance)

402 Section 6 RMA states that in achieving the purpose of the Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall recognise and provide for several matters of national importance. These matters are provided in the table below, followed by a statement as to whether the proposal aligns with that matter or not.

SS	Provision	Proposal’s Alignment
a.	the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:	The proposal requires amendment to ensure the natural character of the coast is preserved.
b.	the protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development:	There are no outstanding natural landscapes or features.
c.	the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:	It is uncertain if the proposal will protect the site’s SNA. Adverse effects on indigenous fauna are potentially significant.
d.	the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:	There is no existing public access, and none is proposed.
e.	the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:	The submission in support from Ngāti Waewae suggests this matter is provided for.
f.	the protection of historic heritage from inappropriate subdivision, use, and development:	The accidental discovery protocol will ensure appropriate management of any historic heritage.
g.	the protection of protected customary rights:	No customer rights are affected that I know about.
h.	the management of significant risks from natural hazards.	Further information is required about natural hazard risks to ecosystems.

Other Matters

403 Section 7 RMA states that in achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall have particular regard to several matters. These matters are provided in the table below, followed by a statement as to whether the proposal aligns with that matter or not.

SS	Provision	Proposal's Alignment
a. aa.	kaitiakitanga: the ethic of stewardship:	The applicant has been consulting mana whenua and have amended the proposal in response to that consultation. Mana whenua have made a submission in support. Accordingly, Kaitiakitanga has been implemented through the consent.
b.	the efficient use and development of natural and physical resources:	While some submitters questioned the energy efficiency of the proposal, by their nature minerals can only be worked where they occur and as such it is not considered to be inefficient from a transport perspective. From a financial perspective, the proposal is an efficient use of the site (generating significant returns) and post remediation will continue to be used productively for farming.
ba.	the efficiency of the end use of energy:	Not relevant as the proposal does not generate energy.
c.	the maintenance and enhancement of amenity values:	While there will be some adverse effects on amenity values, the evidence suggests those effects will be minor. The remediation of the site will generally ensure amenity values are maintained. Some of the riparian planting will enhance amenity values.
d.	intrinsic values of ecosystems:	Potential adverse effects on the intrinsic values of ecosystems are unclear and potentially significant.

f.	maintenance and enhancement of the quality of the environment:	This matter relates more to the quality of air and water which is for WCRC to address.
g.	any finite characteristics of natural and physical resources:	By their nature mineral resources are finite.
h.	the protection of the habitat of trout and salmon:	Effects on the habitat of trout are for WCRC to consider.
i.	the effects of climate change:	Effects on climate change are for WCRC to consider.
j.	the benefits to be derived from the use and development of renewable energy.	Not applicable.

Principles of the Treaty of Waitangi

404 Section 8 RMA requires decision makers to take into account the principles of the treaty of Waitangi. It is considered that the proposal aligns with the principles of the Treaty of Waitangi by the applicant’s consultation with Ngati Waewae and the Hearings Panel making an informed decision based on their submission.

Summary Part 2 Matters

405 Despite having alignment with several Part 2 matters, the proposal needs to be amended to not conflict with key aspects of Part 2.

Other Matters

406 The ability to comply with consent conditions is an applicable other matter.

407 Approximately 110 conditions are proposed to manage the actual and potential effects of the proposal with many more sub-conditions. There are also requirements to comply with multiple lengthy management plans. This creates a very large and complex operation to manage from a compliance perspective, both for the consent holder and for the local authorities. The reliance on management plans, which are an adaptive management approach, also introduces a significant element of uncertainty. To address these concerns, further information was sought from the applicant in relation to:

- a. How the applicant intends to manage these compliance requirements.
- b. Whether the local authorities have the existing resources to manage the compliance requirements.

408 The ability of local authorities to resource the monitoring and compliance of the activity was also raised in the submissions from M. Spruce (no. 60) and C. Schwitzer (no. 135).

Although a slightly different, matter the willingness of WCRC and GDC to monitor and enforce consent conditions was questioned in submissions by Golden Sands Horse and Wagon Tours (no. 357). Submissions from C. Rooyen (no. 130), T. Wart (no. 131) and F. McDonald (s 309) all suggest that self-monitoring is a conflict of interest and should be independent.

409 In response to the request for further information on this matter, the applicant has stated that complex consent conditions are not unusual in a mining context and that the applicant intends to employ an Environmental Superintendent to oversee the implementation of a compliance and monitoring regime that will ensure that mitigation requirements are put in place, and that conditions of consent and management plans are adhered to. I agree with the applicant that the employment of an Environmental Superintendent to oversee the implementation of compliance is a suitable solution. On this basis, I think it is important that a condition is imposed on the consent to ensure the employment of an Environmental Superintendent to oversee the implementation of consent conditions. Note I have referred to the Environmental Superintendent as an 'Accountable Person' in the recommended conditions in accordance with the Westland Mineral Sands Co. Ltd decision, but the title does not matter.

410 In relation to local authorities resourcing compliance of this consent, the applicant has commented that the Council has a statutory responsibility to undertake compliance and enforcement of resource consents. The applicant also notes that the WCRC have an extensive compliance team, and one option may be for the GDC to consider delegating its compliance responsibilities to the WCRC if it feels it is not capable of adequately resourcing its statutory responsibilities.

411 I agree that the Councils have a statutory responsibility to monitor consents. They also have the ability to charge for monitoring, delegate functions to one another, to collaborate on compliance matters or engage a consultant to undertake the monitoring. With these matters in mind, it is reasonable to expect that the local authorities should be able to effectively discharge their statutory compliance responsibilities in relation to this consent. If consent is granted, given the complexity of the proposed consent conditions, I would recommend the local authorities meet and agree the compliance monitoring arrangements for this consent to ensure their statutory obligations can be discharged effectively and efficiently.

412 However, although it is a local authority's responsibility to monitor consents and ensure compliance with consent, whether they do so or not is questioned in a submission from K. Anderson that states:

“The local councils have shown a concerning level of leniency and potential conflicts of interest in approving mining projects in the region. The proposed mining project should not be entrusted to councils that might not act impartially.

- 413 It is outside the scope of this report to investigate or question the integrity of the WCRC and GDC compliance, monitoring and enforcement functions. However, as stated above, with so many conditions of consent, it is critical to ensure there are arrangements in place to ensure compliance.
- 414 I agree with submitters that there is a natural conflict of interest in self-monitoring. However, this can be mitigated by ensuring the applicant has to use outside experts to conduct key aspects of the monitoring programme. I have suggested some minor amendments to some conditions to require that. In the instance those experts work is questioned, Council can conduct their own monitoring.
- 415 Notwithstanding, given the sensitive nature of the environment and the level of community concern, it is important that a periodic inspection of compliance management practices on site is conducted by experts independent from the applicant. This inspection could be required by way of consent conditions through an Expert Advisory Panel and would provide the community with a high degree of confidence through an independent and impartial team reviewing the consent holder’s compliance and monitoring activities. This Expert Advisory Panel will also assist in addressing the uncertainty created by the applicant’s reliance on management plans, including the ability for the applicant to change those management plans. The establishment of the Expert Advisory Panel does not replace the statutory obligations of the local authorities to monitor and enforce the consent but provides complimentary expert support and adequate resourcing to the local authorities.
- 416 Given the local interest in this proposal, I also think a Community Liaison Group would be a useful way to create community transparency of the compliance arrangements. It would also be a useful mechanism for the applicant to understand and respond to local concerns. The applicant has proposed a Community Liaison Group in the conditions.
- 417 I have recommended a change to the proposed consent conditions relating to management plans so as to require the relevant consent authority’s agreement prior to the amendment of those management plans. If so, much reliance is to be put on management plans, it is crucial that there is oversight and accountability for any amendments to those management plans. The Expert Advisory Panel will provide

recommendations to the respective Councils on the suitability of any amendments proposed.

418 In summary, subject to appropriate conditions, I consider that the compliance arrangements should be appropriate.

419 There are no other relevant matters.

Adequacy of Information

420 Section 104(6) of the RMA states that a consent authority may decline an application for a resource consent on the grounds that it has inadequate information to determine the application.

421 The completion of the detailed assessment of the application has revealed several points of clarification and matters of further information which are required from the applicant. These matters are set out in **Appendix 2** of this report. Most of these points of clarification and further information are relatively minor and hence easy for the applicant to address in their evidence. The exception is the information about the proposal's potential adverse effects on ecology; pedestrian and cyclist safety; and dust.

422 The peer review ecologist has recommended further information is provided about ecological effects, or if that cannot be provided, conditions of consent should be imposed to ensure potential ecological adverse effects are avoided. This gives the applicant an option.

423 It is crucial that the information requested about pedestrian and cyclist safety is addressed as it relates to a potential a mortal risk. However, while it is crucial, I suspect there will be ways the applicant can mitigate safety effects on pedestrians and cyclist safety.

424 The significance of the dust assessment largely depends on the results of the radiation testing.

425 Subject to this information being provided, the Hearings Panel should have adequate information to determine the application.

Consent Conditions

426 I have reviewed the conditions of consent (Attachment P dated 5 September 2023) and have provided a list of recommended amendments in **Addendum 2**.

Conclusion

427 The application proposes a heavy mineral concentrate sand mine, which requires several discretionary activity consents. Discretionary activity consents can be granted or refused.

428 This report finds that actual and potential adverse effects on the environment of allowing the proposal will range from being less than minor to potentially significant. Potential adverse effects of concern include effects on coastal natural character, ecology and pedestrian and cyclist safety. Ideally, the applicant would provide more information about the potential adverse effects on these matters.

429 This report's assessment of the relevant statutory planning documents found that while the proposal aligns with some of the provisions of the relevant statutory planning documents, it did not align with all their provisions. Notably there is insufficient evidence to establish whether the proposal aligns with a key policy of the NZCPS which requires adverse effects on at-risk taxa to be avoided. There is also insufficient evidence to demonstrate that adverse effects on the adjoining wetlands are avoided, remedied or mitigated and whether the proposal will preserve the natural character of the coastal environment as required by the NZCPS. Weight could not be given to some provisions of the lower order statutory documents as they were either out of date, in conflict with higher order statutory documents, or they have not progressed far enough through the plan making process.

430 In accordance with the NZCPS and the NPSIB, a precautionary approach is required to address this uncertainty about adverse effects on ecological matters. This precautionary approach has informed the key recommended conditions: that there should be no night time operation during November to January, no night time trucking between July to December; and the mine should be setback from the adjoining wetlands.

431 There is a synergy between some of the recommended conditions. The 100m setback will not only reduce effects on wetland ecosystems and avifauna but will also reduce the risk of pit wall collapse and the risk of coastal inundation. Similarly, the condition regarding no night time operation and trucking during certain periods will not only

reduce the effects on avifauna but also reduce nuisance effects on nearby residents and provide them with some respite from the adverse effects of the activity.

432 The recommendation that there should be third party compliance auditing is important to ensure there is an independent, objective and transparent compliance regime that has the necessary expertise to oversee the compliance of the consent. This, along with the onsite environmental superintendent (accountable person) and community liaison group, provides a robust oversight and management regime that provides assurance there will be compliance with the lengthy and complex conditions of consent.

433 In conclusion, subject to a satisfactory response to the further information being provided and only subject to the recommended amendments to the conditions, I consider the proposal is acceptable in terms of the matters under section 104 RMA. This recommendation is only in relation to the territorial authority's assessment of the application.

Appendix 1 – List of Addendums to this Report

Addendum 1 – Summary of Submissions

Addendum 2 – Recommended Amendments to Conditions

Addendum 3 – Peer Review Comments

3.1 Landscape Peer Review

3.1.1 Landscape Peer Review

3.1.2 Landscape comments in relation to submissions

3.2 Noise Peer Review

3.2.1 Noise Peer Review May 2023

3.2.2 Noise Memo November 2023

3.3 Terrestrial Ecological Peer Review

3.4 Economic Peer Review

3.5 Radiation Peer Review

Appendix 2 – Points of Clarification / Further information

Below is a list of matters that need clarification or further information from the applicant. The applicant can either address these matters in their evidence, or the Hearings Panel can request this information under Section 41C RMA.

The applicant should clarify the following matters in their evidence:

- 1 Please clarify the width of the landscape planting proposed along the northern side of Collins Creek. The AEE states it is a 3m wide planting strip, whereas the landscape plans indicate 3m and 7m wide plantings.
- 2 Please clarify the amendments made to the application as agreed with Ngati Waewae.
- 3 Please clarify the discrepancy between the landscape assessment that explicitly states the 200-metre State Highway 6 setback will remain and the landform plan prepared by Palaris (July, 2023) that indicates mining within this area.
- 4 Please confirm whether Figures 8-10 of the rehabilitation plan submitted with the application (Attachment O), indicates that the ground level the western part of the site will be higher than the exiting ground level.
- 5 Please clarify whether conditions 16.4 and 16.5 correctly refer to conditions 15.1 and 15.2 or whether they should refer to conditions 16.1 and 16.2.

The applicant should provide the following further information:

- 6 If the ground level of the western part of the site is being raised, please provide an assessment of any actual and potential adverse effect resulting from the displacement of coastal water on adjoining properties and the ecosystems.
- 7 Please provide evidence confirming the stability of the pit wall within the 20m boundary setbacks which may be affected by the operation of infiltration trenches.
- 8 Please provide an assessment by a suitably qualified person as to the level and extent of adverse dust effects on sensitive receptors, including the adjoining wetlands. This assessment should compare the monitoring results with the Ministry for the Environment's Good Practice Guide for Assessing and Managing Dust recommended level 4g/m²/30 days. It should also consider whether there are any special characteristics of

the dust (including but not limited to radiation levels) that would warrant a lower dust trigger level. The Dust Management Plan should consider the results of the dust assessment and the comments in this report.

- 9 Please quantify the adverse effects of the proposal on the natural character of the coastal environment. Please also consider whether there are additional opportunities to restore natural character and increase setbacks from the coast and wetlands in a manner that is more responsive to the dynamic coastal processes.
- 10 Please provide an assessment by a suitably qualified and experienced person that addresses the actual and potential adverse effects on the safety of pedestrians and cyclists on State Highway 6 resulting from the increased traffic generated by the activity. As well as other relevant information, it should comment on:
 - a. The condition of the carriageway of the coast road (SH6) and any pedestrian and cycling facilities and subsequent their suitability for pedestrians and cyclists;
 - b. The evidence for pedestrian and cyclist use of SH6 including Strava records, school bus drop off points and promotion of cycling in the area.
 - c. Driver behaviour.
 - d. Relevant statistics and guidance material.
 - e. Measure to manage any adverse effects.
- 11 Please provide the following information regarding ecological effects:
 - a. Descriptions of plant communities, including a comprehensive list of indigenous species in each plant community/vegetation type, at locations adjacent to the site (the property) that may be affected by hydrological changes.
 - b. Avifauna surveys at habitats adjacent to the site, with a particular focus on cryptic or secretive species, such as matuku and fernbird. Subsequent, ongoing monitoring of avifauna at locations adjacent to the site – in addition to those at the site - would provide valuable information for the future assessment of effects.
 - c. Survey of mobile invertebrate fauna at and in the vicinity of the site.
 - d. An assessment of the potential adverse effects of disturbance (noise, light, activity/movement) on avifauna at adjacent habitats.
 - e. An assessment of the potential adverse effects of mine-traffic on Kororā along the Coast Road, including assessment of the effects of traffic-induced mortality on the local population.
 - f. An assessment of Policy 13 and Clause 3.21 of the National Policy Statement on Indigenous Biodiversity and the ecological benefits of restoration of indigenous vegetation across the whole site.