

Before the Hearing Commissioners
appointed by the Grey District Council
and the West Coast Regional Council

Under the Resource Management Act 1991 (the **RMA**)

In the matter of Resource consent applications by TiGa Minerals and Metals
Ltd to establish and operate a mineral sands mine at State
Highway 6, Barrytown (RC-2023-0046; LUN3154/23)

Legal reply submissions on behalf of TiGa Minerals and Metals Limited

26 March 2024

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May it please the Commissioners

- 1 This right of reply on behalf of TiGa Minerals and Metals Limited (**TiGa**) addresses matters arising out of the hearings held on 5, 7-9, 12-13, 26 February and 20 March 2024, and the associated further information circulated¹. When presenting its case, the Applicant responded to material pre-circulated prior to 5 February 2024 from the Coast Road Resilience Group (**CRRG**). This has not been addressed further.
- 2 TiGa has remained open and responsive throughout the hearings process. The Proposal and draft conditions have been modified in response to matters raised by submitters, council officers, and the Panel as they arose. Where better outcomes for the environment and community can be achieved without compromising functional and operational requirements, this mitigation is proffered by the Applicant in the interests of providing the certainty requested by the community. TiGa would like to thank the community for their input through submissions and the hearing.
- 3 The Panel has before them comprehensive expert evidence on matters of concern - there has been no stone left unturned. Considerable attention was given by TiGa and the technical team to operations and design to ensure adverse effects will be avoided on any wetlands and indigenous biodiversity, including the Westland Petrel, through onsite mitigation measures. A comprehensive suite of conditions are proffered. TiGa remains committed to ensuring the Proposal can occur within and for the community, alongside robust management of potential effects on the environment.
- 4 There is no doubt the Proposal will contribute significantly to the economic wellbeing of the community and region. Both the applicant and peer reviewer economists consider the proposal has regional significance, with Mr Ballingall stating (orally) that "at a regional level, it's absolutely, very significant".
- 5 Mr Milne for the economic development agency for the West Coast demonstrated the significant impact of mining in the Barrytown area with a graph demonstrating economic lifts and drops directly correlated to historical mining activity in Grey District². Development West Coast supports the mine as an opportunity to provide much needed high-value jobs, economic diversification and future stability for Grey District, where there hasn't been concentrated investment in tourism infrastructure (like there has been for the northern areas of West Coast). Local submitters in support supported that when there is work, the community flourishes and grows,

¹ Listed in SS K McKenzie (reply) at [4].

² Strongman mine, Spring Creek and Pike River.

with one submitter stating she firmly believed local pub would not have closed if the proposed mine was supported from the start³.

Matters of reply

- 6 A reply is provided in relation to the following matters raised throughout the hearing:
- (a) Amendments to the Application
 - (b) Risks to Westland Petrel
 - (i) Submissions made on the Application
 - (ii) Evidence and causation
 - (iii) Risk and adaptive management – *Sustain our Sounds*
 - (iv) Are the Wildlife Light Pollutions guidelines appropriate mitigation?
 - (c) Set back from Wetland areas:
 - (i) Regulation 45D NES-F - functional need
 - (ii) What areas are natural inland wetlands?
 - (iii) Are the coastal lagoons in the CMA?
 - (iv) Are there impacts on biodiversity necessitating a setback from wetlands?
 - (d) Cyclist safety on SH6
 - (e) Climate change
 - (i) Is resource consent needed because discharges from the proposal are "dangerous"?
 - (ii) Can the ETS be appropriate mitigation?
 - (iii) Does case law support preventing or avoiding emissions?
 - (iv) Crown Minerals Act permit decision
 - (f) Values to the community

³ For e.g. Mrs Noble.

- (g) Impacts on tourism
- (h) Hydrology - submitter concerns raised
- (i) Applicant's compliance with conditions
- (j) Other matters
- (k) Further updates to conditions since Ms McKenzie's supplementary statement (19 March 2024).

Amendments to the Application;

- 7 The proposal is to mine within the Application area only (not more broadly on the Barrytown Flats) and then export the Heavy Mineral Concentrate (**HMC**). A Mineral Separation Plant does not form part of this Application. This is the Application for the Panel to assess, not possible future scenarios.
- 8 Ms Elder⁴ (and others) wanted confirmation of direction for trucking and use of maximums for trucking. Maximums have been provided in conditions. TiGa has confirmed that it will restrict its trucking of the HMC south, and it will not occur on Sundays. When either of the West Coast Ports (Greymouth, Westport) become fully operational for bulk and container export then logistics options will be reassessed.⁵ It is accepted that rail from Greymouth to Westport Port will now be required if the Westport Port was to be used due to the restriction of trucking north.
- 9 Multiple other changes have been made to the Application in response to submissions and evidence to further restrict activities and further reduce effects. Ms McKenzie considers the amendments remain within scope of the Application⁶.

Risks to the Westland Petrel

Submissions made on the Application

- 10 The Applicant has sought to adapt to the changing positions on appropriate mitigation for the Westland Petrel. It is useful to consider the original submissions that were made in relation to the Westland Petrel, *Procellaria westlandica*, including:

⁴ SS para 5.

⁵ SoE of Mr Berry, at [17]-[18].

⁶ SS K McKenzie (reply), at 5.

- (a) The West Coast Penguin Trust (**WCPT**)⁷ – references and attaches the comments made in 2021 on the earlier proposal by Kerry-Jayne Wilson the late chair and scientist of the West Coast Penguin Trust (WCPT), a respected seabird ecologist and the co-author of the paper *Waugh and Wilson* (2017). The notes consider a previous ecology report (Dr Bramley was not involved at this stage), and record Kerry-Jayne Wilson's opinion of appropriate mitigation measures including:
- (i) light spill seaward from the processing plant and vehicles working at the plant should be kept to very low levels particularly between 16 November and 15 January;
 - (ii) trucks should not be permitted to drive past the Westland petrel colonies during hours of darkness between 16 November and 15 January.

An additional note is attached, which notes that her (above) recommendations were related to the operations on the 115ha of privately owned farmland (Application Site), and that if mining was permitted north of this site (she references the area between Canoe Creek and approximately McMillan Road) a total reassessment of the risks posed to the Westland petrels would be necessary. Actions to reduce risk are noted for the area to the north are recorded as: may include no mining activities during the hours of darkness, noise controls and further restrictions on lighting.

- (b) The Director-General of Conservation's submission⁸ (dated 13 October 2023) was concerned that the application does not contain sufficient controls to avoid effects on Westland Petrel. The submission focused on lighting from the mining pit, and increased night-time truck movements from the site and sought conditions in the event consent is granted including (relevantly):
- (i) a condition preventing mining and truck movements during the hours of darkness;
 - (ii) compensation for the additional wildlife management imposed on the Department of Conservation as a result of the mining activities;

⁷https://www.greyc.govt.nz/repository/libraries/id:2cvtstvyv1cxbyz1k6uz/hierarchy/sitecollectiondocuments/Your%20Home/Barrytown%20Mining/Submissions/61%20-%20West%20Coast%20Penguin%20Trust%20-%20Oppose_Redacted.pdf

⁸https://www.greyc.govt.nz/repository/libraries/id:2cvtstvyv1cxbyz1k6uz/hierarchy/sitecollectiondocuments/Your%20Home/Barrytown%20Mining/Submissions/241%20-%20Department%20of%20Conservation%20-%20Oppose_Redacted.pdf

- (iii) a requirement to notify and consult the Department of Conservation in the event of a change to the AMP and / or an application to vary the conditions of consent.
- (c) Mr Stuart-Menteath⁹ submitted on the Avian Management Plan (4.0 Taiko, Westland Petrel) seeking the following decision "In the absence of conditions that require controls on lighting with specific requirements that will prevent negative effects on the Westland Petrel, the application should be declined". His oral evidence welcomed the applicant's decision to cease mining and truck movements at night, which he considered should be sufficient to avoid causing fallout problems provided conditions are specific regarding fixed lighting, hours of operation and petrel flight times¹⁰, in particular:
- (i) the conditions should specify a colour temperature of no more than 2000 degrees Kelvin, in addition to use of yellow/orange spectrum light¹¹;
 - (ii) mining and trucking operations should be limited to civil daylight hours, half an hour before sunrise to half an hour after sunset (noting this would seem appropriate to avoid the possibility of fallout)¹².

11 All of these condition requests in submissions have been provided in the proffered conditions by the Applicant. In addition, the use of minivans (instead of staff vehicles) will be used for shift changes during the hours of darkness. With respect to compensation, Dr Bramley confirmed it is normal practice that any additional wildlife management imposed on the Department of Conservation will be paid by the Applicant.

12 Dr Waugh submitted in opposition to the Application¹³ (9 October 2023) referring to the 2017 analysis she co-authored with the late Kerry Jayne Wilson noting:

- (a) should the application be approved, the recommendations presented in our attached submission be used as consent conditions, combined with or

⁹https://www.greyc.govt.nz/repository/libraries/id:2cvtsvtyv1cxbyz1k6uz/hierarchy/sitecollectiondocuments/Your%20Home/Barrytown%20Mining/Submissions/67%20-%20Menteath-Stuart%2C%20B%20%26%20Howard%2C%20D%20-%20Oppose_Redacted.pdf

¹⁰ Verbal submission by Bruce John Stuart-Menteath and Denise Lyla Howard (8 February 2024), paragraph 23.

¹¹ Verbal submission by Bruce John Stuart-Menteath and Denise Lyla Howard (8 February 2024), paragraph 24-25.

¹² Verbal submission by Bruce John Stuart-Menteath and Denise Lyla Howard (8 February 2024), paragraph 35.

¹³https://www.greyc.govt.nz/repository/libraries/id:2cvtsvtyv1cxbyz1k6uz/hierarchy/sitecollectiondocuments/Your%20Home/Barrytown%20Mining/Submissions/101%20-%20Waugh%2C%20S%20-%20Oppose_Redacted.pdf

adapted by similar recommendations and comments from appropriate authorities such as the Department of Conservation, to ensure that adverse effects on seabirds are avoided.

- (b) the ability of the population to withstand additional removals is currently unknown, and research is needed to estimate the effect of any additional removals from sources related to the mining activity. Dr Waugh's submission was focused on seeking additional research to understand the impacts of any increased human activity and particularly industrial activity within the zone used by the petrels and to carefully monitor the impacts of any deaths on the population size, trend and demographic parameters such as adult survivorship, recruitment and productivity.
- 13 For completeness, it is recorded that engagement with DoC was not forthcoming and the Applicant's offer (via Dr Bramley to DoC) prior to lodgement of this resource consent application to provide funding for a population monitoring programme was rebuffed - resulting in the Applicant committing to willing stakeholders and mana whenua Te Runanga o Ngati Waewae to seek to improve biodiversity through predator control - a terrestrial threat to Westland Petrel. The commitment includes activities which will improve the understanding of the Westland Petrel through further research, with Mātauranga Māori central to this work, and working with other stakeholders such as DoC and WCPT.

Evidence and causation

- 14 It is accepted there are substantial threats to the Westland Petrel, but it is submitted the Panel must consider what additional threat this short-term activity poses to the Westland Petrel (when considering the scope of the application and the mitigation proposed, against the existing environment).
- 15 Management and monitoring of the species is outside of control of the Applicant. Dr Waugh confirmed that there is a specially protected area around the breeding site, and you need a permit to access it (orally). Ms Simister confirmed in response to questions that DoC have a comprehensive monitoring programme, and that the Fisheries department are also funding research.
- 16 Submissions in opposition have focused on risks from artificial lighting of the mining activity, and the likelihood of this risk occurring can be managed by controls on lighting. Dr Bramley has set out the comprehensive conditions proffered by the applicant with respect to fixed and mobile lighting during the hours of darkness.
- 17 The Applicant does not require resource consent for lighting activities on the site (which can meet the permitted plan rules). A non-rural activity on the site is permitted to have 100 light vehicle or 20 heavy vehicle movements daily (some of which would reasonably occur during the hours of darkness). The controls

proposed on lighting are more than what is anticipated by permissive Grey District Plan, with uncontrolled lighting with respect to the Westland Petrel. Lighting is regulated only by Lux levels which Mr Stuart-Menteath considers not to be designed for wildlife, and can result in very bright light regardless of shielding¹⁴.

- 18 Lighting controls on existing farming activities on the site are unrestricted – for e.g. the land owner can switch on the artificial lights of the existing milking shed within the hours of darkness and have outdoor lighting associated with garages, the farm shed and their residential housing. Residential subdivision can occur as a controlled activity (1ha), and small-scale mining activities can also occur in the rural areas of the Barrytown flats with lighting unrestricted. The occurrence of these activities are not fanciful¹⁵. The only lighting control we heard was that *after* a grounding occurs, DoC has a chat with the home owners about switching their lights out to prevent further fall out.
- 19 DGoC seek the Panel make findings such as¹⁶ approximately half of all grounded Westland petrel die, and Westland Petrel mortality is already above the threshold of population sustainability meaning that any additional loss from the mine proposal can be considered an adverse population level effect. This request by DGoC is difficult to reconcile with the evidence heard throughout the hearing. For example, we heard that just this season some 50 grounded petrels were found in the Punakaiki area, 20 died and 30 were released successfully, and of the four grounded petrels found in Greymouth, one died¹⁷. Caution must be applied to statements provided by those submitters (experts or otherwise) who are also advocating against the mining proposal.
- 20 There is a high level of uncertainty with respect to what impact fall out from lighting disorientation has on the population. Population models for Westland Petrel deal with survivorship, and a proportion of mortalities relating to fall out, or fall out on the Barrytown flats cannot be provided¹⁸. From all sources of mortality – Dr Waugh (orally) considered the population stable, maybe slightly declining, maybe slightly

¹⁴ Verbal submission at [24]. This submitter sought specific shielding, colour temperate and intensity of fixed lighting in conditions, and expresses concerns about noting that a light spill of 2 Lux at the boundary for a light source 50m from that boundary would be a very bright light regardless of shielding.

¹⁵ Noting that Mr Geddes considers a high level of land development fanciful upon an overly restrictive review of just part of the Barrytown flats (i.e. the land adjacent to the site) and not the areas where development is actually occurring at the southern end.

¹⁶ DGoC Legal Submissions at [9].

¹⁷ This oral comment is consistent with a report in the Greymouth star on 16 March 2024. The Department of Conservation Buller operations manager Suvi van Sumit. (the author of the DoC Submission on the Application) stated this season there were 50 grounded petrels found in the Punakaiki area, of which 30 were released and 20 died, four were found in Greymouth, one died, three were found in Hokitika, 2 were released and 1 died, one was found in Westport and was successfully released.

¹⁸ Ms Waugh, orally.

increasing. Ms Simister also stated (orally) that more birds are found from fallout but mortality is about the same, and that a timeframe to extinction has not been calculated. The conditions of sub colonies closest to the mine are not known, as they are not monitored. (Ms Simister, Dr Waugh orally).

Risk and adaptive management

- 21 Even accepting the evidence from Ms Simister and others that any adverse effect on the Westland Petrel population is a population effect, the Panel must then find that the proposal *causes* an adverse effect, taking into account the mitigation offered.
- 22 Given the context of the Application, and the evidence before the Panel, it is submitted risk elimination or a strict avoidance approach is not appropriate and that adaptive management is an appropriate response in conditions of consent to manage risk and uncertainty. The key question to address is whether uncertainties can be sufficiently reduced, and whether the remaining risk can be adequately managed going forward, with reference to the factors in the Supreme Court case *Sustain our Sounds*¹⁹.
- 23 The interim Environment Court case of *Wilson v Waikato Regional Council*²⁰ related to a mussel farm in the Coromandel in CMA where threatened and at-risk marine species are encountered. Orca (nationally critical) and Southern Right Whales (at-risk, recovering) were threatened or at-risk species for which fatal entanglement or even sub-lethal incidents could give rise to population level consequences. Seabirds potential risks included entanglement, habitat exclusion, benthic habitat change, foreign debris, navigational lights, disturbance and noise but it was found the proposal would pose a very low risk, with any effects on known avian species being negligible.
- 24 The mussel farm was not within important habitat and would not present a significant habitat exclusion or modification risk, and the prospect of serious harm was very low. The dataset was inadequate and of a desktop nature and had uncertainties, but the evidence was sufficient to enable it to make findings (being primarily predictive and evaluative). The Court was satisfied that decline of consent would not fairly and reasonably relate to the risks presented and granted consent (subject to adaptive management and recommended modifications to conditions)²¹.

¹⁹ Opening legal submissions from paragraphs 61-67.

²⁰ *Wilson v WRC* [2021] NZEnvC 131

²¹ *Ibid* at [177].

- 25 In its interim decision the Court held:
- (a) risk is measured according to both scale/serious harmful consequences and relative likelihood;
 - (b) that a precautionary approach can be reflected in consent conditions, rather than dictating consent decline, and in terms of the factors noted in *Sustain our Sounds*:
 - (i) as to ‘the extent of environmental risk (including the gravity of the consequences)’: the risk is very low and the consequences can be effectively managed by condition;
 - (ii) as to ‘the degree of uncertainty’: the uncertainty concerning any future change in the environment is effectively managed by consent duration and conditions; and
 - (iii) as to ‘the extent to which an adaptive management approach will sufficiently diminish risk and uncertainty’: adaptive management is an appropriate application of the precautionary approach in this case.
 - (c) it had the capacity to impose consent conditions that allow for future review in the event that fresh science reveals a need to.
- 26 In the second interim decision on 4 November 2022 which revisited conditions the Environment Court stated²²:
- (a) The Supreme Court in *Sustain our Sounds* emphasised the importance of considering risks, but did not direct that a risk elimination or a strict avoidance approach be taken. Nor did it prescribe any benchmark for adaptive management to satisfy a precautionary approach.
 - (b) A precautionary approach must consider both dimensions of risk, namely likelihood and magnitude, and focusing unduly on magnitude (as it would appear the appellant has done) leads to impracticable, unduly risk-averse, outcomes not directed by the NZCPS or required by the RMA.
 - (c) For marine mammals, the Court found that any population-level consequence of any fatal entanglement or other incident would plainly also harm indigenous biodiversity in the coastal environment. In applying a precautionary approach, the Court then found that the likelihood of harm (including of fatal entanglement) were so low that Policy 11 NZCPS would

²² *Wilson v Waikato Regional Council* [2022] NZEnvC 22, [41]-[45].

not be offended by an effective adaptive management regime under suitable consent conditions.

- (d) it was satisfied it could rely on the Council to duly exercise its statutory responsibilities for administering and enforcing the consent.

27 Dr Bramley's proffered conditions, have responded in detail to the evidence of local Westland Petrel experts and require that adverse effects are avoided, and an appropriate adaptive management for any interactions with Wetland Petrel on the Site. It is submitted that adverse effects will be avoided as risk is significantly reduced and likelihood of the risk occurring is effectively managed by consent duration and conditions, including:

- (a) Trucking will only occur during daylight hours and will only occur to the south, away from the Westland Petrel colony. This is defined as 30mins before sunrise and 30 mins after sunset, and will vary seasonally.
- (b) Mining will only occur during the same daylight hours.
- (c) Where a shift change occurs in the hours of darkness the company will require all staff to use minivan transport.
- (d) The processing plant will be fully housed within a building with no windows;
- (e) Exterior lights will comply with the Australian Light Pollution Guidelines be shielded, pointed downward, filtered to reduce blue light, be 2000k, equipped with switches and motion sensors as appropriate to minimise light at all times.
- (f) The avian management plan has been updated with a procedure to address interactions (which include a sighting) with Westland Petrel on site. The occurrence of one interaction (which includes a sighting or interaction on a wildlife camera) will prompt a review of the AMP. Two interactions within four weeks of each other, or a grounding, will result in operations being suspended at the site during the hours of darkness until the AMP has been reviewed and any actions necessary to protect Westland Petrel incorporated into mine operations. Live birds seen on the road at any time of day/night, should be reported to 0800 DOC HOT as soon as possible and encouraged off the road if safe to do so. There are requirements for reporting and independent oversight.
- (g) Wildlife cameras will be installed around the processing plant, access road and the lagoon to detect Westland Petrel (and Korora) should they be present on site.

- (h) Predator control is required for the duration of the consent will contribute to finding any grounded birds alive.
- 28 As noted in opening, TiGa feels a strong sense of responsibility to, within its control, protect and avoid adverse effects on threatened birds if they were to present on the Application Site and adjoining areas, particularly the Westland Petrel. While not offered as a condition due to current feasibility, the company is currently investigating deploying bird radar technology prior to the activities commencing which could monitor existing flightpath behaviour across the Application Site, and may assist with future monitoring any change to flightpaths of birds as well as detecting birds in vicinity of the operational mine site, alerting staff, and being able to tailor operations accordingly (i.e. switch off lights).
- 29 Ms Simister accepted:
- (a) that if stationary lighting implements the Wildlife Light Pollution guidelines it will be of low risk to the Westland Petrels, and that you can visually distinguish between a bird malnourished or exhausted by its flight home, or a bird impacted by lighting (i.e. birds are in good body condition and health and there is proximate lighting in blue/green intensity)(oral response to questions from the Panel); and
- (b) provided the company uses a mini-bus in the hours of darkness the associated risk from vehicles on SH6 to Westland Petrel will be low²³.
- 30 It is submitted that given the proposed conditions, the focus on magnitude by some submitters, would lead to impracticable and unduly risk-averse outcome not otherwise expected for other Barrytown or west coast community activities. Should unexpected outcomes occur, the Council would be entitled to review conditions and a solution exists (i.e. switch off outside lighting).
- 31 With respect to the likelihood of the risk occurring, it would need to be found that:
- (a) for the short periods when outside lights are on, the Wildlife Light Pollution guidelines aren't effective for Westland Petrel, as it is a seabird which is more susceptible to lighting (addressed below);
- (b) the Westland Petrel's will be disoriented by the lighting which is lit at exactly the same time as it is flying over the site (noting the minimal movements of minivan vehicles, and limited periods of outdoor motion lighting, push-button or emergency maintenance lighting);

²³ SS K Simister (19 March 2024) at [19].

- (c) Westland petrel become grounded as a result of the limited lighting activities;
- (d) The birds will be critically injured or killed during the fallout;
- (e) Or if they survive, after being grounding, the bird is not discovered (despite the cameras being present on site and the requirement for the Applicant to search for them); and
- (f) The Applicant's detection and rescue proposals in the Condition of Consents and AMP do not work and no changes are made to the site activities and this occurrence would repeat itself.

Are the Wildlife Light Pollution guidelines appropriate mitigation?

32 In her first statement of evidence, Ms Simister states that "*any artificial lighting associated with the mining proposal must follow the National Light Pollution Guidelines for Wildlife (Commonwealth of Australia, 2023)*"(*Wildlife Light Pollution guidelines*)²⁴. She also refers to Westland Petrel (*Procellaria westlandica*) being included in the Convention on the Conservation of Migratory Species of Wild Animals (CMSWA) and listed as having an "unfavourable" conservation status. (Appendix II).²⁵ The CMSWA endorsed the Wildlife Light Pollution guidelines in February 2020.

33 Despite the above statement, Ms Simister has also stated that the Wildlife Light Pollution Guidelines are generic guidelines for marine wildlife in general and were not written or tested with Westland petrel in mind.

34 I have reviewed the evidence provided throughout the hearing, and I could not find any specific references to physiology and behaviour in the evidence which would distinguish the Westland Petrel from other seabirds with respect to lighting.

35 Ms Simister gave an example of another seabird species that nests in the Barrytown area and travels to and from their breeding colonies in the hours of darkness (Sooty shearwater) which have not yet been recorded as attracted to lighting and succumbing to fallout in the local area. Otherwise no evidence is provided as to why the Westland petrel physiology and behaviour makes them particularly susceptible to light pollution when compared with other seabirds:

- (a) Ms Simister references *Waugh and Wilson 2017* (and unpublished raw data on Westland Petrel groundings) to support a comment that the species are

²⁴ K Simister, at [14].

²⁵ Appendix I have been assessed as being in danger of extinction throughout all or a significant portion of their range. The Conference of the Parties has interpreted the term "endangered" as meaning "facing a very high risk of extinction in the wild in the near future"; Appendix II covers migratory species that have an unfavourable conservation status.

"documented to be susceptible to artificial light disorientation.²⁶ Threat of artificial lighting is spoken of generally for petrels, for example: *Disorientation caused by attraction to artificial lights is the key impact on burrow nesting seabirds such as those from the Procellariiformes order, forcing them to land as they fly to and from their breeding colonies - a phenomena called 'fallout' or 'grounding'*²⁷.

- (b) Reference in the *Waugh and Wilson 2017* report discusses threats of the Westland Petrel. With respect to attraction to lights (also called fallout) references is made to a scientific report on a global review of seabirds (including procellaria westlandica species) mortality caused by land-based artificial lights (*Rodriguez et al 2017*)²⁸.
- (c) *Rodriguez et al* is also specifically referenced in the Light Guidelines (Appendix G). *Procellariiformes* are specifically referenced including with respect to eye structure and sensitivities, wavelength, intensity and direction, and key management measures provided to address physical aspects of artificial light which are considered most effective (i.e. intensity and colour (wavelength)).

36 Dr Waugh also references³⁰*Rodriguez et al (2017)* stating this study reviewed information about seabird mortality related to light attraction, and concluded that there were many individual species responses to situations, and greater detail was needed to understand and prevent this mortality occurring. In short, there is no simple answer, and it's not always related to weather or time of year, although some factors such as the attraction of fledglings to lights is a common across many petrel and shearwater species.

37 Dr Bramley's evidence refers to the same Wildlife Light Pollution guidelines and principles having been applied at the Westland Mineral Sands' 9 Mile sand mining site (south of Westport) and lists the coastal birds potentially affected at Nine Mile included kororā, tōrea, tōrea tai, fairy prion (*Pachyptila turtur*), tāiko and sooty shearwater (*Puffinus griseus*). Although the Westland Minerals site is not as closely located to the tāiko colony as this proposal, Dr Bramley notes it is located near fairy

²⁶ Evidence of K Simister (25 January 2024) at [14].

²⁷ Evidence of K Simister (25 January 2024) at [21].

²⁸https://www.westcoastpenguintrust.org.nz/wp-content/uploads/2019/03/Rodriguezetal2017-seabirdmortality_land-basedartificiallights.pdf

²⁹<https://www.greyc.govt.nz/repository/libraries/id:2cvtsvtyv1cxbyz1k6uz/hierarchy/sitecollectiondocuments/Your%20Home/Barrytown%20Mining/D-GoC%20Further%20information%20request%20during%20hearing%20-%2026%202024/Waugh%20and%20Wilson%202017.pdf> (page 200).

³⁰ At [52].

prion and sooty shearwater colonies at Wall Island (approximately 120m from Cape Foulwind and 6.5km from the mine). No grounded birds have been detected at Westland Mineral Sands' site, although he also notes that petrel groundings near Westport are historically much less than petrel groundings near Punakaiki and therefore effects would be expected to be less anyway.

- 38 Ms Simister confirmed orally in response to questions that if changes are required to the site lighting in response to interactions, provided lighting has been installed in accordance with the Wildlife Light Pollution guidelines, it should be a "fairly easy adjustment" done by an independent lighting expert to mitigate the risk on Westland Petrels. A lighting audit is a requirement of conditions.

Set back from wetland areas

Regulation 45D NES-F - functional need

- 39 Additional legal submissions were requested and provided on functional need on 16 February 2024. These submissions have not changed as a result of the reply evidence of Dr Durand, and legal submissions of Ms Warnock:
- (a) NES-F Regulation 45D(6) mirrors the requirements of clause 3.22 NPS-FW.
 - (b) The focus is on the placement of the activities necessary (i.e. they can only occur there) to mine a fixed in location mineral thereby minimising disturbance activity within or within a setback of a natural inland wetland;
 - (c) In addition, an applicant must demonstrate the minerals extracted will provide *significant* national or regional benefits;
 - (d) Further where there is an indirect or direct loss of extent or values of a natural inland wetland it needs to be demonstrated how each step of the effects mitigation hierarchy will be applied to any loss of extent or values of the wetland (including cumulative effects and loss of potential value). The hierarchy begins with avoidance of effects and concludes with avoidance of the activity;
 - (e) Reading the test in this way – as opposed to focusing on whether minerals occur elsewhere on a site or may occur elsewhere in a region - does not provide unconstrained mining activity, or make the functional need aspect redundant.
- 40 Mr Brand stated that this area is unique in that it contains high-grade deposits, with the composition garnet and ilmenite together, with two substantial mineral resources that can be extracted from the one location that it is rare for such a composition of minerals to be found with both being in economically viable

quantities.³¹ Dr Durand did not provide evidence to support his suggestion that this mining can occur elsewhere.

- 41 While considered separately for the purpose of Regulation 45D(6), the practical reality is that a project, such as this, considers mining planning and environmental effects elements together as Mr Miller sets out in his evidence. Dr Durand's interpretation, despite accepting "the proposal is best arranged that way", does not allow the effects of the Application to be assessed under Regulation 45D, despite the project seeking to protect the extent and values any wetlands (natural inland wetlands or otherwise).

What areas are natural inland wetlands

- 42 Opening legal submissions at paragraphs 31-33 sets out the areas of natural inland wetlands with reference to the evidence of Dr Bramley. Dr Bramley assesses there are no natural inland wetlands on the application site. There is no evidence which has credibly disputed this.
- 43 With respect to the neighbouring Langridge property to the north, no evidence has been provided that such natural inland wetlands do exist there and the evidential burden has not been met. The Application assumed the existence of these wetlands if such evidence was provided. For TiGa, Dr Bramley stated he had insufficient evidence to determine whether natural inland wetlands existed on the northern Langridge property, noting the change to the definition since Mr Nichol had carried out an assessment for the earlier application.
- 44 In opening I invited the Panel not to decide what wetland areas were natural inland wetlands, should a consenting pathway in Regulation 45D for mineral extraction and ancillary activities be met. The High Court has found no error of law in this approach previously taken by the Environment Court when it struggled with the imprecise definition and lack of evidence as to whether a wetland was a natural inland wetland in *Poutama Kaitiaki Charitable Trust v TRC*³² because the activity was relying on the specified infrastructure exception.

Are the coastal lagoons in the CMA?

- 45 As I have noted above, if the coastal lagoons are in the CMA, then they are excluded from the NPS-FM definition of a natural inland wetland. Dr Durand considers the coastal lagoon is a natural inland wetland without reference to evidence and based on the definitions in the RMA, but he omits to refer to the most critical RMA definition ('mouth'). Section 2 RMA defines the landward boundary of

³¹ Mr Brand (orally)

³² Opening legal submissions, at [35].

the CMA where it crosses a river shall be calculated upstream from the river mouth. The term 'mouth', for the purposes of defining the CMA, means the mouth of the river as agreed and set between the Minister for Conservation, the regional authority and the territorial authority. The definition goes on state unequivocally that, once agreed and set, shall not be changed under Schedule 1 or otherwise varied, altered, questioned, or reviewed in any way until the next review of the regional coastal plan.

- 46 Ms McKenzie stated in her rebuttal evidence³³ and orally at the hearing that both the proposed and operative Regional Coastal Plans mark the CMA as located at the mouths of Deverys and Collins Creeks. This demarcation was determined by agreement between the Minister of Conservation, WCRC and GDC. Logically, any water below this point must form part of the CMA.
- 47 There are some wetted areas on the fringe of Canoe Creek Lagoon that contain vegetation. Ecologically, Dr Bramley's assessment is that Collins Creek Lagoon (being a part of the larger Canoe Creek lagoon) and Devery's Lagoon are coastal wetlands and that the surrounding wetland vegetation is also coastal.³⁴ When asked by Commissioner Maassen whether Canoe Creek was a coastal wetland - Dr Gamlen-Greene confirmed orally that she considered, as an ecologist looking at functions, it is a coastal lagoon.
- 48 A recent Court of Appeal case *Page v Greater Wellington Regional Council*³⁵ considered the definition of "wetland" in the RMA in the context of a conviction appeal. This case found wetland delineation requires more than consideration of vegetation, hydrology and hydric soils. It also requires *animals (such as aquatic invertebrates and existence of fauna adapted to wet conditions) adapted to wet conditions*. There is no evidence before the panel as to whether fringe wetted vegetated coastal lagoon areas would meet the definition of wetland (referred to in the natural wetland definition) independently.
- 49 While we could find no case law specific to this situation, there have been cases which have sought to determine the CMA boundary location where there have been disputes as to this line by the relevant authorities.
- (a) The *Christchurch Rivers*³⁶ cases involved a determination of the CMA line in the regional plans for the Heathcote and Avon Rivers which flowed into an

³³ Summary Statement and Rebuttal Evidence – Katherine McKenzie, at [24]-[25].

³⁴ SoE of Gary Bramley, at [151].

³⁵ [2024] NZCA 51; <https://www.courtsofnz.govt.nz/assets/cases/2024/2024-NZCA-51.pdf>

³⁶ *Re Christchurch City Council* (1992) 1A ELRNZ 211 and *Minister of Conservation v Christchurch City Council* (HC) Christchurch AP63 93, 26 July 1993; (1993) 2 NZRMA 593.

estuary. First the Planning Tribunal (PT) determined the estuary was within the coastal area because it was covered by the spring tide, the landforms were dominated by coastal processes, the water was predominantly saline, the majority of species were saline-tolerant and the RMA recognises that estuaries are coastal.³⁷ The PT held that, for practicality, the CMA should be determined by landforms (in this case, bridges) rather than by the extent of saline tolerant flora and fauna.³⁸ On appeal, the High Court confirmed the PT's decision to apply a "common sense" approach tested against scientific evidence.³⁹ The HC also confirmed that reference to Part 2 of the RMA is inappropriate in making this decision.⁴⁰

- (b) This approach was subsequently applied in a non-declaratory, non-plan-making context in *Gisborne District Council v Falkner*.⁴¹ The Planning Tribunal noted that the CMA boundary delineates the jurisdiction between territorial and regional authorities. Therefore, the boundary line needs to be conveniently ascertainable so that people can tell what rules govern their activities without difficulty.⁴²

50 It is submitted on the evidence before you, including the fringe vegetation with the lagoon in the CMA is a common sense approach when considering the dynamic coastal environment and the need to provide a clear ascertainable boundary to delineate the jurisdiction between territorial and regional authorities.

Are there impacts on biodiversity necessitating a setback from wetlands?

51 Mr Geddes and DGoC seeks a 100m setback on the basis of Mr Harding's evidence⁴³. It is unclear when reviewing Mr Harding's position the reasons in evidence for this. Opposition to mining within a 100m (or indeed a 500m) setback appears to be on the basis of mining activity generally. Not this mining proposal, with its specific mitigations proposed.

³⁷ *Re Christchurch City Council*, at 213.

³⁸ *Re Christchurch City Council*, at 217.

³⁹ *Minister of Conservation v Christchurch City Council*, at 22.

⁴⁰ *Minister of Conservation v Christchurch City Council*, at 22.

⁴¹ PT Gisborne Decision A82 94, 13 October 1994. The context being a prosecution where there was a question of whether the activities were being carried out in the CMA. Note also – this decision point was not appealed to the HC: *Falkner v Gisborne District Council* (HC) Gisborne AP1/95, 26 July 1995, at 4.

⁴² *Gisborne District Council v Falkner*, at 31.

⁴³ DGoC Legal submissions at [51].

- 52 Mr Harding appears to interpret that the reference to "avoid" in Policy 11 NZCPS is an absolute reference to "no adverse effects". Opening legal submissions paragraphs [56]-[59] address this point.
- 53 In response to a question from the Panel, Mr Harding confirmed that he did not understand the small extent of disturbance. No reference is made in his reply evidence to the proposed setback for the breeding season, or the approximate time that mining will be within that area. Mr Miller has confirmed that the total time spent inside the 100m area of the lagoons is between approximately 8 to 11 months.⁴⁴ This is not one consecutive stretch of time, but 5-7 weeks in each of panel 4-8 and 10. No reference is made to any other evidence – such as hydrology or noise evidence - to support his conclusions. There will be no mining occurring at night in the pit which would address any lighting concerns. The detailed evidence of Dr Bramley who has worked with Mr Farren and Mr Rekker to understand the noise and hydrology environments, and which informed the design of the proposal should be preferred.
- 54 The technical assessments have not relied on the permitted baseline. However, it is submitted, it would be entirely relevant and appropriate to consider a permitted baseline resulting from agricultural or non-rural activities should the Commissioners consider there to be an effect on the environment which is unacceptable. Relevant permitted baselines are set out in the evidence of Ms McKenzie⁴⁵ - and include a similar permitted disturbed area from earthworks, small mining and other non-rural activities limited to 20 heavy vehicle movements and 100 other vehicles movements, large and/or multiple rural buildings provided lighting doesn't generate 2.5 lux spill beyond the property. Dr Bramley accepted (orally) that general agricultural activities like tethering or bailing could do more damage than the Proposal. As could having cattle stock in paddocks can trample nests and eggs.

Cyclist safety on SH6

- 55 The importance of SH6 as addressed in opening legal submissions from paragraph 95. It is a strategic route of the highest order and is regionally significant infrastructure for which the efficient operation should not be compromised.
- 56 It is submitted that it is not the responsibility of the applicant to resolve existing concerns for cyclist safety on SH6. The peer review by Ableys confirmed that a safety audit is unlikely to show a significant change in the magnitude of the safety

⁴⁴ SS of Stephen Miller (dated 7 February 2024), at [3(f)].

⁴⁵ SoE Ms McKenzie at [59]-[64].

risk to pedestrians and cyclist from that existing⁴⁶. Waka Kotahi, the road controlling authority, has not raised any concerns around effects of cycle-safety of SH6 in its submission.

57 To assist the Panel, a brief review of the submissions made on the Application was carried out with respect to cycling:

(a) While cycle safety was generally raised as a concern in a handful of submissions, across the wide ranging public submissions (357 submissions, 194 in opposition) we could only identify 4 submitters⁴⁷ who stated they cycle this stretch of road. No cycle companies made a submission.

(b) All of these submitters acknowledged the existing risk (For e.g. the road is already questionable for cycling or any alternate forms of transport other than driving⁴⁸; when I cycle to Greymouth, generally the higher the volume of traffic the more unsafe it is for me⁴⁹; SH6 is not a wide road, the white lines at the edge are very often pitted, pot-holed, grassed, and unrideable, necessitating riding out on the road - our right after all - a hairy experience when a following vehicle is passing with oncoming traffic⁵⁰).

(c) It is unlikely that an ordinary reasonable person would ride the SH6 pinch point areas of concern. Throughout the hearing many stated they wouldn't ride on this road – for example the Council peer reviewer⁵¹, Mr Fuller (orally), Mr Milne (orally).

58 The independent traffic experts involved in the hearing agree with the proposed conditions of consent, with the one outstanding matter relating to the imposition of signage on a highway.

59 Mr Fuller does not support the condition requiring additional signage or road markings on SH6 to mitigate the effects of the Mine trucks on pedestrian and cycle safety. While he accepts active warning signage would benefit the existing road users, notably by alerting the current drivers on SH6 of cyclists, his view is that this is remedying an existing safety concern, rather than mitigating the effects of the Mine trucks. This is consistent with Waka Kotahi's position, set out in their correspondence with Mr Fuller, that signage upgrades were not "absolutely

⁴⁶ Mat Collins, at [12(a)].

⁴⁷ #44 Sheppard; #80 Hills; #131 Cromey; #181 Carroll

⁴⁸ #181 Carroll.

⁴⁹ #131 Cromey.

⁵⁰ #44 Sheppard.

⁵¹ at [27].

necessary" and to require this would be inconsistent with how other traffic generating activities are treated⁵². Mr Fuller considers the proposed Conditions are sufficient to mitigate the transport effects of the Application⁵³.

- 60 Notwithstanding this, Mr Fuller looked for an approximate cost of signage and was unable to provide a costing, other than an indication they would be significant particularly in the context of the timeframe of the project. Mr Collins also could not assist. Mr Fuller advised that a cost for a TMP establishing signage on SH6 could be significant (with publicly available information of \$174,000 per site for traffic management).
- 61 TiGa is offering as part of consent conditions with respect to the CLG that it will report any matters of concern raised with respect to State Highway 6 to the West Coast Regional Council Land Transport Committee or NZTA (Condition 11.2(c)).
- 62 TiGa has also lodged a submission on 15 March 2024 on the Draft West Coast Regional Land Transport Plan 2024-2034. As part of its submission, TiGa provided the Abley peer review and recorded that while the safety of the existing roading network is not for it (a private applicant for resource consent to manage), that the recommendations in this review need to be given adequate consideration, funding secured, and investment made to ensure roads are maintained to a high level of safety and efficiency for all users, or alternative safety mitigation measures be implemented (such as signage warning of cyclists). Amendment was also sought to objectives to promote road safety for cyclists, pedestrians and tourist drivers.
- 63 For completeness, it is noted that:
- (a) Mr Geddes' comment that the signage would also benefit any future mining conducted in the Barrytown area by the applicant⁵⁴ is not relevant.
 - (b) That Ms Hills likes to do a weekly bike on SH6 was a factor considered by TiGa when proffering a condition not to truck on SH6 on Sundays.

Climate change

Is resource consent needed because discharges from the proposal are "dangerous"?

- 64 Opening legal submissions at paragraphs [72]-[77] sets out why the proposal meets the permitted activity rules for GHG emissions in the Air Quality Plan. A resource consent is therefore not required, nor can it be granted by the Panel.

⁵² SS N Fuller (19 March 2024), at Attachment 1: NZTA Correspondence.

⁵³ SS N Fuller (19 March 2024), at [36].

⁵⁴ Section 42A GDC (reply), at [45].

Emissions from mobile sources such as motor vehicle emissions were specifically considered in the Air Quality Plan and a permissive approach taken.

65 Legal counsel for DGoC and Dr Durand considers this rule is not able to be met as the discharges are, cumulatively, dangerous⁵⁵.

(a) Dr Durand and Ms Warnock are conflating a compliance assessment for a rule in a plan with an assessment of cumulative effects⁵⁶.

(b) Ms Warnock says case law confirms that GHG emissions are dangerous (with reference to the recent Supreme Court case of *Smith v Fonterra*). This is not relevant to an assessment of whether the individual discharges from a mining operation is dangerous. I note that the pleadings made in that case, when they spoke of the activities of the collective respondents, referred to whether the activities *contributed* to dangerous anthropogenic interference in the climate system, not whether they were dangerous in of themselves.

66 As DGoC consider resource consent is required, it submits the Panel is required to have regard to the climate change effects of the proposal under section 104(1)(a). In paragraph [96], a permitted baseline is then (confusingly) applied when assessing section 104(1) which accepts and discounts permitted emissions from 20 trucks per day (i.e. presumably accepting that vehicle emissions are permitted activities, and that permitted activities are not to be added to a cumulative impact assessment).

Can the ETS be appropriate mitigation?

67 The position of the Applicant remains that resource consent is not required for greenhouse gas emissions as they are specifically permitted under the Air Quality Plan.

68 Even if the Panel considers resource consent is required, my submission is that for this short term proposal TiGa has reasonably proposed to reduce emissions (connect to grid, use existing local trucks and contractors for mining, availability of a minivan for staff⁵⁷, design a fuel efficient proposal, and carry out planting on the Application Site). Residual emissions from fuel are accounted for via the ETS scheme which is an effective and appropriate mitigation.

⁵⁵ Section 42A reply WCRC, at [96].

⁵⁶ This is a view also held by SS Ms McKenzie (reply) at [17].

⁵⁷ Required to be used during the hours of darkness.

69 DoC's submission did not raise climate change concerns, but Ms Warnock provided legal submissions to assist the Panel⁵⁸. Caution should be exercised when considering the case law as support for the propositions cited by Ms Warnock for DGoC.

70 During the hearing, the Supreme court in *Smith v Fonterra Co-operative Group Ltd* determined that a claim for tortious damage from climate change should not be struck out. In doing so, the Court commented that policing the actual environmental effects of the activities of individual emitters is primarily the province of the RMA and not the Climate Change Response Act.⁵⁹

71 Ms Warnock cites parts of the relevant paragraph (i.e. paragraphs 99 – 100) but omits to refer to, in my submission, the more relevant commentary which follows in paragraph 100:

[100] The last point is important to grasp. The CCRA does not purport to cover the entire field. It is a companion measure designed to operate alongside the RMA in relation to GHG emissions. As we noted at [47], RMA amendments in 2004 and 2022 required all decision-makers to have particular regard to the effects of climate change, and regional and local authorities to have regard to CCRA emissions reduction plans and national adaptation plans. We also referred to the recent NES on GHG emissions, which provides for consent authority control of GHGs emitted by industrial process heat devices such as boilers and furnaces.

72 Paragraph 47 also sets out the environmental regulation of GHG discharges under the RMA and expressly records, plans and policies drafted in light of CCRA emissions reduction plans and national adaptation plans will be reflected in future resource consent decisions:

With effect from 2022, that constraint was removed and replaced with a requirement on local and regional councils to have regard to CCRA emissions reduction plans and national adaptation plans when exercising their own rule making and consenting functions. Footnote: See ss 61(2)(d)–(e), 66(2)(f)–(g) and 74(2)(d)–(e), inserted by the Resource Management Amendment Act 2020. RMA plans and policies drafted in light of CCRA emissions reduction plans and national adaptation plans would then be reflected in resource consent decisions.

⁵⁸ From [77]

⁵⁹ *Michael John Smith v Fonterra Co-Operative Group Limited* [2024] NZSC 5, at [99] (at Paragraph 85 DGoC Legal submissions)

- 73 In my submission, *Smith v Fonterra* does nothing more than confirm the law as it has changed since November 2022 as set out in Opening Legal Submissions from paragraph [78].
- 74 Ms Warnock also stated that the ETS scheme could not be considered mitigation (orally), but could not say in response to the Panel questions what the funds from the ETS scheme are used for. Funds are used to directly support emissions reductions. Since 2022, the NZ ETS auction proceeds are used to support emissions reductions programmes through the Climate Emergency Response Fund.
- 75 Finally reference was made to the practice in Australia to address emissions, and the case of *Gloucester Resources*.⁶⁰ This case related to an open cut coal mine extracting 2 million tonnes of coal per year for 16 years with 500ha disturbance, 51ha of remnant native vegetation clearance, and 3 contiguous open cuts up to 220m deep. It is simply not comparable. Ms Warnock accepted in response to questions that Australia does not have a scheme comparable to the ETS.

The Applicant's position on Crown Minerals Act Permit decision

- 76 I read the climate change section in the "Recommendation on MP60785 from NZPAM" (June 2022) provided in the CRRG evidence. The assessment states that the emissions from the proposed activities are captured by the ETS which is the government's main tool for emission reductions. This is consistent with the position in opening legal submissions at paragraphs 80, 82 and 84.

Does case law support preventing or avoiding emissions?

- 77 Section 108AA requires that, unless the applicant agrees to the condition, the condition needs to be directly connected to an adverse effect of the activity on the environment.
- 78 It is submitted, an activity could not be considered to create unacceptable adverse effects if it is permitted in a plan.
- 79 Notwithstanding this, on the request of submitters, Mr Miller has done a preliminary calculation which demonstrates a minimal impact of the proposal's emissions. It is estimated approximately 1,583 t CO₂ pa from mining and 812 t CO₂ pa for road haul, which in the context of the proposed reduced emissions budget for the period (2026-2030) equates to 0.004% of the budgeted emissions overall; or 0.01% of the budgeted emissions for the energy and industry sector, and 0.007% of budgeted transport emissions.

⁶⁰ DGoC Legal Submissions at [97(c)].

- 80 One of the few cases (pre-2004) to directly consider GHG emissions as an effect was *Environmental Defence Society Inc v Taranaki Regional Council*⁶¹. In this case, the applicant had obtained resource consents for a natural gas electricity plant that would emit up to 2.6 million tonnes of CO₂ per year. This equated to around one millionth of total annual global emissions⁶². It is not comparable to this situation.
- 81 Another such case was *Environmental Defence Society (Inc) v Auckland Regional Council*⁶³. EDS appealed a decision to grant a gas-fired combined power station (which would emit up to 1.2 million tonnes of CO₂ per year) seeking the imposition of a condition requiring offsetting emissions by a programme of forestry sequestration. No condition had been included by the Council addressing the discharge of greenhouse gas, and EDS argued the emissions of carbon dioxide were an adverse effect. The appeal was dismissed. The Environment Court accepted the scientific contributions of GHG emissions to climate change but dismissed the appeal, questioning the efficacy in the global context, as well as the appropriateness and reasonableness of imposing mitigation measures, recording⁶⁴:

This disquiet is engendered by a range of considerations including:

- (i) Our inability on the evidence to assess adequately the national and international consequences of such a condition;
- (ii) Our inability on the evidence to assess adequately the social and economic consequences of such a condition;
- (iii) The clear preferred policy of the New Zealand Government to address greenhouse gas emissions as an international issue, and that sectional emissions should be considered at national level to ensure a consistency of approach to guarantee an efficiency compatible with achieving the best social, environmental and economic outcome;
- (iv) The endorsement of the preferred government policy by the regional policy statement and the proposed regional plan;
- (v) The doubtful efficacy of such a condition in the global context.

⁶¹ *Environmental Defence Society Inc v Taranaki Regional Council* ENC Auckland A184/2002, 6 September 2002.

⁶² *Environmental Defence Society Inc v Taranaki Regional Council* A184 at [16]-[19].

⁶³ *Environmental Defence Society (Inc) v Auckland Regional Council* A183: [Case](#)

⁶⁴ *Environmental Defence Society (Inc) v Auckland Regional Council* A183, at [88].

- 82 The disquiet expressed in this case remains relevant today.
- 83 Dr Durand states in his reply "It is not clear exactly how emissions could be [further] reduced or avoided other than by avoiding the activity"⁶⁵. In my submission, it is clearly not the intention of the Government policy (i.e. emission reduction plans) to prevent new activities, especially those activities which have taken all reasonable measures available to it to reduce emissions such as this Application.

Values to the community

- 84 The hearing presented a diverse range of members of the community, with CRRG representing some of the community. The suggestions that the activity cannot co-exist with the Proposal are genuinely held, but not objective and not a possible conclusion when considering the objective and independent evidence provided on the Application.
- 85 Some members of the community claimed that the values of the community include clean air, clean water and the protection of wetlands. Assuming for a moment that these are the only community values, a reasonable person informed of the ecological, hydrological and dust-management expert evidence could not conclude that these values would be harmed. If community values are to be considered, then there are over 150 supporting submissions that show the community also values 57 high-value jobs and responsible economic development.
- 86 A few submitters claimed that only applicants with a track record of operational success should be granted consent. This is an anti-competitive approach which would prevent any new industry from establishing in New Zealand. The Application is an example of a new minerals industry emerging which can diversify the West Coast economy. If only existing operators could obtain resource consents, New Zealand's economy would be trapped in old methods and industries and would stagnate.

Impact on tourism

- 87 There is no credible evidence before the Panel to suggest that other industries, such as the technology sector or tourism, cannot also occur on the West Coast. There is already a co-existence of tourism and extractive industries on the West Coast.
- 88 Mr Milne appeared for Development West Coast (custodians of promoting tourism and visitation to the West Coast). He didn't consider the Proposal would detract from tourism or the untamed wilderness brand. While the Coast

⁶⁵ Section 42A Reply WCRC, at [105].

Road is one of the most significant roads in the world, Mr Milne's view was the size and location of the site wouldn't detract from it, including in the context of the time taken to drive the significant section of the road (about 45min).

- 89 In response to Mr Volk's claims that tourism jobs would be lost to mining, Mr Ballingall explained (orally) that the employment pools for tourism and mining are distinct and meaningful displacement of the tourism pool is unlikely.
- 90 In his evidence in chief, Mr Ballingall explained that diversification of the West Coast economy is beneficial.⁶⁶ The economics peer review by Property Economics concludes that "*even if there is an impact on tourism, it is likely to be minor and significantly outweighed by the economic contributions of the proposed mining operation.*"⁶⁷

Hydrology impacts

- 91 The objective and independent evidence of Mr Rekker and Mr Sinclair, both hydrologists experienced in mining, should be preferred over Professor McGlynn, who stated that his evidence was a high-level assessment of potential impacts and he did not critique the hydrology, water quality, modelling, water management aspects of the Application.
- 92 The following propositions made during the hearing have no realistic basis in evidence:
- (a) *that hydrology will cause the pit to fill up and overflow* – in response to questions, Mr Sinclair stated (orally) that the pit is so large that it would take days to fill, even in a high rainfall event. The Applicant would therefore have more than enough time to respond through the water management system before any overflow occurs;
 - (b) *that the pit could collapse inwards and take the whole 20m buffer with the coastal lagoon* - Mr Wylie confirmed in response to questions there is no value in increasing distance from the lagoon based on geotechnical risk. Mr Wylie confirmed (orally) that the distance does not change stability risks. Notwithstanding this, he has had input into conditions which require additional geotechnical investigations prior to mining in panels 1, 4-9 and 10 and monitoring, and filling of the mine void at the western pit wall within 6 weeks of panel commencement and, within 100m of Canoe Creek Lagoon, complete the filling of the mine void within 8 weeks. Mr Wylie confirmed that the likelihood of a Magnitude 8 Alpine Fault earthquake impacting the mining

⁶⁶ SoE of Mr Ballingall, at 19 and

⁶⁷ Property Economics – Economic Peer Review, at 7.

activity within in any one-year period is 0.001%, which translates as a low risk⁶⁸.

Applicant's compliance with conditions

- 93 Recommendations from the GDC reporting officer appear to be of higher consequence on the basis that he doesn't consider TiGa will comply, which is simply inappropriate. For example⁶⁹:
- (a) Reference is made to the uncertainty about the extent to which the AMP will be resourced and the applicant will judiciously implement the AMP or LMP.
 - (b) Doubt is case on radio communication to support the inclusion of the active road signage condition – "*the communication may not be heard, or could be misheard or misunderstood. It is also dependent on the drivers proactively implementing the radio communication, which is uncertain*".
 - (c) With reference to Mr. Harding's evidence, there remains a considerable risk that regardless of the operator's intentions – and the requirements of the consent conditions – one or more components of the proposed mitigation will fail.
- 94 TiGa intends to be a good neighbour and meet its environmental and social responsibilities.⁷⁰ This includes maintaining compliance with the consent conditions and any other regulatory requirement. There is simply no evidence to suggest otherwise.
- 95 TiGa is entitled to the assumption that it will act legally and in accordance with consent conditions. This is a well-established principle of resource management law.⁷¹ The possibility of non-compliance is therefore not a relevant matter when deciding whether or not to grant consent.

Other matters raised:

- 96 *Future activities* - In addition to the existing environment described in opening legal submissions,⁷² submitters raised other possible activities. These should not be considered as part of the existing environment. Ms Deborah Langridge has stated

⁶⁸ SS of Cam Wylie, at [X].

⁶⁹ Section 42A GDC (reply), at [12], [13], [42], [64].

⁷⁰ EIC of Robert Brand, at [55]

⁷¹ *Barry v Auckland City Council* (1975) 5 NZTPA 312, at 318 as cited in *Jayashree Ltd v Auckland Council* [2016] NZCA 5, at [20].

⁷² Legal submissions for the Applicant (dated 5 February 2024), at [18]-[24].

they intend to erect and use a dwelling on the north side of Rusty Lagoon in the future⁷³, with the potential that it be used as eco-accommodation and run bird-watching and eco-tours on their land (orally). The submitters acknowledged that these activities are not currently undertaken, and it was uncertain whether they would do them. Based on the information provided, it seems probable resource consent would be required for the activities specified. That being said, the project would not prevent these activities still occurring.

- 97 *Lagoon is private property* - Concerns of effects on people carrying out tourism activities on Canoe Creek Lagoon should not be considered relevant as this Lagoon is fully within the private property Nikau Deer Farm Ltd (i.e. the Coates Family).
- 98 *Water quality* - No expert evidence was provided to the contrary of water quality conditions being appropriate – Dr Gamlen-Green hadn't looked at them, and the Panel is entitled to accept these conditions as uncontested by Dr Durand for the WCRC.
- 99 *Industrial vs rural activity*: The numerous references throughout the hearing by the submitters to this proposal being industrial are misguided. The activity would not meet the definition of Industrial Activity in the GDP or National Planning Standards. The Rural Zone is considered the most appropriate zone for mining in the operative Grey District Plan.
- 100 *Grey River radiation* – concentrated samples of monazite said to be taken from the Grey River have no relevance to the Application. Mr Ryan has confirmed that there are very low levels of monazite in the Barrytown ore⁷⁴.
- 101 *Concerns from Ms S Langridge family regarding the future of ponds 3 and 4* – Mr Teear confirmed in evidence the addition of a new wetland area, constituting ponds 3 and 4, on completion of the mining operation will not create any new issues in regard to sea level rise and inundation issues⁷⁵.
- 102 *Visual amenity from the Paparoa Track* – this was assessed by Ms Crawford in her original landscape assessment on page 50, where it is acknowledged from selected locations the site may be visible on clear days, at much lower elevations (than the track itself), at a minimum distance of 8.4km. Any views will be focussed to the ocean, and the coastal plain is a small part of the overall view. Ms Crawford concludes that "*The site and mining activity (other than bare earth) will be difficult to discern. Due to the distance been the site and the viewer, it is considered the*

⁷³ Deborah Langridge – Submission of evidence (7 February 2024), at [43].

⁷⁴ SS M Ryan (19 March 2024), at [8].

⁷⁵ SoE Mr Teear at [51].

Project would have a negligible effect on walkers of the Paparoa Track". The same submitter acknowledged that you also walk past historic mine sites such as Pike Coal River.

- 103 *Facebook page* - A map on TiGa's Facebook page included land in Area 2 in error. TiGa has had this map removed.
- 104 *Noise amenity on SH6* - submitters raised concerns about the effects of freight transport between the Application Site and the loadout destination. With respect to noise amenity effects, Rule 19.7.3 of the Grey District Plan permits noise from trucks on roads. Regardless, Mr Farren has assessed the resulting increase in noise from trucks to be a "just perceptible" change of 3dB.⁷⁶
- 105 *Truck loads* – in response to the query by Ms Elder, the application is based on the proposed haulage company advice of a 30 tonne load.

Key changes to conditions:

- 106 Dr Durand, the reporting officer for the WCRC has not sought any amendments to the offered conditions. Should consent be granted, the Panel can accept the offered WCRC conditions as uncontested by Dr Durand.
- 107 The following additional changes are made to conditions in response to questions from the Commissioners of Ms McKenzie on 20 March 2024:
- (a) Condition 4.1 has been amended to remove reference to conditions of consent and focus on closure activities which is the purpose of requiring the bond.
 - (b) Condition 11.1 has been amended to include a requirement for the applicant to provide a voluntary contribution to a local community group or charity, to be decided by attendees of each meeting (in lieu of paying individual attendees).
 - (c) Condition 16.2 has been amended to ensure that the contents of this condition do not limit the objective in Condition 16.3 to avoid adverse effects on wildlife (specifically Taiko).
- 108 No other changes have been made.
- 109 Please find revised conditions dated 26 March 2024 **attached**.

⁷⁶ Summary Statement of Jon Farren, at [11].

Summary

110 Will this application promote sustainable management? That is the ultimate test for the mineral sand mine operation on Barrytown Flats. There is no doubt the Proposal will contribute significantly to the economic wellbeing of the community and region. The Proposal before you has been designed with protection of the environment and matters of national importance at the forefront of their considerations. It is submitted that the sustainable management purpose of the Resource Management Act 1991 (**RMA**) will be met, including for the reasons provided in opening legal submissions at [10]-[14], and the Proposal is deserving of consent subject to the conditions offered.



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Counsel for TiGa

26 March 2024