**THE ENVIRONMENT COURT**

**CHRISTCHURCH REGISTRY**

**I MUA I TE KOOTI TAIAO O AOTEAROA**

**ENV-2017-CHC-090**

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| **Under** | **the Resource Management Act 1991** |
| **In the matter** | **of an appeal pursuant to section 120 of the Act** |
| **Between** | **THE ROYAL FOREST AND BIRD PROTECTION SOCIETY OF NEW ZEALAND INCORPORATED**<br>**Appellant** |
| **And** | **WEST COAST REGIONAL COUNCIL AND BULLER DISTRICT COUNCIL**<br>**Respondents** |
| **And** | **STEVENSON MINING LIMITED**<br>**Applicant** |

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# SUBMISSIONS OF BEHALF OF STEVENSON MINING LIMITED

**25 JULY 2022**

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## INTRODUCTION

1 An overview of the proposal is set out in Ms Brewster's evidence[1], with details about mine planning and sequencing more fully described in Ms Rock's evidence[2], management of geochemistry and overburden in Dr Pope's evidence[3], water management in Dr Cudmore's evidence[4], rehabilitation in Dr Simcock's evidence, and off-footprint mitigation and offsetting/compensation set out by Dr Bramley.[5]

2 Coal quality information indicate that the Te Kuha deposit contains high quality coking coal for export for steel manufacture that will command premium price as a stand-alone product. As a product blended with other West Coast coking coal, the Te Kuha coal could be used to increase the value of significant tonnages of other coals particularly because of its high rank, high fluidity, high swell, low ash and low sulphur. As well as coking coal markets, it is likely that Stevenson would be able to develop other niche or specialist markets for Te Kuha coal if desired.[6]

3 Coking coal is one of the European Commission's top 30 'critical raw materials'.[7]

4 All actual and potential effects of the proposal have been considered through the course of the last seven years since the application was made. These effects are now addressed in a comprehensive suite of conditions which constrain the proposal and require the avoidance, remediation, and mitigation of effects, and once those measure have been applied the offset of, and compensation for, residual effects.

5 The matters in dispute are three: ecology, economics and landscape. These submissions address these areas of dispute in that order.

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[1] Ms Brewster evidence paras 7 – 62, 75 – 82.
[2] Ms Rock evidence, paras 16 – 39.
[3] Dr Pope evidence paras 47 – 49, 64 – 69.
[4] Dr Cudmore evidence paras 22 – 69, 87 – 119.
[5] Dr Bramley Avifauna rebuttal evidence paras 20 – 28.
[6] Dr Pope evidence paras 16 – 29.
[7] Ms Brewster evidence paras 102 – 105.

## STRUCTURE OF SUBMISSIONS ON ECOLOGY

6 My submissions on ecology differentiate between an assessment of ecological effects[8] and an assessment of those effects against the relevant statutory provisions[9]. They are structured in the following way:

(a) **The Overarching Legal Considerations**

I comment first on the statutory requirements in section 6(c) of the Act and the way the applicant has designed and planned the proposal in light of these requirements. That is followed by submissions on five fundamental differences of approach between the applicant and the opposing parties. This difference in approach permeates the technical and planning evidence. I will submit that for all five differences the applicant's approach is to be preferred because it more correctly applies the statutory requirements.

(b) **Identifying Areas of Significant Indigenous Vegetation.**

I describe the rationale for the applicant's evidence that, using the criteria in Appendix 1 of the West Coast RPS, there is a single vegetation SNA comprising coal measures vegetation which is intersected by the mine footprint. I then discuss the evidence for the appellant and the Director-General which takes a more reductionist approach to conclude there are several separate SNAs, and why the Court should prefer Dr Bramley's approach.

(c) **Determining the size and areal extent of the Vegetation SNA(s)**.

The difference in approach to identifying vegetation SNAs between the ecologists leads directly to differences between them on the spatial extent of the relevant SNA(s). This is relevant when it comes to assessing whether the values of the relevant SNA(s) are adequately protected.

(d) **Identifying Significant Habitats of Indigenous Fauna**.

[8] Under section 104(1)(a) and s104(1)(ab).
[9] Under s 104(1)(b)

Dr Bramley's evidence is that the mine footprint is a small part of significant habitats for invertebrates. Witnesses for Forest & Bird and the Director-General consider the footprint is also a SNA for additional species, including roroa (Great Spotted Kiwi). I comment on the difference in evidence assessed against the criteria in the RPS for determining habitat SNAs. I will note that, while the applicant does not agree with the ecologists who consider the site is part of a habitat SNA for a wider range of species, this debate is somewhat academic because the conditions proposed by the applicant effectively include all the species in dispute as if they were part of a habitat SNA.

**(e) Determining the size and extent of the Habitat SNAs.**

For birds, the ecologists agree that the mine footprint comprises a small part of the relevant habitat SNA(s), though there is some disagreement about the overall spatial extent of the habitats in question. There is greater disagreement about the spatial extent of invertebrate habitats. Here, Dr Bramley considers that the footprint intersects with part of the habitats, while other ecologists are of the view that the footprint itself may be the habitat in question, at least for some species. I will discuss why Dr Bramley's evidence should be preferred.

**(f) The presence of wetlands and how effects on wetlands are addressed**.

The witnesses agree that there is a total of 6.08 ha of wetland (made up of three different types) which will be removed by the mining. The planning witnesses agree that the 2020 National Environment Standards[10] do not apply to this proposal. This section of my submissions considers the application of the National Policy Statement for Freshwater 2020 and the appropriateness of the proposed rehabilitation/remediation.

**(g) What other vegetation species of conservation interest should be the subject of assessment?**

[10] Resource Management (National Environmental Standards for Freshwater) Regulations 2020.

The witnesses have agreed on a definition of 'species of conservation interest' which should be considered separately to SNAs. I comment on the identification of these species, and how the proposed conditions address the effects on such species.

**(h) What are the effects on the relevant ecological values in the absence of mitigation?**

This section of the submissions discusses the variation in approach to assessing effects adopted by the witnesses. On the one hand, the witnesses advising the applicant have used the 2018 Ecological Impact Assessment Guidelines published by the Environment Institute of Australia and New Zealand (the EIANZ Guidelines)[11]. The use of the Guidelines results in a table of conclusions applying a consistent methodology. On the other hand, the witnesses advising the Director-General and Forest & Bird have not used the Guidelines. I will submit that, where there are differences between the conclusions, the evidence of the applicant's advisors should be preferred as it demonstrates a competent application of the Guidelines resulting in a transparent and understandable use of the recommended approach.

**(i) How has the effects management hierarchy (avoid, remedy, mitigate) been applied?**

I identify the actions taken by the applicant to properly apply the effects management hierarchy. There is a dispute between the parties as to whether the proposed pest control outside the mine footprint in what is known as the Te Kuha Biodiversity Management Area is mitigation, biodiversity offset, or biodiversity compensation. While I comment on that issue, and particularly why at least some of the pest control should be considered to be mitigation of effects on areas of vegetation and habitats, I conclude that at the end of the day the precise classification is not critical. Rather, I submit the important question is whether all

[11] EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, 2nd edition (2018) Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., Ussher, G.T. Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems.

appropriate actions will reasonably be taken to apply the effects management hierarchy

**(j) What are the residual effects after avoidance, remediation and mitigation?**

The ecologists advising the applicant have used the EIANZ Guidelines to reach conclusions on the residual effects after avoidance, minimisation and rehabilitation. In doing this, they have taken a conservative approach by not considering the proposed off-site pest control as mitigation, and therefore not including it in the assessment of residual effects.

**(k) Whether the offsetting and compensation proposed to address residual effects is adequate.**

This section of the submissions addresses the proposal against generally accepted offsetting and compensation principles. I focus on those two which are in dispute: 'limits to offsets', and 'additionality'.

It is the applicant's position (unlike that of the Director-General and Forest & Bird) that it is not critical for the Court to determine a 'bright line' definition between offsets and compensation for each value affected. Rather, the real issue is whether the applicant has appropriately applied the effects management hierarchy and the effects are appropriately addressed?

This part of the submissions will also discuss the applicant's use of Biodiversity Compensation Models (BCM) to assist with the consideration of the appropriateness of the measures proposed to address residual effects on birds.

**(l) An assessment against the provisions of relevant statutory instruments**.

The recently operative (2020) Regional Policy Statement (RPS) contains several policies about the use of the effects management hierarchy, biodiversity offsets and biodiversity compensation. This section of the submissions considers these policies (and other relevant provisions in the RPS and Buller District Plan). I will conclude that the witnesses for the Director-General and Forest & Bird have (i) inappropriately attempted to apply these policies as

if they were activity status rules, (ii) misapplied the RPS policies both at an individual policy level, and by failing to consider them properly as a whole in their appropriate context, and (iii) have incorrectly applied the policies without taking into account mitigation.

## THE OVERARCHING LEGAL CONSIDERATIONS

7 The Court has two separate, but interrelated, considerations:

(a) Whether areas of significant indigenous vegetation and significant habitats of indigenous fauna will be 'protected' with the mine in place, including all the proposed rehabilitation, mitigation and other conditions being properly complied with[12] (my emphasis); and

(b) For all other ecological values, whether the effects of the mine (including all the conditions being properly complied with) will be appropriately managed (by way of reasonable avoidance, remedy, mitigation and offset/compensatory actions).[13]

8 The distinction between the two considerations is demonstrated in the 2020 West Coast Regional Policy Statement (RPS) where on the one hand Policies 7.2 – 7.5 of Chapter 7 address how Significant Natural Areas – both areas of vegetation and habitats (SNAs) - are to be managed and protected. These policies "provide a cascading framework to give direction to regional or district plan development and consideration of consent applications for activities in a SNA. The cascade follows the mitigation hierarchy recognised in resource management practice".[14]

9 On the other hand, Policy 7.7 addresses all other ecological values. This policy "sets out the management approach to adverse effects in locations which do not contain significant indigenous vegetation or significant habitats of indigenous fauna".[15]

[12] Section 6(c) RMA.
[13] Section 5 RMA.
[14] RPS Explanation to the Policies, page 28.
[15] RPS Explanation to the Policies, page 29.

**Overview of how the applicant has approached the assessment and management of effects in terms of the statutory tests**

10 The applicant's approach to the planning for this mine and assessing it against the statutory requirements can be summarised in the following way.

11 The coal resource is fixed in location.

12 Nature is infinitely complex and not static. All descriptions of ecosystems are incomplete and generalised to some degree. In identifying and describing 'what we value', the applicant's ecology advisors have taken an approach which is both scientifically valid and has enabled practicable decisions about management to be made. Those assessments focus on 'areas', 'habitats', and species of conservation interest as required by s6 RMA, the RPS and the BDP. The comprehensive surveys undertaken when planning this project build on, and are informed by, a range of other relevant ecological surveys in the Ngakawau Ecological District which have been undertaken over recent years[16].

13 The design of the mine, including the access road, and the mine planning has avoided and minimised effects so far as is reasonably practicable[17].

14 The proposed rehabilitation of the mine footprint is part of the mitigation of effects. The rehabilitation proposed is world leading and has been informed by lessons from other mines and projects[18]. The proposed closure criteria are stringent and detailed. The rehabilitation plan[19] and closure criteria[20] conditions are critical in this regard.

15 There will be residual adverse effects after best practice on-footprint rehabilitation and off-footprint mitigation is applied. The applicant's ecologists have used best practice methodology by assessing the

[16] Dr Bramley EIC Vegetation para 61; Dr Bramley Vegetation rebuttal evidence paras 43 – 47.
[17] Dr Simcock, EiC paras 31 – 33; Dr Bramley Vegetation EiC paras 156 – 161.
[18] Dr Simcock EiC para 34; Sr Simcock Rebuttal evidence paras 37 – 39 and Appendix 2.
[19] Conditions 50 – 58.
[20] Condition 31(b).

significance of the residual effects in terms of the 2018 EIANZ Guidelines. Unhelpfully, the ecologists advising Forest & Bird and the Director-General have not used that best practice approach, and have not provided any reasons for departing from it.

16 To address the residual effects, the applicant has considered the application of biodiversity offsets and biodiversity compensation in accordance with the 'effects management hierarchy'. In doing so, the applicant's ecologists have been explicit about which values can be addressed by 'like for like' positive actions (and can therefore be considered as biodiversity offsets), and which affected values cannot be the subject of 'like for like' positive actions (and can therefore only be addressed by way of biodiversity compensation). The applicant's advisors have applied both the generally recognised offsetting and compensation principles[21], and the specific policies in the West Coast RPS[22].

17 The outcome is a 'mixed package' of mitigation, biodiversity offsets, and biodiversity compensation, which, for both practical and ecological reasons, have been integrated within an area called the Te Kuha Biodiversity Management Area, including and surrounding the mine footprint.

18 To respond to the criticism of the applicant's approach by the ecologists advising Forest & Bird and the Director-General, the applicant has tested the adequacy of the proposed mitigation/offset/compensation package using a Biodiversity Compensation Model (BCM) for birds. The BCM is not intended as a decision-making tool, but is used to assist in assessing the validity and robustness of the ecologists' expert opinions. The modelling confirms that their expert opinions around addressing residual effects (at least with respect to birds) is generally appropriate.

19 A comprehensive and detailed suite of conditions is proposed. These conditions provide for adequate certainty about outcome, but allow for adaptive management where that is necessary. The conditions have

[21] Principally as developed by the international Business and Biodiversity Offsets Programme. See JWS Offsets/Compensation section 2.
[22] Discussed in paras 220 to 270.

benefitted from significant input from the ecologists advising Forest & Bird and the Director-General.[23]

**Comparison with other parties' approaches**

20 Before I discuss in detail the competing ecological evidence, I summarise five fundamental differences in approach taken by the applicant on the one hand, and by Forest & Bird and the Director-General on the other. These five approaches have influenced the respective positions throughout most, if not all, the ecological evidence. My submissions below are to the effect that on all three issues, the applicant's approach is to be preferred because it more correctly applies the statutory requirements.

(a) **The scale of assessment used in identifying areas of significant indigenous vegetation**

21 Generally, Dr Lloyd and Dr Marshall have applied a much more detailed and finer grained scale than Dr Bramley and Dr Craig consider appropriate. The scale of assessment used is important because it goes ultimately to both what can and should be required in terms of the rehabilitation of the mine site itself, and the extent to which residual effects can be addressed by off-site 'like for like' positive actions. The very detailed scale of assessment approach taken by Dr Lloyd and Dr Marshall leads them to the conclusion that the proposed rehabilitation is inadequate in re-establishing what is currently present on the site, and that the offsite actions are not adequately like for like in relation to the values within the footprint.

22 While the appropriate scale of assessment is, ultimately, a matter for expert opinion, Dr Bramley's wider approach based on an assessment at the scale of the ecological district is supported by the EIANZ Guidelines and the RPS.

23 While the vegetation types Dr Bramley has identified within the proposed mine footprint could be further subdivided or grouped together in the detailed way used by Dr Lloyd, that will not provide improved understanding of the areas of vegetation that are affected by the mine footprint, in terms of managing effects.

[23] Appendix 1 to Ms Courtier's rebuttal evidence shows the changes made since the Council decision, including as a result of expert conferencing.

24 The approach used by Dr Bramley and endorsed by Dr Craig captures and does not 'lose' the ecological values and species which we value. It does not fail to "capture some habitat types that are obviously present at the site' as Dr Lloyd asserts[24].

25 The scale or lens Dr Bramley has used is not so broad as to be unhelpful in terms of 'measuring what we value', nor is it so narrow that the classifications are not comparable with other estimates, which is central to the issue of determining the nature and magnitude of effects.

**(b) Treating the mine footprint as the Significant Natural Area in question**

26 Forest & Bird's and the Director-General's witnesses tend to primarily treat the site (ie the mine footprint) as the relevant 'area of significant indigenous vegetation' and 'significant habitat of indigenous fauna' in terms of the criteria for identifying Significant Natural Areas ('SNA') in Appendix 1 to the RPS.

27 While all ecologists agree that the site has certain values set out in Appendix 1 to the RPS, the applicant's position is that the mine site is but part of the larger relevant 'area of significant indigenous vegetation' and part of larger relevant 'significant habitats of indigenous fauna'. The different approaches taken to this issue by the witnesses are important for two reasons. First, the issue leads to the question of what proposed off-footprint actions can be appropriately classified as mitigation (rather than offsets or compensation). The approach taken by the ecologists advising the Director-General and Forest & Bird mean that they have effectively ignored the off-footprint mitigation, which, as I will discuss, is inconsistent with the RPS policy framework and the decision in *Buller Coal*.

28 Secondly, this issue is important because if the mine footprint is treated as the SNA in question rather than it being part of a larger identified SNA, it becomes much more difficult, if not impossible, to protect or maintain the values of that SNA (because the area will be removed, and rehabilitation is incapable of recreating exactly what is presently there).

29 Moreover, the witnesses for Forest & Bird and the Director-General appear to consider that 'protect' means 'keep the same', even if some

[24] Dr Lloyd EiC para 180.

minor effects are allowed. And again, they appear to effectively say that 'keep the same' relates to the values within the footprint itself. If this were to be the test, then clearly the proposal would fail. It is not possible to keep the values the same within the footprint because that area is to become a mine. Where they have gone wrong is to equate the significant area and habitats with only the mine footprint itself, and to equate protection with 'maintenance' as if that word meant 'preservation'.

**(c) Treating RPS policies and offsetting principles as if they were rules**

30 The third fundamental difference in approach where I submit Forest & Bird and the Director-General are in error is in relation to how the application of the effects management hierarchy is to be considered and the way in which to assess the appropriateness of the proposed biodiversity offset and biodiversity compensation package.

31 The essential difference between the applicant's approach and that of the other parties is that Forest & Bird's and the Director-General's evidence focusses on trying to establish hard and fast definitions for 'mitigation', 'offsetting', and 'biodiversity compensation'. They consider that there are clear distinctions between each of these terms which the Court must address and reach a conclusion on each action proposed (such as pest control). But more importantly, the implication is that the distinctions are critical in this case. The intention seems to be to demonstrate that the applicant has not applied the effects management hierarchy properly, and is therefore inconsistent with the RPS policies.

32 The applicant, in contrast, considers that a more nuanced and practical approach is required and that the Court is entitled to exercise its discretionary judgment based on the cogency of the evidence that you will hear. That is not to say that the definitions of these terms and how the applicant has applied the hierarchy is unimportant. They are very important, but the fine distinctions between 'avoid', 'mitigate', 'offset' and 'compensate' are not critical or determinative in this instance.

33 Were the proposed activity a non-complying activity, such fine distinctions might have been important.[25] But here, the proposed mine

[25] Because in considering the non-complying threshold test, positive effects cannot be considered in assessing whether the effects are no more than minor.

is a discretionary activity. The Court can have regard to all the actions proposed, however they are defined (and whether or not they are consistent with any relevant statutory planning provisions)[26]. The actions proposed by the applicant to address effects are a mixture of avoidance, remediation, mitigation, offsetting and compensation. It is not critical to your consideration that you determine precisely where one activity ceases to be one type of response and becomes another.

34 I certainly accept that the effects management hierarchy must be applied properly (and the applicant's evidence will demonstrate that it has been), but that question is not a 'paint by numbers' exercise, and again requires the Court to exercise your discretionary judgment on the evidence in the normal way. I address the distinction between mitigation and offsetting and the extent to which it matters in detail below[27].

35 A second example of this very structured and inflexible approach taken by Forest & Bird and the Director-General is in relation to the biodiversity offsetting principle of 'limits to offsets', particularly as it relates to Policy 7.2 of the RPS. The appellant and the Director-General treat this policy (and Policies 7.4 and 7.5 similarly) as if it were effectively a prohibited activity rule, rather than a principle or a policy[28]. While the Court may find, having considered the evidence, that the values of the residual effects of the proposal are significant and that it would be inappropriate to apply both offsets and compensation, that should be done after a full consideration of all the evidence, including the extensive conditions proposed which includes a range of mitigation and remediation measures. However, Forest & Bird and the Director-General want to relieve you of the task of assessing the evidence and exercising your discretionary judgment. Their approach is that Policy 7.2 constitutes a bright line test about limits to offsets which the application fails. And that effectively means the application must be declined.

36 The applicant's position, in contrast, is that Policy 7.2 and the other policies in section 7 of the RPS are not in the nature of rules. The policy has general terms which are not intended to operate, and are incapable of operating, as a rule. While Policy 7.2 is as important as all the other

[26] Under both s104(1)(a) and s104(1)(ab) RMA.
[27] See paras 192 – 200 below.
[28] While east the same time taking a very broad approach to the limits in Policy 7.2 – effectively ignoring some of the specific language in that policy.

policies, it is one policy that has to be considered 'in the round' with other policies, all of which give effect to the relevant objectives of the RPS.

37 If the witnesses for Forest & Bird and the Director-General are correct about their interpretation of Policy 7.2, that is likely to mean that all mining in the Buller would effectively be prohibited because no substantive mining proposal on the West Coast could meet the Policy 7.2 'tests' as their witnesses have formulated them, not least because an application would be tested against an RPS policy before mitigation is considered. That outcome would be curious, to say the least, when Policy 7.2 was part of the Court-assisted mediated settlement where mining companies were part of, and actively contributed to the agreed provisions. Forest & Bird's and the Director-General's witnesses appear to be taking an 'aha, gotcha' type approach with their interpretation of these policies

**(d) The assumption that declining consent is the best option for protection**

38 Throughout much of the evidence for Forest & Bird and the Director-General about the role of offsets and compensation and their place within the effects management hierarchy there is an implicit, but untested, assumption that protection of the existing biodiversity values in the wider Te Kuha area is best achieved by leaving them alone. That in turn assumes that biodiversity in most situations is in a steady state or that its condition and extent will improve over time if left to its own devices. But this fails to have regard to New Zealand's specific ongoing risks to biodiversity through introduced predators and browsers, which is almost unique internationally. The concept of the mitigation hierarchy as developed by BBOP was in a more general context which did not have the specific threats that we have in this country. While avoidance of adverse effects as a starting point should always apply on the principle that we should aim to do things in a way that causes as little external harm as possible, that is a different proposition from one that assumes avoidance in New Zealand is adequate, in itself, for the protection of significant biodiversity.

39 As one recent article states:[29]

> *While this 'preservationist' approach will work in some instances it is ineffective in others, and inadequately recognises the extent to which protection of our remaining faunal values in particular requires active, rather than passive protection. Providing for 'preservation' through legal status or covenants that preclude future activities will on its own not provide for protection of many biodiversity values in the presence of invasive pests*
>
> *A more effective approach in relation to protecting our remaining fauna may be to allow some activities that impact biodiversity values to proceed but requiring those activities to include mitigation and positive enhancement measures like predator control, to achieve overall better protection for and enhancement of the affected values. In other words, always requiring a net biodiversity gain.*

40 I submit it is also relevant that many of the effects are temporary (albeit prolonged). Restoration of connectivity and ecological function is achievable. But witnesses for Forest & Bird and the Director-General approach the issue as if all values will be permanently removed.

41 On the contrary, the evidence of Dr Bramley and Dr Craig will show that the ecological values of the relevant SNAs will not necessarily be maintained or protected if consent is declined. In 2018, experts advising Forest & Bird and the Director-General were of the view that pest pressure in the area was not high and therefore the proposed pest control work would have little or no benefit[30]. That position is now shown to be erroneous by the 2021 evidence from the ecologists advising those parties which point to the 1080 application in the area in 2020 as part of the Battle For Our Birds programme[31]. The extensive pest control proposed by the applicant as a condition of consent will accordingly make a positive difference[32].

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[29] What does 'Protection' of Biodiversity mean? J Craig, S Christensen RMJ Nov 2021 p13.

[30] 2018 JWS Flora sections 12 and 13; 2018 JWS Avifauna sections 10 and 11; De Lloyd 2018 EiC paras 107, 110, 119; De McClellan 2018 EiC paras 149, 151, 153.

[31] Evidence of Ms Mealey, 30 November 2021, paras 91 – 97.

[32] For example, Mr Smith says (EiC para 53) that rats are ubiquitous and (at para 54) that stoats are more widespread than results show.

42 In stark terms, from the perspective of section 6(c) 'protection', there are two choices. First, to retain the status quo and decline consent which would be to accept the continued decline of values because of pest plant and animal pressures over the larger area, even if the occasional pest control effort were to continue. Or secondly, to grant consent for the removal of vegetation and parts of habitats on the mine footprint. While that would, in the absence of the mitigation and compensation measures proposed, be a significant adverse effect, the combination of best practice rehabilitation of the mine site, other mitigation measures, and extensive pest control for at least 35 years over an area of approximately 6000 ha will, despite the loss of certain values, result in an overall net gain in significant ecological values. It will not only protect, but will enhance, the vegetation and habitat values of the relevant SNAs in the longer term.

**(e) Uncertainty, risk, and the need to be cautious**

43 Perhaps the most significant difference in approach between the parties is that the ecologists advising the Director-General and Forest & Bird have adopted a significantly different stance when dealing with risk and uncertainty than the ecologists advising the applicant. The evidence of the ecologists advising the Director-General and Forest & Bird for the most part lacks a rigorous assessment based on a transparent and logical framework. That can be contrasted with the approach of the ecologists advising the applicant who have structured their assessment of effects in accordance with the EIANZ Guidelines, assessed the proposed rehabilitation having regard to the known success (and failures) of other relevant rehabilitation methods used on other projects, adopted well-recognised understandings of the benefits of pest control, and used a conservative biodiversity compensation model to test their conclusions in relation to the proposed offsets and compensation for effects on significant habitats of birds.

44 The seeming refusal (without explanation) by the ecologists advising Forest & Bird and the Director-General to use the EIANZ Guidelines is, I submit, instructive in this regard. They appear to be unwilling to adopt a structured approach to their assessments. Their approach has led them to conclusions that the effects of the proposal are highly uncertain, that the likelihood of unwanted or unexpected results from the proposed

mitigation and rehabilitation is high, and that the consequences of those unwanted or unexpected results are significantly adverse.

45 However, their conclusions appear to be premised on an unstated assumption that all uncertainty is problematic per se. Their evidence does not provide a logical assessment of risk in the commonly understood manner of considering both likelihood and consequences of an event happening. Rather, their approach is generally that unless there is a high (or sometimes absolute) level of certainty of a positive outcome for a particular action proposed, the assumption is that the likelihood of an adverse outcome will be high. As an example, in terms of the efficacy of pest control as mitigation/offset/compensation, it seems their view is that the necessary certainty of a positive effect in this case could only be achieved if that were undertaken in advance of the effect so that the positive outcomes could be 'proved'.

46 Significantly, there is then generally also an assumption that the consequence of each assumed adverse outcome is highly adverse.

47 This approach plays out in several themes throughout the evidence for Forest & Bird and the Director-General. These themes include that the applicant is said not to have done enough baseline ecological study to understand the vegetation, habitats and species which are present on the site and in the surrounding areas, that the proposed rehabilitation is highly speculative and unlikely to work, that the proposed pest control surrounding and including the mine footprint is unlikely to be effective, and that the biodiversity compensation modelling is so flawed and uncertain that it provides no assistance with the decision making. Further, the opposing ecologists assert that many of the key conditions are too uncertain, and the draft ecological management plans are not detailed enough to properly understand what will be done and how effective it will be. Moreover, it appears their attitude is that the applicant cannot be trusted to provide adequate resourcing for a community charitable trust to deliver the proposed pest control, which is, in any event, unlikely to be effective, seemingly because they are unaware of other examples where similar trusts have delivered positive effects on public conservation land and at a similar scale to what is proposed here.

48 While a detailed consideration of all these matters is entirely legitimate and it is for the applicant to convince the Court that it can be satisfied

on the evidence, I submit that the overall approach taken by these witnesses is to assume the worst in a manner which is inconsistent with the way in which the Court has, in other instances, dealt with issues of risk, uncertainty and the need to exercise an appropriate level of caution. Moreover, I will submit that it is contrary to the preponderance of the evidence. The opposing ecologists will no doubt say that their approach is justified because of the significance of the values which will be affected and the potentially highly adverse outcomes, but I will be submitting when it comes to a consideration of the detailed issues that such an extremely risk averse approach is not justified in the circumstances.

49 As a final 'backstop' the proposed conditions provide for an adaptive management approach should it prove, once the rehabilitation, mitigation, offsets and compensation package is not delivering the expected results. This further reduces the risk of unexpected outcomes.

## IDENTIFYING AREAS OF SIGNIFICANT INDIGENOUS VEGETATION

50 Areas of significant indigenous vegetation and significant habitats (SNAs) are to be identified and mapped in the relevant regional plan and district plans using the criteria in Appendix 1 of the RPS[33]. To date, there are no SNAs identified in the Buller District Plan[34].

51 There are two areas of vegetation present within the footprint and in the areas surrounding the mine footprint distinguished by their underlying geology:

(a) Coal measures vegetation; and

(b) Non-coal measures vegetation (most of which is forest at Te Kuha).

52 Using the criteria in Appendix 1 of the RPS, and Dr Bramley's experience of the appropriate scale for survey and management purposes, it is his evidence that the only SNA intersected by the mine

[33] RPS Policy 7.1.

[34] The operative Buller District Plan predates the RPS and contain different criteria for identifying SNAs, which is discussed below at paragraph 283. To date, none have been identified in the district plan.

footprint is coal measures vegetation[35]. Coal measures vegetation is a term which includes a mosaic of vegetation including:

(a) Herbfield

(b) Manuka - Dracophyllum rockland

(c) Manuka shrubland

(d) Pakihi; and

(e) Shrubland.

53 Dr Bramley considers all these types of vegetation, and the wetlands within the coal measures vegetation, to collectively comprise a single 'area' for the purposes of the criteria in Appendix 1. While the coal measures vegetation meets the criteria for significance in the RPS, it is important to note that there are no obligate coal measures vegetation. No species or assemblages are only found within the coal measures vegetation. While there are some species of conservation interest within the mine footprint, they are also found outside coal measures vegetation and, in many cases, outside the Ngakawau Ecological District.

54 This can be contrasted with Dr Lloyd who appears to consider that the vegetation sub-types, the wetlands, and other features, should be considered as separate 'areas' of significant vegetation[36].

55 While Dr Bramley's evidence is that only the area of coal measures vegetation meets one or more of the Appendix 1, he has nonetheless adopted a conservative approach for the purposes of his analysis, by including non-coal measures forest as if it were an SNA for the purposes of the RPS. Non-coal measures forest areas also contain a range of forest types including:

(a) Mountain beech/yellow-silver pine – pink forest

(b) Rimu – red beech – silver beech forest

(c) Yellow silver pine – manuka shrubland; and

(d) Rimu/hard beech forest.

[35] Bramley EiC Vegetation paras 136, 137.

[36] The differences are described generally in section 2 of the 2022 Flora JWS dated 29 March 2022.

(e) Regenerating shrubland.

**The appropriate scale or lens to use in identifying areas of vegetation**

56 It is important to consider the appropriate scale to apply when describing or classifying areas of vegetation which will be affected by the proposed mine. In general terms, Dr Lloyd and Dr Marshall has applied a much more detailed and finer grained scale than Dr Bramley considers appropriate.

57 The EIANZ Guidelines advise that the Ecological Districts framework is the most appropriate basis for consideration of the ecological context[37], but they identify that the Land Environments framework is also appropriate.

58 As I noted above, while the vegetation types Dr Bramley has identified within the proposed mine footprint could be further subdivided or grouped together depending on the purpose of the analysis, the detailed approach used by Dr Lloyd, will not provide improved understanding of the areas of vegetation that are affected by the mine footprint.

59 In summary, the approach used by Dr Bramley and endorsed by Dr Craig captures and does not 'lose' the ecological values and species which we value. It does not fail to "capture some habitat types that are obviously present at the site' as Dr Lloyd asserts.[38]

60 The scale or lens Dr Bramley has used is not so broad as to be unhelpful in terms of 'measuring what we value', nor is it so narrow that the classifications are not comparable with other estimates, which is central to the issue of determining the nature and magnitude of effects. This approach does allow for adverse effects on the 'habitat types' within the footprint to be identified and therefore addressed.[39]

61 The criteria for assessing significance are set out in Appendix 1 (for terrestrial and freshwater biodiversity) and 2 (for wetlands) of the Regional Policy Statement (RPS) and in Policy 4.8.7.4 of the Buller District Plan. These criteria, particularly the RPS criteria, support Dr

[37] Dr Bramley EiC Vegetation para 58.
[38] Dr Lloyd EiC paras 39ff; Dr Marshall EiC para 60.
[39] Dr Bramley Vegetation rebuttal evidence para 14.

Bramley's and Dr Craig's approach to the scale (or lens) through which areas of vegetation should be classified, that is, the criteria point to undertaking a consideration of areas of vegetation and habitats at an ecological district scale rather than a more detailed or finer scale.

62 Dr Craig comments on the differences in approach between Dr Bramley and Dr Lloyd.[40] He considers that it is important to consider the utility of approaches that split nature into smaller parts over more general descriptions, given that nature is not stable but is in a state of constant change. When it comes to the later question of judging whether an identified area of vegetation will be protected, Dr Craig considers that a broader scale of description, as listed in the RPS, is appropriate. Every place, when described in detail has some unique ecological features, but there needs to be a comparison with other comparable vegetation in the same Ecological District and over a reasonable time frame.

63 Dr Craig considers there may be some confusion amongst the ecologists with the (apparently interchangeable) use of the terms 'type' and 'area'.[41] He considers that they are not necessarily synonyms. Dr Bramley clearly does not consider that coal measures vegetation is one 'ubiquitous type' because his evidence is that coal measures vegetation includes a mosaic of vegetation including four separate classifications and within those classifications there are a variety of vegetation assemblages.

64 It is important to consider the purpose for which the classification of vegetation into areas is to be made. The RPS requires classification and consideration of representativeness and rarity/distinctiveness to be assessed at the scale of the Ecological District[42]. If vegetation is dissected to the level advocated by Dr Lloyd, that does not assist such a consideration at the Ecological District level.

65 In summary, two areas of vegetation comprised of several sub-types is a pragmatic and reasonable number of areas/types which does not oversimplify the vegetation pattern, appropriately recognises functionally, ecologically and geographically similar units and allows for meaningful comparisons and assessment of effects.

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[40] Dr Craig, EIC paras 50 - 69

[41] Dr Craig EIC para 66

[42] RPS Appendix 1 Clauses 1 and 2.

66 The applicant's ecologists have also considered the separate criteria for determining SNAs in the Buller District Plan. Using the District Plan criteria, their conclusions remain the same.

**DETERMINING THE SIZE OF THE VEGETATION SNA(S)**

67 The essential difference between Dr Bramley and Dr Lloyd is that Dr Lloyd considers that the area of significant coal measures vegetation to be an area of some 470ha which overlies coal measures at Te Kuha[43], whereas Dr Bramley considers the coal measures vegetation across the Buller Coal Plateau (comprising approximately 7120 ha) to be an 'area of significant vegetation' in aggregate[44]. Dr Lloyd also excludes areas of vegetation on the basis of previous fire (but not land movement). Dr Bramley has not excluded either area, since disturbance (of various types) is a natural ecological phenomenon and the regeneration at those sites is well advanced and comprises predominantly indigenous species similar to those found nearby.

68 Dr Lloyd has included some areas as coal measures vegetation which do not overlie coal measures geology. This vegetation reflects the natural ecological response to environmental gradients and demonstrates how the species found growing on coal measures geology are a subset of those found in the wider environment which are capable of growing at poorly drained, low fertility sites with acidic soils. Dr Bramley has restricted his estimates of coal measures vegetation to those overlying coal measures geology, so in that respect Dr Bramley's estimates are more conservative.

69 While coal measures vegetation is not all in a single consolidated place but rather is located across the Ngakawau ED, all the patches share an underlying geology which has contributed to similarities in the soils and growing conditions. Stunted vegetation of the type recognised as coal measures does not occur on more fertile geologies underlain by granite or gneiss which occur elsewhere in the ED. Exactly which species are present within each patch is determined by gradients of other ecological drivers such as altitude, exposure and rainfall. The subset of species making up the communities in each patch derive from the same set of

[43] Shown on Figure 7 of Dr Lloyd's 2021 evidence in chief.
[44] As discussed in Appendix 1 to Dr Bramley's 2021 Vegetation evidence in chief.

species present in the wider ED. As well as geology, similar patches have in common a number of features (altitudinal range, exposure, rainfall, drainage, fertility and the like). Dr Bramley considers these common ecological drivers and similarities in the composition and structure of the vegetation types to mean they should be treated as one recognisable unit, rather than subdivided as Dr Lloyd as done.

70 Coal measures geology produces distinct and recognisable vegetation, and that is why Dr Bramley considers that geology is the most important ecological driver. On that basis, he considers that all areas with identical or similar geology can be treated similarly for the purposes of vegetation classification. Differences in growth form largely reflect underlying soil characteristics including drainage. The presence of coal measures geology is one of three reasons why the Ngakawau ED was separated from its neighbours.[45]

71 Dr Bramley's consideration has been guided by the significance assessment criteria set out in the RPS, as well as the EIANZ guidelines. For both purposes, it is important to ensure that the ecological values are identified, so that they can be appropriately managed through the mitigation and rehabilitation process. The approach taken by Dr Bramley achieves an appropriate balance between identifying "what we value" and enabling a practical approach to managing the effects on those values. In addition, the proposed rehabilitation adequately 'captures' the important ecological values and provides practical means for those values to be protected and, where necessary, rehabilitated.

72 The overall extent of coal measures vegetation is commented on in detail by Dr Bramley in Appendix 1 to his Vegetation EiC. Dr Bramley considers that the total area of coal measures vegetation in the Ecological District was originally about 9,500 ha of which about 7120 ha remains. The coal measures vegetation of Te Kuha which will be removed is 1.8% of the area of significant coal measures vegetation in the Ngakawau Ecological District. That would mean approximately 71% of the coal measures vegetation which was present in pre-human times will remain.[46]

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[45] Dr Bramley Vegetation rebuttal evidence para 11.

[46] Dr Bramley, Vegetation EiC, Appendix 1 paras 6 – 11 (pages 83 – 85). I note that Dr Lloyd and Dr Marshall consider the important/valuable coal measures are those above 600m asl, for which the percentages are a little different.

73 Likewise, non-coal measures forest (assuming the Court decides it is an SNA) should be considered at this same scale as a single area, rather than a number of discrete SNAs.

## IDENTIFYING SIGNIFICANT HABITATS OF INDIGENOUS FAUNA

74 Consistent with the approach to assessing significant vegetation, the assessment of what are significant habitats should be made in the context of the Ecological District. The reference to 'significant' habitats signifies that all habitats of indigenous fauna are not significant per se. That is, not all parts of habitats of indigenous fauna are necessarily significant.

75 The evidence will show that the mine site is a small part of a larger area of several ecosystems and habitats that cover much of the Ecological District. Moreover, the mine footprint area itself is too small to hold self-sustaining populations of most bird species and the individuals present will interact with other individuals of the same species from adjacent areas outside the proposed mine footprint.

### Avifauna

76 Using the criteria in Appendix 1 of the RPS, and Dr Bramley's and Dr Craig's experience of what is an appropriate scale for survey and management purposes, neither of them consider that the mine site is a significant habitat for roroa[47]. Dr Craig's opinion is that while the roroa habitat within the footprint is not in itself significant, it is within a SNA/significant area for roroa. However, without predator control and with ongoing declines, the footprint may no longer be used by roroa. Having said that, however, they have taken the conservative approach of addressing effects on roroa habitat as if it were a SNA.

77 In contrast, Dr Smith and Ms McDonald consider that the mine site is a significant habitat for roroa, fernbird and falcon.[48]

78 While the Applicant does not agree with the ecologists who consider the site is part of a habitat SNA for a wider range of species, this debate is somewhat academic because the conditions proposed by the applicant

[47] Section 2 of the 2022 Avifauna JWS.
[48] Section 2 of the 2022 Avifauna JWS.

effectively include all the species in dispute as if they were part of a habitat SNA.

79 Ms McDonald for the Director-General raises several concerns about the adequacy of baseline surveys for avifauna.[49] Those issues are responded to in Dr Bramley's avifauna rebuttal evidence where he concludes that there is no material lack of information as to species abundance, richness or distribution in the assessment.[50]

**Invertebrates**

80 Dr Bramley's evidence (based on the earlier work of Mr Toft) is that the mine footprint is part of a significant habitat (in terms of the RPS criteria) for:

(a) Forest Ringlet butterflies;

(c) The undescribed Leaf-veined slug; and

(d) Tiger beetle.[51]

81 Dr Smith, Mr Patrick and Mr Chinn also consider the footprint to be a significant habitat for the Helms Stage Beetle. While Dr Bramley does not agree, the issue is also somewhat academic because the conditions proposed by the applicant effectively include all the species in dispute as if they were part of a habitat SNA. This remains the case even though Dr Bramley considers that, on reflection, no specific conditions relating to the slug are necessary or would be helpful.[52]

**DETERMINING THE SIZE OF THE HABITAT SNAS**

**Avifauna**

82 While the experts disagree on the full extent of the habitat of roroa in the Ngakawau Ecological District, they do agree that the mine footprint is only a small part of the overall roroa and falcon habitat.

**Invertebrates**

83 This is an issue where there are significant differences between the experts. Dr Bramley's evidence is that the footprint is part of wider

[49] Ms McDonald EiC paras 28ff.
[50] Dr Bramley Avifauna rebuttal evidence paras 7 – 11.
[51] Section 2 2022 Invertebrates JWS.
[52] Dr Bramley Invertebrate evidence para 53.

habitat within the Ecological District for invertebrate species. In contrast, the ecologists advising Forest & Bird and the Director-General consider that the relevant invertebrate habitats are likely much smaller. This is an example of where they have focused on the mine footprint and not, I submit, 'lifted their eyes' to consider the wider habitat within the Ecological District as required by the RPS. As a result, their conclusions about the effects on invertebrate habitats is considerably greater than Dr Bramley who has more appropriately considered the habitats within the mine footprint within their wider context.

## OTHER SPECIES OF CONSERVATION CONCERN AND INTEREST

84 The ecologists distinguish between species of conservation concern (which are species regarded as 'Threatened' or 'At Risk' in the latest Department of Conservation conservation status update) and species of conservation interest (which are species which are not Threatened or At Risk but have other ecological characteristics which make them regionally or locally important). These individual species have been considered separately from the 'areas of significant vegetation'. However, as Dr Bramley notes[53], this is somewhat of an artificial distinction because these values, such as threatened and At risk plant species, are found within the coal measures vegetation as well.

85 The list of vascular plant species of both conservation concern and conservation interested are listed in section 5 of the 2022 JWS Flora.

86 A diverse array of species of bryophytes (ie mosses and liverworts) and lichens are also present within the ecosystems on and around the site, some of which are of conservation concern and interest. The relevant species are listed in section 6 of the 2022 JWS Flora.

87 How these species are to be managed is addressed in the conditions.[54]

[53] Bramley Vegetation EIC para 142
[54] Conditions 31(b), 50(j), 51(f), 51(g)(iv), 51(g)(v), 178, 179, 190

## WHAT ARE THE EFFECTS ON THE RELEVANT ECOLOGICAL VALUES (IN THE ABSENCE OF MITIGATION/REHABILITATION)?

### Using the EIANZ Guidelines

88 The applicant's effects assessment evidence has followed the EIANZ Guidelines.[55] Using a standard framework and matrix approach such as this provides a consistent and transparent assessment of effects and is considered good practice[56].

89 In summary, the guidelines provide a stepwise and systematic process for assessing:

(a) The "Ecological value" of a habitat or species with the ecological value for habitats assessed against four sub-criteria, including representativeness, rarity / distinctiveness, diversity and pattern and ecological context.

(b) The "Magnitude of Effect" of the proposed activity on each "Ecological value". The "Magnitude of Effect" is based predominately on the permanence or duration of the effect and the scale of the effect, ie the areal extent per se, the proportional effect relative to availability in the surrounding landscape and the intensity of the effect.

(c) The overall "Level of Residual Effect" based on the "Ecological value" against the "Magnitude of Effect".

90 Applying this approach allows a systematic way of assessing what effects should be avoided, remedied and mitigated and what residual effects remain after application of the 'effects management hierarchy'. Accordingly, the first step is to identify the effects of the mine in the absence of any measures taken to address those effects. This section of my submissions summarises the effects in the absence of mitigation (including rehabilitation).

[55] EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems, 2nd edition (2018) Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., Ussher, G.T. Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems.

[56] See paras 49 – 52 and attachment A to Dr Ussher's 2018 evidence.

91 Unhelpfully, the ecologists advising the Director-General and Forest & Bird appear to have refused to apply the methodology in the EIANZ Guidelines. They have not provided any cogent reasons[57].

**Effects on coal measures vegetation**

92 The proposal will result in the removal of a maximum of 144 ha of indigenous vegetation of various types. 121 ha of this vegetation is coal measures vegetation which is part of a larger SNA.

93 The removal of vegetation would create approximately 22.8 km of new cut edge around the site. The new edges created around the perimeter of the pit and along roadsides would no longer be buffered from changes in microclimate by surrounding vegetation as it currently is. This would affect vegetation for varying distances from the newly exposed edge depending on features like aspect, topography and elevation, as well as on the height of the edge vegetation. Typical microclimate changes associated with vegetation edges include increased exposure to wind, decreased humidity, increased solar radiation and temperature and increased variability in microclimate. Dr Bramley and Dr Lloyd do not agree about the areal extent of edge effects.[58]

94 The removal of these habitats would reduce the amount of habitat available for species of conservation concern and interest.

95 The implications on the overall coal measure vegetation SNA of the removal of that amount of coal measures vegetation is discussed by Dr Bramley in Appendix 1 to his Vegetation EiC[59]. For the purposes of that discussion, Dr Bramley has assumed that all that vegetation will be permanently lost. That is, that the rehabilitated footprint will never result in coal measure vegetation re-establishing on the site. However, as Dr Simcock and Dr Ross discuss in their evidence, the rehabilitated footprint is in fact able to support the re-establishment of all species and vegetation assemblages that are present on site and will not likely revert to taller forest as asserted by Dr Lloyd

[57] Dr Smith comments on the EIANZ Guidelines in paras 41 – 46 of his EiC but provides no reasons why he does not apply the recommended methodology. Dr Bramley's response to Dr Smith's comments are in paras 16 and 17 of his Avifauna rebuttal evidence.
[58] See section 3 of the 2022 JWS Rehabilitation.
[59] Dr Bramley Vegetation EiC Appendix 1 paras 22 – 56 (pages 89 – 99).

96 In Appendix 1, Dr Bramley discusses the concept of Threatened Environments Classification. This is an assessment of how well 'protected' environments are. Coal Measures Vegetation Plateaux fits within Category 6 under the TEC classification. Category 6 environments are regarded as "less reduced and better protected", whilst environments in the other five categories are regarded as threatened and/or under protected.[60] Dr Bramley comments in detail on the 2013 paper by Dr Gruner, the purpose of which to provide ecologically based guidance to Department of Conservation decision makers on appropriate representation targets for use in a systematic approach to conservation planning for the Buller Coal Plateau in order to enable long term persistence of biodiversity. In that paper, Dr Gruner concludes that in order to achieve "minimal risk" of loss the target for unique and widespread features should be 60%.

97 Dr Bramley's assessment is that if Te Kuha is mined 71% of the coal measures vegetation that was originally present on the plateaux will remain. More than half of the original extent of coal measures vegetation (61%) is legally within land administered for conservation purposes.[61]

98 Dr Bramley concludes that, according to the widely accepted thresholds included in the Threatened Environment Classification, following removal of vegetation because of the Te Kuha mine, coal measures habitats should remain regarded as 'less reduced and better protected'.[62]

**Effects on avifauna and lizards**

99 The mine will reduce the overall area of habitat for species of conservation concern to varying degrees. Those species which could be affected include four birds: roroa, New Zealand pipit, South Island fernbird, South Island robin; and three lizards (West Coast green gecko, forest gecko, speckled skink). The proposal will also result in a long term (but not permanent) reduction in habitats for common species,

[60] Ibid, para 23.
[61] Ibid, para 19. (I accept that it varies for the various subtypes). Dr Bramley then takes a more conservative position by discounting all conservation land which is not actively being managed which reduces the level of 'protection' to 51%. However, that conservative approach is not adopted in the original TEC report from 2107 or in Dr Gruner's 2103 work.
[62] Ibid, para 55.

although some species such as fantail may benefit from more edge and open areas.

100 This loss of habitat could be prolonged (>50 years) for those particular species which are generally restricted to forest, such as rifleman. For more generalist species, or those which prefer open habitat (such as New Zealand pipit) or shrublands (such as fernbird), the rehabilitated habitats will become suitable at varying times into the future from almost immediately (for pipit, weka, and fernbird) to 10 – 20 years for species capable of occupying dense shrubland.

101 Dr Bramley has conservatively estimated that at worst the mine would result in the loss of four adult kiwi over the life of the mine[63] (estimated as 50 years before rehabilitated habitats are usable by kiwi again), the loss of 720 weka (mine life estimated as 30 years, recognising that weka will likely colonise the mine more quickly than kiwi if they remain in the vicinity), the loss of 360 fernbirds and the loss of 180 pipits.[64]

102 Both Dr Des Smith and Ms McDonald consider that Dr Bramley has underestimated the level and magnitude of effects, although neither have undertaken an assessment which is comparable to Dr Bramley's. They disagree over their estimates of the numbers of birds likely to be affected. If consent is granted, in order to inform the TKBMEP, additional baseline monitoring of rōroa, forest birds and fernbirds is required to confirm the number of birds present and their physical location.[65]

**Effects on invertebrates**

103 All experts agree that in the absence of mitigation and rehabilitation, the mine will remove at least part of significant habitats of some invertebrates[66]. The effects on the wider habitats of those invertebrates (that is, beyond the footprint and edge effects) is unclear because of the

[63] Dr Craig considers any losses are unlikely. Dr Craig EiC para 98, rebuttal evidence paras 51 – 57.
[64] Bramley Fauna EIC para 136. This all assumes that the birds present are not affected by predation, which is unlikely – Dr Craig rebuttal evidence. Both Dr McClellan and Dr Craig consider that pipit will experience a gain, and none will be lost until rehabilitation achieves canopy closure. Their opinion is that if the access road is kept open as well as a road on the mine site, then pipit will be able to remain at their current levels after an initial gain.
[65] Condition 175(b).
[66] JWS Invertebrates Section 4.

practical impossibility of undertaking Ecological District wide surveys for the invertebrates in question.

**Effects on wetlands**

104 The proposal will result in the removal within the mine footprint of the following wetlands:

- Mānuka shrubland - 5.78 ha
- Wire rush wetlands – 0.24 ha
- Ephemeral wetland – 0.06 ha

105 There is a difference of opinion about the values of the ephemeral wetland. This is discussed in Dr Bramley's Vegetation rebuttal evidence.[67] Based on his experience of other similar wetlands across the Buller Coal Plateaux, Dr Bramley considers the ephemeral wetland at Te Kuha to be atypical because it currently appears to be species poor in terms of plants and includes exotic species.[68]

## APPLICATION OF THE EFFECTS MANAGEMENT HIERARCHY

106 There are no 'bright line' distinctions between avoidance, remediation and mitigation. In practice, the definitions overlap. As I discuss below, the distinctions are not of significance in this case because the real issue is whether all appropriate actions will reasonably be taken to apply the 'effects management hierarchy'.

**Avoidance and mitigation of effects during design and construction**

107 The applicant's evidence describes the various measures which were taken in the mine planning process to avoid unacceptable effects, and to minimise all other effects, recognising that the minerals are fixed in location, so there are practical limits to what effects can be avoided[69].

[67] Paras 16 – 20.
[68] Bramley Vegetation rebuttal evidence para 19.
[69] Bramley Vegetation EIC paras 156 – 161; Bramley Fauna EIC paras 130 – 132; Simcock EIC paras 25 -33

108 If consent is granted, the consent holder must prepare and have certified by the Councils a Construction Management Plan[70]. This plan sets out a range of requirements to minimise effects in relation to such matters as:

a. Minimising edge effects;

b. Conserving materials to be used in the rehabilitation;

c. Minimising the potential for weed incursions; and

d. Minimising the visibility and ecological effects of vegetation removal of cuts and fills of the access road.

**Rehabilitation**

109 Traditionally, rehabilitation has been treated as remediation, rather than mitigation, but it has elements of both. A clear distinction between the two is, however, not critical. Dr Simcock's and Dr Ross' evidence explain in detail how the site is to be rehabilitated, and the distinction between rehabilitation and restoration, and why the latter (as effectively suggested by the opposing ecologists), is impracticable.

110 The rehabilitation which is proposed by the applicant will be best practice, based on the experience and expertise of Dr Simcock, who is one of New Zealand's leading rehabilitation specialists. The rehabilitation builds on experiences and results (both successful and unsuccessful) from previous mining operations on the Buller Coal Plateaux and elsewhere[71]. The one example of a rehabilitation site referred to as Campbell's Dump' at the Stockton Mine has limited relevance to Te Kuha.[72] The extensive and detailed rehabilitation and closure conditions proposed, which have had the benefit of full input from all ecologists presenting evidence[73], will ensure the rehabilitation is effective in achieving the anticipated objectives and outcomes, while retaining an appropriate degree of flexibility in the specifics of delivery.

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[70] Conditions 36, 47 – 49.

[71] Dr Simcock rebuttal evidence paras 1,5 and Appendix 1; Dr Bramley Vegetation rebuttal evidence para 22, 27 - 42.

[72] Dr Bramley Vegetation rebuttal evidence paras 27 – 42.

[73] Appendix 1 to Ms Courtier's rebuttal evidence identifies the extensive changes which have been made to the conditions of consent imposed by the Commissioners' Hearing Panel, following expert conferencing in 2018 and 2022, and from further work done by Dr Simcock.

111 Because of the complexity of existing ecosystems within the footprint, it is not possible to recreate that infinite complexity in the rehabilitation. However, like the rehabilitation of any project where there are dynamic and complex ecosystems on the site which are affected, recreating what is exactly there at present is not, and cannot be, the objective. Rather, as Dr Craig and Dr Simcock discuss in their evidence, rehabilitation that restores natural processes should be more important than trying to recreate or re-establish what is presently there, when the latter is inherently incapable of success[74]. Having said that, however, the proposed rehabilitation goes as far towards re-establishing similar ecosystems to those presently existing as is reasonably practicable.[75]

112 The overall goal of rehabilitation (now agreed by the ecologists) is practically delivered by requiring rehabilitation practices for five rehabilitation vegetation types, and six habitat features for fauna within specified vegetation types[76]. The proposed rehabilitated vegetation types encompass a range of the vegetation associations that are at the site now.

113 The intended rehabilitation outcome is generally to have lower stature vegetation predominating on shallower slopes, rather than taller forested areas[77]. Rehabilitating the site with poorly drained soils, so that moisture is retained (produced by a combination of the factors listed above), is more likely to result in this intended outcome.[78]

114 The rehabilitation objectives have been strengthened by a more specific requirement to recreate wetlands in the rehabilitated footprint.[79]

115 Both Dr Gruner and Dr Marshall consider a major risk to achieving the specified rehabilitation criteria is unsuitable soil quality, which includes not maintaining highly acid and infertile conditions that favour coal measures vegetation. Dr Simcock does not share this concern. The key attributes of soil fertility in the context of coal measure soils are both chemical and physical. The key physical fertility attributes are drainage (agreed by all experts) and rooting depth, as most roots are confined to

[74] Dr Simcock EiC para 57; Dr Simcock rebuttal evidence para 4; Dr Craig EiC paras 207 -220.
[75] Dr Simcock EiC para 58; Dr Simcock rebuttal evidence para 22.
[76] Conditions 50 – 51A.
[77] Dr Simcock EiC, para 105.
[78] Dr Ross rebuttal evidence para 6.
[79] Dr Simcock rebuttal evidence paras 30 – 32, 48 – 60.

the topsoil. Soil chemistry data from the Stockton and Cypress mines indicates the key soil chemical conditions that maintain macro-nutrient stress and low organic matter decomposition rates are maintained in rehabilitated soils.

116 Dr Lloyd and Dr Marshall consider that the proposed rehabilitated mine site will not retain sufficient moisture to achieve the outcomes specified in the proposed conditions.[80]

117 Dr Ross addresses this concern in both his evidence in chief and rebuttal evidence. In relation to soil quality and soil hydrology and their effects on vegetation, Dr Ross has the more pertinent expertise and experience. His conclusion is that the hydrology of rehabilitated soils, on the flat and low angle parts of rehabilitated landforms on the proposed Te Kuha mine site, will be poorly draining and therefore capable of sustaining rehabilitated low stature vegetation, despite occasional periods when the soils might become unsaturated.[81] Furthermore, the soil fertility in the rehabilitated footprint will not be improved in the long-term when stockpiled soil or vegetation direct transfer is replaced over infertile Coal Measures sandstone in compacted overburden.[82] This reinforces Dr Ross' opinion that the low stature vegetation proposed for the rehabilitation is achievable.

118 Dr Simcock agrees with Dr Ross. Her opinion is that the areas of low slope shown in the rehabilitation plan will be poorly drained, with soils in these areas saturated for varying lengths of time. These poorly drained soils are likely to exhibit similar properties to the poorly drained areas currently present and support similar vegetation, i.e. mānuka, rather than forest trees.

119 There is also disagreement noted in the Rehabilitation JWS[83] about the "(un)certainties of success" for rehabilitating mānuka shrubland, herbfield and ephemeral wetland.

[80] Conditions 51 and 51. Dr Lloyd's evidence on this is primarily in paras 338 – 347 of his EiC. Dr Marshall EiC para 83.
[81] Dr Ross rebuttal evidence para 28.
[82] Dr Ross rebuttal evidence para 37.
[83] 2022 Rehabilitation JWS Sections 5 and 8.

120 Dr Simcock and Dr Ross address these concerns in detail.[84] It is their opinion that wetland soil hydrology and low soil fertility can be recreated to support these wetland ecosystems, and importantly, that there are examples of such recreated wetland ecosystems at Stockton Mine. Dr Simcock concludes that the changes made to the conditions as a result of conferencing[85] will enable the rehabilitation of the three wetland vegetation associations.

121 Dr Simcock has also updated the detailed closure criteria following expert conferencing[86]. These have been selected to ensure rehabilitated vegetation and habitats have established and progressed to states that are resilient to expected pressures (particularly weeds) and have demonstrated ecological processes (such as establishment of new native seedlings that were not planted) that indicate continued development along native-dominated successional trajectories. The closure conditions specify plant cover that confirms native dominance and minimises impacts from weeds that may adversely affect successional trajectories.

122 The closure conditions also set minimum plant species diversity and identify key plant species for each of the rehabilitated vegetation associations which must be present at closure at minimum densities. Criteria for habitat features specify the 'as built' form, general location, and number or density. The construction of habitat features targeted to Forest Ringlet Butterfly, kiwi and Helms stag beetle/weta are intended to facilitate re-invasion from the populations in surrounding areas and from the areas of Direct Transfer. Ephemeral wetlands are included along with escarpment features which allow use of suitable coal floor landforms and establishment of larger boulders with tree seedlings.[87]

123 The Applicant has agreed following expert conferencing to establish a Technical Advisory Group, at its cost, to advise it on rehabilitation.[88] This TAG is separate and additional to the requirement for technical reviewers which are to advise the Consent Authorities.[89]

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[84] Dr Simcock rebuttal evidence paras 48 – 60; Dr Ross rebuttal evidence paras 48 – 51.
[85] Condition 51(b).
[86] Cndition 31(b).
[87] Dr Simcock EiC para 70 – 88; Dr Simcock rebuttal evidence paras 63 – 79.
[88] Condition 51A.
[89] Conditions 72 – 75.

124 Dr Lloyd is also concerned that soil fertility conditions in the rehabilitated site will lead to forest predominating.[90] Dr Ross addresses this concern and concludes, based on data obtained from a similar site, that the soil fertility for rehabilitated vegetation will not be improved in the long-term. This will mean low stature vegetation is more likely than forest.[91]

125 The specifics of important vegetation components (species or habitats) which might be "missed" by this approach are also provided for in the rehabilitation plan[92].

126 Dr Simcock's assessment is conservative and not overly optimistic, given the core rehabilitation methods have been applied elsewhere to many components of coal measures ecosystems, at suitable scales (tens of ha) and for durations (10 to 20+ years) that provide confidence in the rehabilitation trajectories. These methods need to be refined for the Te Kuha site, and this refinement is provided for by the mine schedule and the detailed rehabilitation management plan[93]. Annual monitoring and reporting required by the conditions[94] will a) encourage adaptive management and b) ensure that if rehabilitation targets are at risk of not being achieved, there is time to adjust and apply remedial actions.

**Off-site mitigation - distinguishing between mitigation and offsetting/compensation**

127 The evidence on behalf of the appellant and the Director-General takes issue with the proposed pest control in the Te Kuha Biodiversity Management area which Dr Bramley and Dr Craig describe, in part, as mitigation rather than as offsets/compensation.

128 Mitigation is not defined in either the RPS or the District Plan. Nor do those documents provide a definition of offsets and compensation (although the RPS does set out criteria against which offsets and compensation are to be assessed).

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[90] Dr Lloyd EiC para 326.
[91] Dr Ross rebuttal evidence paras 29 – 38.
[92] Conditions 50b, 50c, 50d, 50e, 50f, 50i, 50j and 50l, 51a, 51c, 51g and 51h, and 56; Dr Bramley Vegetation rebuttal evidence paras 23 – 26.
[93] Conditions 50 and 51.
[94] Conditions 51(j)(ix), 63(a), 63(b), 68, 69(a), 69(h).

129 From a legal perspective, the distinction between offsetting and compensation on the one hand, and mitigation on the other, only 'bites' in respect of an assessment of the degree of effects either in the context of a notification decision or in the context of section 104D (the non-complying "threshold test"). Neither apply in this case.

130 Offsetting or compensation is generally understood to be a countervailing "positive effect" of a proposal, as opposed to mitigation, which is understood to be steps taken to reduce the severity of an adverse effect (see more on this below).

131 In *West Coast Environmental Network v Buller District Council* referring to the High Court's decision on the distinction between offset and mitigation[95], the Environment Court held:[96]

> *[6] Although the High Court held that "mitigation" and "offsets" were separate concepts that needed to be distinguished, it refused to find, as Forest and Bird had sought, that mitigation considerations should in themselves be given a greater weighting than offsets. Rather, it held that the weighting depended on the context, including the degree of mitigation and the scale and qualities of the offset.*
>
> *[7] We note the agreement of the parties and the High Court that since s104(1)(a) allows the taking into account of positive effects on the environment proffered by the applicant, offsets can be had regard to when exercising the discretion under s104, and in appropriate contexts under s5(2). We are instructed that they do not constitute "mitigation" in terms of s5(2)(c).*
>
> *[8] Had we been dealing with a non-complying activity, this would clearly have been important, since, not being mitigation, offsets could not be brought to bear on the assessment of the level of adverse effect under the first "threshold test" for jurisdiction in s104D. However, in the case of discretionary activities there is no statutory threshold guarding the entrance to s104. Under s104 it is trite to say that what is required is a broad overall consideration*

[95] This case was remitted to the Environment Court from a High Court appeal of its earlier decision.

[96] *West Coast Environmental Network v Buller District Council* [2013] NZEnvC 178 at [6] – [8].

*of the scale and character of the effects, positive and adverse, together with the provisions of the statutory instruments and ultimately the application to them of relevant aspects of Part 2. Whether adverse effects are reduced by mitigation or counterbalanced by "offsets" or positive effects may not of itself be material in the overall outcome. [footnotes omitted]*

132 Those decisions were issued prior to the amendment to the RMA in 2017, which specifically imported reference to "positive effects on the environment to offset or compensate for any adverse effects on the environment" into section 104(1)(ab).

133 The most relevant guidance on the distinction is provided by the High Court in *Royal Forest and Bird Protection Society Inc v Buller District Council*:[97]

*[72] I am of the view that counsel for Forest and Bird are correct, that such offsets do not directly mitigate any adverse effects of the activities coming with the resource consents on the environment. This latter proposition is best understood in context. So, for example, if open cast mining will destroy the habitat of an important species of snails, an adverse effect, it cannot be said logically that enhancing the habitat of snails elsewhere in the environment mitigates that adverse effect, unless possibly the population that was in the environment that is being destroyed was lifted and placed in the new environment. Merely to say that the positive benefit offered relates to the values affected by an adverse effect is, in my view, applying mitigating outside the normal usage of that term. And the normal usage would appear to apply when reading s 5(2). The usual meaning of "mitigate" is to alleviate, or to abate, or to moderate the severity of something. Offsets do not do that. Rather, they offer a positive new effect, one which did not exist before.*

134 As noted by the High Court, the usual meaning of "mitigate" is to "alleviate", "abate" or "moderate the severity of something". This then gives rise to the question – moderate the severity of something "on what"?

135 In my submission, the answer to that question depends upon the nature of the effect and the environment which is affected. Actions which are

[97] *Royal Forest and Bird Protection Society Inc v Buller District Council* [2013] NZHC 1346 at [72].

taken immediately at the point of impact are most certainly mitigation, but there is also some scope to include those actions taken somewhat further away. Obviously, the further distance from the point of impact or the more divorced from the nature of effect at issue, the more likely a response would be classified as being an offset or compensation, rather than mitigation.

136 From a strict ecology position, it could be said that the replacement of vegetation cannot be "mitigation" unless it is replaced with exactly the same species in exactly the same position from which it was removed. Likewise, in the context of a wetland, a strict position might be that the lifting up and removal of part of a wetland and its placement in a new environment (were that practically possible) would be mitigation, but that the enhancement / replanting of an adjoining area of wetland (even within the same wetland) is not mitigation – rather it is considered to be an "offset". This is, because the wetland community to be enhanced in the new location is not exactly the same as the wetland community that was removed.

137 On this narrow interpretation, very few responses could ever be considered to be mitigation for ecological effects. For example, the effects relating to the reclamation of a stream or wetland could never be "mitigated" (other than reducing the extent of the reclamation) because any stream/wetland replacement or enhancement would not be in exactly the same location. Arguably, if such a strict interpretation were applied, then the removal of any native vegetation could never be mitigated (unless it were to be replaced in exactly the same location after the works have been completed, which, other than for temporary construction works, would never be practicable).

138 In terms of the High Court's decision in the *Escarpment* case, from a legal and planning perspective, the "point of impact" for the purposes of drawing a distinction between mitigation and offsetting should not be "individual plant or animal", but rather should be the broader community of plants and animals in that immediate locality.

139 In my submission, from a legal and planning perspective, the correct approach to identifying the distinction between mitigation and offsetting is to examine:

(a) What is the nature of the effect on either ecological functioning or biodiversity and what flora or fauna is that effect affecting (with the "point of impact" understood to be on a broader basis, rather than individual plants and animals)?

(b) What is the nature of the response? Does that response serve to moderate the severity of, or alleviate the extent of effects on, the ecological functioning or biodiversity (in which case the response would be mitigation)?

140 I acknowledge that any bright line distinction between mitigation and offsetting is difficult. For example, I would not suggest that effects on Great Spotted Kiwi could be mitigated by positive work on other kiwi species' habitat in the North Island. This is similar to the situation in the *Escarpment* decision where the High Court held that works undertaken some 100 km away were properly classified as an "offset" rather than mitigation.[98] As with virtually everything in the environmental field, it is matter of scale and degree.

141 Mitigation must address the effects at the 'point of impact'. In the present situation, the 'point of impact' is the relevant habitats of indigenous fauna within the Ecological District, and not simply the footprint itself. Dr Bramley discusses the habitats where pest control off the mine footprint will result in 'in-kind' positive outcomes and distinguishes them from 'out of kind' compensation[99]. The pest control measures in the wider Te Kuha Biodiversity Management Area are, therefore, mitigation of the effects of the proposal on the habitats of birds, lizards and invertebrates.

142 I submit there is little benefit in debating at length or in fine detail the fine distinctions between mitigation, offsets and compensation. It is more important that the applicant can demonstrate that it has properly applied the 'effects management hierarchy'. While some values cannot be replaced by an exact (or even similar) 'like for like', what is proposed is as close as practicable in the circumstances to achieving like for like positive effects across a range of values. In fact, Dr Craig's opinion is that given the history of lack of protection and ongoing decline in

[98] See *Royal Forest and Bird Protection Society Inc v Buller District Council* [2013] NZHC 1346 at [6] and [75].

[99] Dr Bramley EiC Vegetation paras 243 – 245; Dr Bramley EiC Fauna paras 146 – 182

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biodiversity values, the applicant is offering "trading up" to a naturally functioning system built on enhanced protection (through intensive pest control) rather than attempting to return to 'what is'[100]. At all stages of the consideration, the applicant has correctly applied the 'effects management hierarchy', both in terms of general principles and the policies in Chapter 7 of the RPS.

143 Again, however, nothing turns, I submit, on whether the Court accepts this submission. The proposed pest control is intended to form a mixed package of mitigation, biodiversity offsets and biodiversity compensation[101]. Insofar as fauna is concerned, the positive measures are clearly 'like for like' or 'in-kind' and can therefore also be considered as a biodiversity offset. What is critical, I submit, is that the applicant is demonstrating the full application of the effects management hierarchy in that there is no reasonably practical better option or alternative to how effects are proposed to be addressed.

**WHAT ARE THE RESIDUAL EFEFCTS AFTER MITIGATION?**

144 The applicant's evidence is that with the rehabilitation and mitigation proposed (and as required by the proposed conditions), the proposal will result in the following level of residual effects (determined applying the assessment process set out in the EIANZ Guidelines).

**Vegetation**

145 Dr Bramley sets out in tabular form his conclusions on the magnitude and level of residual effects of the proposal on vegetation at both the 'local' and Ecological District levels[102]. He is the only witness to have used the EIANZ Guidelines. Dr Bramley identified that there are significant residual adverse effects for bryophyte mat communities (located within forested boulderfield) and three species of vascular plant, four species of non-vascular plant and one lichen. Dr Bramley

[100] Dr Craig EiC paras 241 – 244; Dr Craig Rebuttal evidence paras 73 – 75.
[101] Dr Bramley EiC Vegetation paras 243 – 245; Dr Bramley EiC Fauna paras 151, 152.
[102] Dr Bramley EiC Vegetation Tables 1a, 1b and 2 pages 58 – 61.

does not consider that these effects can be effectively offset so he has proposed compensation to account for these residual effects.[103]

146 The 2022 Vegetation JWS sets out a table of 'vegetation types' where detailed comments on residual effects are set out[104]. It is unclear how these 'types' relate to SNAs as identified using the Appendix 1 RPS criteria. More importantly, this table relates solely to effects within the footprint rather than effects on the relevant SNA(s) including at the level of the Ecological District. At this 'local' level there is a high level of agreement between the experts, except in relation to the wetland areas. This table of residual 'local' effects is of limited assistance in determining effects on the SNA(s) in question, though it does have some relevance in assessing the likelihood of success of the proposed rehabilitation of the mine footprint

**Birds and lizards**

147 Again, Dr Bramley is the only witness to have undertaken an effects assessment in accordance with the EIANZ Guidelines[105]. He concludes that the residual effects on the habitats of all relevant bird and lizard species are either low or very low.[106]

**Invertebrates**

148 And Dr Bramley is alone again in having carried out an assessment in accordance with the EIANZ Guidelines[107]. He concludes that the residual effects on the Forest Ringlet Butterfly to be very high, and on the leaf-veined slug to be moderate-high. Residual effects on the habitats of other invertebrates are low.

149 There is general agreement as to the high level of significance of the invertebrate habitats at Te Kuha and the type of effects due to mining. The experts also agree that the Applicant has sampled an unknown (and probably small) subset of the total number of species present at the site. Areas of disagreement relate to the level of effects, the certainty

[103] Dr Bramley Vegetation EiC para 29; Dr Bramley Vegetation rebuttal evidence para 52.
[104] 2022 Vegetation JWS section 13 pages 18 – 20.
[105] Dr Smith criticises Dr Bramley's use of the Guidelines – 2022 Avifauna JWS section 7 page 14, which is addressed by Dr Bramley in Avifauna Rebuttal evidence paras 16 – 19.
[106] Dr Bramley EiC Fauna, Table 1 para 185.
[107] Dr Bramley EiC Invertebrates para 85; 2022 Invertebrate JWS section 7.

of ecological outcomes, and the scale and significance of effects on invertebrate populations.

150 Mr Chinn for the Director-General is concerned about what he considers is a lack of data to inform the application. He suggests that a 'community-based approach' to characterising the invertebrate fauna should have been used rather than the species-based approach.[108] Dr Bramley sets out why he does not agree with that approach, and is of the opinion, that even if it were undertaken, it would not assist with decision making.[109] Moreover, neither Dr Bramley nor I are aware of this approach ever having been used to support an application for resource consent.[110]

151 Additional work could always be done. However, as Dr Bramley notes, the outcome of such additional work is not always useful[111]. For example, there has been repeated surveys for the undescribed leaf-veined slug and none have been located.

152 Dr Bramley's approach of focussing on well-known species those which are conspicuous or common enough to be easily sampled, and those which are good indicators of community responses (e.g., to habitat removal and to management efforts) is appropriate and adequate.

153 Research has shown that the recovery of native invertebrate communities in restored sites is considerably accelerated when native plants are actively established – either via direct transfer or by a combination of direct transfer and planting. Direct transfer of vegetation is particularly successful at assisting in community recovery and assists some poorly mobile species to reach rehabilitated sites[112]. That is why there is a requirement that direct transfer be maximised.[113]

154 Dr Bramley accepts that the invertebrate communities that will form earliest in response to rehabilitation at Te Kuha will be different to the original undisturbed communities, but they will still have many elements in common and will retain values that are consistent with those in the wider ecological district, including providing food for insectivorous birds

[108] Mr Chinn EiC para 82.
[109] Dr Bramley Invertebrate rebuttal evidence para 15.
[110] Ibid, para 16.
[111] Ibid, para 20.
[112] Ibid, paras 23 – 26.
[113] Condition 51(a).

and lizards.[114] By adopting a range of methods, which are all required by conditions of consent, the invertebrate population at Te Kuha will continue to be dominated by native species and will become progressively more similar to surrounding communities over time.[115]

155 Dr V Smith sets out a range of concerns about the proposed conditions requiring the Te Kuha Biodiversity Management and Enhancement Plan.[116] As a result of the expert conferencing and further consideration by the team advising the applicant, significant changes have been made to those conditions, which I submit address her concerns.[117]

156 Mr Patrick is of the opinion that we do not know enough about effects or the forest ringlet butterfly to have any confidence that mitigation will maintain or increase butterfly numbers.[118] At present, Dr Bramley agrees[119]. However, a baseline survey will be required if consent is granted. The purpose of this is to assist in obtaining that information because one of the knowledge gaps is with respect to how much habitat is potentially available and where it is, although butterflies clearly occur in reasonable numbers both inside and outside the footprint. Information about distribution and abundance of habitat will be required to help inform any future management decisions.

157 An earlier draft of the proposed conditions included a requirement to undertake more searching for the undescribed leaf-veined slug. That has been done, and no more were detected. Further searching for, and monitoring of, the slug is impractical. Moreover, since it was discovered in tall forest, of which only 3.5ha would be removed, a considerable amount of similar habitat outside the proposed footprint will remain intact. Furthermore, because the slug is most likely a species of tall forest, it is unlikely to respond rapidly to the rehabilitation measures proposed because development of tall forest is expected to be prolonged.[120]

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[114] Dr Bramley Invertebrate rebuttal evidence para 31.
[115] Ibid, para 35.
[116] Dr V Smith Supplementary Evidence paras 16ff.
[117] Dr Bramley Invertebrate rebuttal evidence paras 44,45; Appendix 1 to Ms Courtier's rebuttal evidence.
[118] Mr Patrick, EiC para 119.
[119] Dr Bramley Invertebrate rebuttal evidence para 46.
[120] Ibid, para 53.

**Wetlands**

158 The evidence for the applicant is that the wetlands within the footprint can be re-established.[121] Consequently, there will, in the medium to longer term, no loss of wetland values.

159 As noted above, that conclusion is challenged by Dr Lloyd. I have addressed that issue in relation to the discussion on the proposed rehabilitation.

**ADDRESSING RESIDUAL EFFECTS THROUGH BIODIVERSITY OFFSETTING AND ENVIRONMENTAL COMPENSATION**

160 There is considerable evidence before the Court about the adequacy and appropriateness of the proposed mitigation/offsets/compensation 'package' proposed by the Applicant. This section of my submissions considers the main criticisms of this 'package' in the evidence and JWSs.

**The proposed off-footprint mitigation/offset/compensation package**

161 The off-footprint measures proposed comprise a suite of biodiversity management within an area of approximately 6000 ha, referred to as the Te Kuha Biodiversity Management Area (TKBMA)[122]. That area surrounds the footprint and links with other areas under biodiversity management. Within the TKBMA for a period of 35 years, the conditions require the consent holder to maintain and enhance populations of birds, lizards, and invertebrates, manage weeds and reduce the pressure of mammalian predators, browsers and wasps.[123] The target species for management and enhancement within the Te Kuha Biodiversity Management Area shall be[124] great spotted kiwi (Roroa) forest birds and fernbirds[125], lizards[126], bryophytes[127], the Forest Ringlet

[121] Dr Boothroyd EiC para 96; Dr Bramley Vegetation rebuttal evidence paras 53 and 56; Dr Simcock rebuttal evidence paras 48 – 60; Dr Ross rebuttal evidence paras 48 – 51.
[122] Shown in Figure 7 of Dr Bramley's EiC Fauna, and Appendix 2 of Dr Bramley's Avifauna Rebuttal Evidence.
[123] Condition 167.
[124] Condition 171.
[125] Conditions 175, 175.
[126] Conditions 176, 177.
[127] Conditions 178, 179

Butterfly[128], Helm's stag beetle[129], and key vegetation species.[130] Many of these conditions have been amended and strengthened as a result of expert conferencing, and further consideration by the Applicant's advisors.[131]

162 The conditions require the preparation of Te Kuha Biodiversity Management and Enhancement Plan in consultation with the Department of Conservation, the Buller District Council, and Te Rūnanga o Ngāti Waewae, which sets out how compliance with the conditions is to be achieved. A draft Te Kuha Biodiversity Management and Enhancement Plan is appended to Dr Bramley's Vegetation Rebuttal evidence.[132]

163 The Applicant has agreed following expert conferencing to establish a Technical Advisory Group, at its cost, to advise it on the management activities in the Te Kuha Biodiversity Management Area.[133] This TAG is separate and additional to the requirement for technical reviewers which are to advise the Consent Authorities.[134]

164 In order to ensure that the objectives are to be met, the Applicant proposes that the Consent Holder must provide to the Consent Authorities reports from an independent ecologist that the measures being undertaken are likely to meet and will continue to meet the objectives set out in the conditions. These reports must be provided by years 3, 5, 10 and 15 from the start of management activities within the TKBMA.[135]

165 These reports are specifically linked to a condition which enables the Consent Authorities to review the conditions of consent to ensure that the objectives of the Management Plan as provided for in the conditions

[128] Conditions 185, 186.
[129] Conditions 191, 192.
[130] Condition 190.
[131] JWS Vegetation section 23; JWS Avifauna section 15; Ms Courtier rebuttal evidence Appendix 1.
[132] Dated June 2022. The previous draft version dated March 2018 which was appended to Dr Bramley's Vegetation EiC has been superseded by the June 2022 version.
[133] Condition 169. It would be clearer if this requirement were set out in a separate condition rather than as part of condition 169. This could be the same TAG as is required to be established to advise on rehabilitation by condition 51A.
[134] Conditions 72 – 75.
[135] Condition 169.

are met.[136] It is this condition which enables the Consent Authorities to amend the conditions (such as by providing additional or more specific objectives, requiring additional measurement measures, and increasing the duration of the management beyond 35 years) which forms the basis for future adaptive management if that turns out to be necessary

166 Ms McDonald and Dr Des Smith have raised several concerns about what they consider to be risks and uncertainties with the proposed pest control.[137] These various technical concerns are responded to by both Dr Bramley[138] and Dr Craig[139] in their rebuttal evidence. In summary, as Dr Craig puts it: "Properly done intensive pest control as proposed by the applicant will make a significant positive difference in the values of the TKBMA. That is not a guess – it is based on good science from other places."

167 It is proposed that the pest control continue for 35 years, although that can be extended if necessary to achieve the outcomes of the Biodiversity Management and Enhancement Management Plan.[140] That duration has been criticised as being too short.[141] Dr Craig has addressed that criticism in detail.[142]

168 I am aware of only one reported instance where a 'in perpetuity' condition was proposed. In its decision on the Mt Messenger Bypass[143], the Court stated:

*The Restoration Package*

*[208] We are satisfied that the Restoration Package includes a range of mitigation, offset and compensation that together are sufficient to provide for on-site/near-site ecological benefits in the short term and ecological benefits over the whole PMA (and potentially beyond It) in the longer term.*

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[136] Condition 15.
[137] Eg, Dr D Smith EiC paras 35, 68ff, 80; Ms McDonald supplementary evidence para 15; JWS Offsets/Compensation section 5A.
[138] Dr Bramley Avifauna rebuttal evidence paras 20 – 28.
[139] Dr Craig rebuttal evidence paras 35 – 39, 48.
[140] Condition 15.
[141] Dr D Smith EiC paras 31 – 38; Ms Mealey EiC paras 98 – 106.
[142] Dr Craig EiC paras 188 – 191; Dr Craig rebuttal evidence paras 40 – 43. Also Der Bramley Avifauna rebuttal evidence para 25.
[143] *Director-General of Conservation v New Zealand Transport Agency* [2019] NZEnvC 203 at [209] – [209].

*[209] We consider the in-perpetuity provision of the Restoration Package to be extremely generous, but this is what the parties have agreed and we have no basis on which to convert this to a shorter term. We note, however, that we do not consider the inclusion of an in-perpetuity condition to be precedent-setting in terms of future projects, as the Restoration Package results from the peculiar circumstances of this Project and is volunteered. Should the need for predator control of the type now required no longer be necessary in future (for example, should a national pest management strategy overtake the requirement for local pest/predator control initiatives) the usual recourse to a review of the consent conditions is available.*

169 The peculiar circumstances of that project included that the road was treated as if it will remain in place in perpetuity and therefore the footprint would never be rehabilitated. Moreover, the effect of disturbing or removing? connectivity was also seen to be a permanent one. That is quite different to the situation at Te Kuha where the footprint will be rehabilitated to a high standard and connectivity will be restored.

**A charitable trust as the delivery mechanism**

170 The applicant proposes that the vehicle for delivering the off-footprint pest control and other positive works be a newly created charitable trust. This is simply the administrative vehicle or mechanism to be used. The applicant would always continue to be responsible and liable for compliance with the conditions, including the ongoing funding of the work. The concept of using a trust as the mechanism to deliver the pest control required by the proposed conditions is intended to enable this work to potentially form part of a larger Buller 'pest free' project in due course, rather than the current ad-hoc approach where each project is stand-alone.[144] Moreover, the trust is intended to it provide an opportunity for Ngāti Waewae to take a formal and active role in conservation management, thereby assisting with the exercise of kaitiakitanga.[145]

**The principle of Limits to Offsets**

171 One of the general principles around the appropriate use of offsets is that there are 'limits to offsets'. In general terms, offsets cannot be

[144] Dr Craig rebuttal evidence paras 44 – 50.
[145] Ms Brewster evidence para 73.

legitimately used where there is a significant adverse effect that cannot be addressed through effects management. In every appellate consenting process I have been involved in there is a disagreement between ecologists over what constitutes a significant residual effect which cannot be appropriately addressed.

172 There are two separate, but interrelated, considerations with respect to this principle. The first is an assessment of effects under s104(1)( a) and s104(1)(ab). This section of my submissions considers this general principle in terms of a consideration of the effects of the proposal. I comment on the limits to offsets or 'bottom lines set out in Policy 7.2 of the RPS in the section of my submissions which considers the statutory documents under s104(1)(b).

173 This principle about limits to offsets derives from the work of the Business and Biodiversity Offsets Programme (BBOP). In 2004, Forest Trends[146] established BBOP. At that time the terminology for core concepts such as 'mitigation', 'compensation' and 'offsets' varied from country to country and group to group, leading to confusion and misunderstanding. It also wasn't clear how to measure losses and gains of biodiversity, how to consider the social and cultural values of communities and how to set up the legal, financial and administrative arrangements to secure mitigation measures over the long term. At the same time, government policies and financial investment conditions did not necessarily encourage best practice.

174 Without a recognised standard, project developers, lenders and the conservation community had no way of judging the quality of mitigation measures including biodiversity offsets. In addition, developers were exposed to potential criticism that the efforts they made to offset impacts were inappropriate, wrong in kind, scale and location and did not accord with good practice. The risk of criticism and the lack of certainty that investment in offsets will be well regarded by stakeholders was (and continues to be) a significant disincentive to developers.

[146] Forest Trends is a not-for-profit organisation based in the United States "with three principal roles: convening market players to advance market transformations, generating and disseminating critical information to market players, and facilitating deals between different critical links in the value chains of new forestry". https://www.forest-trends.org/who-we-are/mission-and-history/

175 BBOP started with 40 representatives from companies, governments, non-governmental organisations and financial institutions[147]. BBOP grew to over 100 members, with a Secretariat provided by Forest Trends and the Wildlife Conservation Society.

176 BBOP's work continued until 2018 when it considered that its objectives had been achieved. Over the period 2004 – 2018 BBOP developed and published a series of publications, which resulted in establishing more rigour and transparency in the application of the mitigation hierarchy and promoting concepts like No Net Loss and Net Gain.

177 Rather than endeavouring to prescribe very detailed guidelines for every scenario, members of BBOP agreed that best practice should be established by defining a set of principles that set a high standard on how to proceed but that are flexible enough to apply in very varied circumstances. In 2009, BBOP agreed the Principles on Biodiversity Offsets, now used, cited, adapted and integrated into law, policy, industry guidance and financial loan conditions worldwide.

178 BBOP then published the Standard on Biodiversity Offsets which is intended to help companies, lenders, governments, civil society and auditors navigate through the mitigation hierarchy and establish actions to achieve no net loss or a net gain of biodiversity. BBOP's 'Handbooks' are 'how to' tools to enable practitioners to put the Principles and Standard into practice in the design and implementation of particular projects. The Handbooks are accompanied by 'Resource Papers' one of which is a 2012 paper on the principle of Limits to Offsets[148].

179 As noted, BBOP's work is intended to be flexible and provide guidance rather than dictating specific rules. That is reflected in the following comments from BBOP documents

> ***Not-offsetable thresholds****: Where the residual negative impacts of a proposed project are likely to be so great as to lead to irreplaceable loss of biodiversity (e.g. global EXTINCTION of a species), no biodiversity offset could compensate for such loss. In these circumstances, biodiversity offsets would be impossible.*

[147] Business and Biodiversity Offsets Programme (BBOP). 2018. Working for Biodiversity Net Gain: An Overview of the Business and Biodiversity Offsets Programme (BBOP) 2004–2018. Washington, D.C

[148] Business and Biodiversity Offsets Programme (BBOP). 2012. Resource Paper: Limits to What Can Be Offset. BBOP, Washington, D.C

*Similarly, biodiversity offsets may be an inappropriate approach for a species or ecological community that is currently or has already undergone a significant decline, as the risk that the offset will fail could be too high... Beyond global species extinction, the guidance in this Handbook avoids suggesting that there are clear 'bright line' thresholds (i.e. firm dividing lines between what can be offset and what cannot) because, as yet, there is no consensus on these*[149]*.*

*In general, whether a specific set of development impacts on biodiversity can and should be offset is context dependent and needs to be established on a case by case basis. This requires consideration of a wide range of ecological, legal, socio-economic and financial factors, and should be guided by the advice of suitably qualified specialists and local expertise*[150]*.*

*Irreplaceability and vulnerability are key concepts in understanding and determining the ecological constraints on the feasibility of an offset. Irreplaceability is defined in the context of a conservation target set for biodiversity with the aim of ensuring the persistence of a full range of biodiversity, to maintain biodiversity or to halt its further decline. Appropriate targets vary with the type and status of the biodiversity concerned and its context…The irreplaceability of a site or an area is defined … as: 1) the likelihood that the site will be needed as part of a conservation system that achieves the set of targets and the biodiversity conservation goals; and 2) the extent to which the options for achieving the set of targets are reduced if the area is not available for conservation (e.g., if the site is lost due to development impacts). Irreplaceability is therefore a contextual measure, i.e., it is understood at a specific scale (e.g., at the regional or national scale). …. High irreplaceability means high risk for offsetting.*

*Vulnerability is defined … as 'the likelihood or imminence of biodiversity loss (e.g., of a particular species) due to current or*

[149] Business and Biodiversity Offsets Programme (BBOP). 2012. Biodiversity Offset Design Handbook-Updated. BBOP, Washington, D.C. Page 7.
[150] Business and Biodiversity Offsets Programme (BBOP). 2012. Resource Paper: Limits to What Can Be Offset. BBOP, Washington, D.C. Page 3.

*impending threatening processes'. These threats may be habitat loss, degradation, or fragmentation, over-harvesting or hunting, and other factors that compromise the amount, condition and functionality of this type of biodiversity and therefore its continued representation and persistence in the landscape. Vulnerability can be specified at the level of a particular site and its biodiversity (e.g., an industrial complex is proposed to be built on the site) or for biodiversity components (e.g., a species is globally or regionally threatened due to the fragmentation of its habitat). The IUCN Red List is a globally accepted system for listing vulnerable species (i.e., those that are threatened or endangered) according to agreed criteria. While the Red List is designed to detect the risk of species extinction, the concept of vulnerability can also be extended to ecosystems. Note that in practice precise definitions of vulnerability may vary, as do the criteria for determining the vulnerability of particular biodiversity components or sites.*

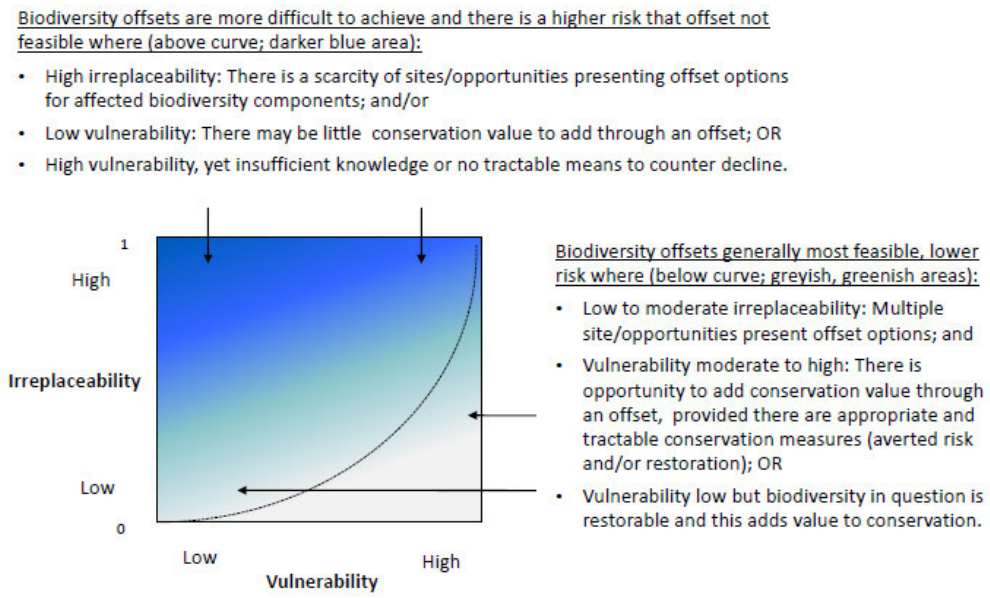
*Vulnerability indicates both risk and opportunity - by adding conservation value - for offsetting*[151]*.*

180 Importantly, the BBOP guidance provides that the inability to meet the requirements for an offset does not necessarily mean that a project should not proceed:

*If there are residual impacts that cannot be offset, have you planned an appropriate response? Options include either taking further steps than were initially planned avoid / minimise those impacts, to reconsider the project, or to proceed, acknowledging that it is impossible to offset the impacts. (In this case, other compensatory conservation measures could be very worthwhile, but it is important to be open with stakeholders about the fact that it is impossible to offset all the impacts*[152]*.*

181 BBOP expresses this graphically as follows (Fig 3 Handbook)

[151] Business and Biodiversity Offsets Programme (BBOP). 2012. Resource Paper: Limits to What Can Be Offset. BBOP, Washington, D.C. Page 5.
[152] Business and Biodiversity Offsets Programme (BBOP). 2012. Biodiversity Offset Design Handbook-Updated. BBOP, Washington, D.C. Page 23.




182 This Figure confirms the extracts quoted above that the principle of limits to offsets is a matter for a discretionary consideration based on a range of factors. There are no 'bright line tests' (other than perhaps the extinction of a species).

183 To provide objectivity on the question whether the proposal would offend against the limits to offsets principle, Dr Bramley has used the "Limits to Offsetting" analysis (developed by Pilgrim et al. (the "Pilgrim analysis")[153] Dr Bramley's rebuttal evidence sets out that analysis for all ecological values in which the residual Level of Effects associated with Project activities was assessed as greater than "Moderate".

184 The Pilgrim analysis centres on assessing whether effects on a given biodiversity value should be avoided because it "exceeds the limits of offsetting". An assessment of "limits to offsetting" or "offsetability" for a given biodiversity value is broadly based on "Combining biodiversity conservation concern with the likelihood of offset success in a burden of proof framework".[154] The process includes a sequential assessment of:

(a) The biodiversity of concern, which is based on vulnerability and irreplaceability:

[153] A process for assessing the offsetability of biodiversity impacts. Conservation Letters, 6(5) Pilgrim, J. D., Brownlie, S., Ekstrom, J. M., Gardner, T. A., von Hase, A., Kate, K. T., Savy, C. E., Stephens R. T. T., Temple, H. J., Treweek, J., Ussher, G. T. & Ward, G. (2013), at pg 376–384.
[154] At p 382

(i) Vulnerability equates to "threat status" with the Pilgrim process assigning five vulnerability categories[155] aligned with International Union for the Conservation of Nature ("IUCN") red-list categories[156] in descending order of vulnerability, namely: Critically endangered; Endangered; Vulnerable; Near Threatened / Least Concern; and Data deficient / Not evaluated[157].

(ii) Irreplaceability equates to the importance of sites to the global persistence of the ecosystem type or species, ie the percentage of the global range or population of a biodiversity feature sustained by the area of analysis.

(b) An assessment of offset or compensation feasibility is based on the technical potential and the availability of offset opportunities. Categories range from Class I (lowest potential for offset opportunities) to Class IV (highest potential for offset opportunities).

(c) An assessment of offset or compensation certainty with respect to implementation and delivery of No Net Loss or preferably Net Gain outcomes. Categories range from Class I (lowest level of certainty) to Class IV (highest level of certainty).

185 The Pilgrim analysis is also consistent with BBOP in that it sees the question as one of analysis rather than a ‘test’ and expresses it in diagrammatic form in the following way:

[155] At p 382
[156] IUCN (2001). IUCN Red List Categories and Criteria—Version 3.1. International Union for Conservation of Nature and Natural Resources (IUCN), Gland, Switzerland and Cambridge, UK.
[157] Ibid.

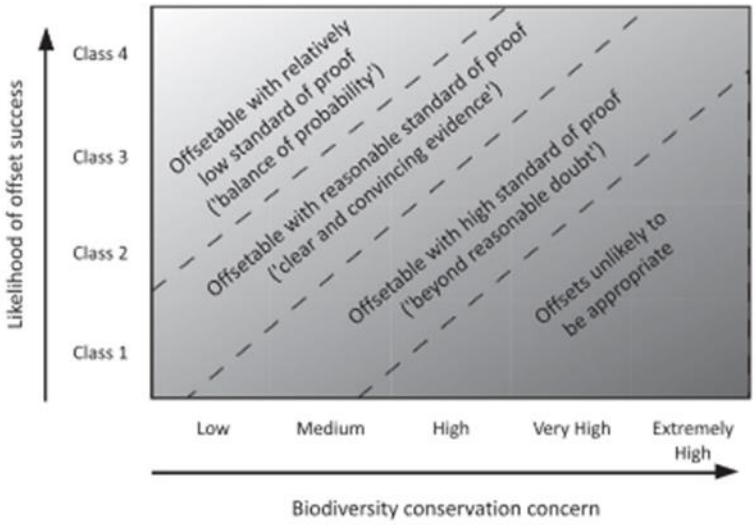



**Figure 2** Burden of proof conceptualization of offsetability, combining biodiversity conservation concern and likelihood of offset success. A practical framework may thus, e.g. view offsets as unlikely to be appropriate for: Class 1 likelihood of offset success for areas of High, Very High, and Extremely High conservation concern; Class 2 for Very High and Extremely High concern; and Class 3 for Extremely High concern.

186 This approach is consistent with the 2018 Guidance[158].

187 Dr Bramley's conclusions from using the Pilgrim analysis is that for all vegetation, avifauna and invertebrate values, the 'limits to offsets' principle is not compromised or breached[159].

188 In conclusion, and based on the level of conservation concern, offset feasibility and offset certainty, the "limits to offsetting" principle is addressed. for all assessed biodiversity values (ie those with a level of effects greater than "Moderate")

**Additionality**

189 A second principle derived from BBOP is that of 'additionality:

*A biodiversity offset should achieve conservation outcomes above and beyond results that would have occurred if the offset had not taken*

[158] Biodiversity Offsetting in New Zealand - Guidance for Local Govt Decision Maker, Table1page 4,

[159] Dr Bramley Vegetation Rebuttal evidence paras 83 – 94; Dr Bramley Fauna Rebuttal evidence paras 41 – 51; Dr Bramley Invertebrate Rebuttal evidence paras 54 – 65.

*place. Offset design and implementation should avoid displacing activities harmful to biodiversity to other locations.*

190 Ms Mealey considers that the proposed pest control is inconsistent with the principle of additionality because "regular large scale aerial pest control commenced over the Te Kuha are in November 2020" (the New Creek operation)[160].

191 Dr Craig discusses this in his rebuttal evidence[161]. In summary:

a. The November 2020 operation confirms Dr Bramley's and Dr Craig's evidence in chief that pest pressure in the Te Kuha Biodiversity Management Area is such that it warrants control as a matter of priority when considered from a national perspective.

b. There is no guarantee that aerial operations at Te Kuha will continue. Planning for drops takes place on an annual basis and many planned operations by the Department are cancelled. There is simply not enough funding to do all the aerial operations that are necessary. The recent budget for the Department is inadequate to do all that is necessary nationwide.

c. In any event, even if another aerial operation were to occur at Te Kuha, it is said (but not even confirmed by a Department strategy or business plan) that it will end in 2026. Witnesses for the Department and Forest & Bird are critical of the proposal by the applicant to end even more regular pest control operations after 35 years[162]. That criticism must be significantly increased in respect of the suggested operation by the Department (though that is not remarked on in their evidence). The Department's proposal of one more treatment will be ineffective in suppressing pests in the area beyond any very short-term (months for rodents) control. In any event it is unclear whether the Department would undertake any monitoring of the effectiveness of such an operation.

d. Moreover, even if there were a guarantee that the sort of pest control and monitoring proposed by the applicant over at least 35 years could be guaranteed by the Department as a legally enforceable requirement (in the same way as a resource consent condition),

[160] Ms Mealey EiC paras 89 – 97.
[161] Dr Craig Rebuttal Evidence paras 21 – 34.
[162] Including Ms Mealey herself – EiC para 100.

having the applicant take over that work would release that funding for an alternative operation which is currently unfunded, thereby resulting in additionality in that respect. Additionality arises in relation to the effect, not what the Department may or may not do in the future.

**The distinction between offsets and compensation**

192 Generally, environmental compensation is designed to recompense for losses, but does not aim to measure and balance gains with losses as offsetting is intended to do. Environmental compensation is recognised as the 'last resort' option within the effects management hierarchy and carries the most risk. While the endpoint of environmental compensation can be a socially acceptable positive outcome, and have significant biodiversity benefits, there is currently no accepted system by which the benefits generated by environmental compensation, which often involve out-of-kind exchanges can be objectively measured against losses. Therefore, the level of certainty that the benefits will be adequate to compensate for the losses is much lower compared with an offset.

193 Ms Mealey considers[163] that the actions proposed by the applicant are compensation rather than offsets because the applicant had not initially used a specific type of quantitative model. Dr Baber's evidence in chief addresses this and concludes, correctly in my submission, that there is no requirement to use modelling, or any specific model in particular, in order to qualify as an offset. There does, however, need to be an explicit statement of losses and gains and the principle of 'like-for-like' must be complied with.

194 As a response to Ms Mealey's criticism, and on Dr Baber's advice, Dr Bramley has undertaken modelling for effects on the habitats of indigenous birds. Simply undertaking a modelling exercise cannot 'convert' what is otherwise compensation into an offset as Ms Mealey appears to imply. Rather, the distinction in any particular case is an assessment of the proposed actions against the offsetting principles. Use of a model can assist that assessment, but modelling (especially using the specific type of modelling that Ms Mealey refers to) is not a sine qua non of offsetting.

[163] Ms Mealey EiC para 39(a).

195 The Environment Court has commented on the distinction in the Manawatu Highway decision as follows:

> *Where the attribute values and losses are able to be quantified and the outcome verified, that replacement or improvement is an offset. Where the values cannot be quantified and the losses and gains cannot be verified, that outcome is termed compensation.*[164]

196 As I discuss below, the Court makes it clear in that decision that this does not mean that the use of any model, or any particular model is compulsory to 'qualify' as an offset.

197 Dr Bramley and Dr Craig are of the opinion that some elements of the pest control constitute an offset in accordance with the offset principles. Dr Baber takes a more conservative approach and prefers to call the entire package compensation, on the basis that the specific model advocated for by those advising the Director-General is incapable of practical application in a situation such as this (hence the development of the Biodiversity Compensation Model (BCM) which has been used by Dr Bramley).

198 At the end of the day, defining a bright line between offsets and compensation in this case is not, I submit, necessary or useful. What is important is for the applicant to be transparent about the appropriate application of the effects management hierarchy and to have stepped logically through that process. That is what has been done. The use by Dr Bramley of a BCM for birds is appropriate for the reasons set out by Dr Baber, despite Dr Giejsztowt for Forest & Bird being of the opinion both types of models considered in the evidence are flawed and are therefore not useful.

199 An example of a practical approach to the distinction between offsets and compensation can be found in the 2020 decision of the independent commissioners' decision in Oceana Gold's Deepdell North application[165]:

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[164] *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192 at para 153

[165] Application by Oceana Gold (New Zealand) Limited for the Deepdell North Stage III Project, decision by Independent Commissioners dated 23 September 2020.

*We were also impressed by the evidence of [a witness for the Director-General of Conservation] on this issue. In discussing the provisions of the RPS he said:*

> *(Court decisions) "appear to structure offsetting and compensation as "all or nothing" tiers where a proposal either meets the full set of criteria or drops down to the next tier. I am concerned that this could potentially fail the best meet the purpose of the RMA, and fail to deliver the best ecological outcomes. I consider that the approach taken by OGL is preferable, such that even where one criteria of a tier cannot be met, they have still worked to comply with as many of the other criteria for that tier as possible…."*
>
> *"While I recognise the RPS provisions on offsetting and compensation, to an extent I consider the classification of the proposal in that way is somewhat academic. It is clear to me that OGL has taken an "effects management hierarchy approach – where adverse effects cannot be avoided, remedied or mitigated they have applied offsetting principles as much as practicable, where offsetting is not achievable they have applied compensation principles as much as practicable, and where compensation is not achievable, they have offered positive ecological enhancement measures."*

200 I submit that this is a pragmatic yet principled, approach, applicable to the present case.

**The use of models/quantification**

201 There is no statutory or policy requirement to use any type of model to either be defined as, or to demonstrate the acceptability of, a proposed biodiversity offset.

202 Not only is there no legal requirement to use a model or loss/gain calculation, but in this case the use of such a calculation is also unnecessary. I submit that reliance on expert opinion from Dr Bramley, confirmed by other experts advising Stevenson, is adequate to establish the appropriateness of the proposed offset/compensation and a model is unnecessary. Nonetheless, because of the trenchant criticism of Dr Bramley's approach and in response to Ms Mealey's assertion that a model is compulsory, Stevenson has chosen to use a model to assist. Consequently, what Stevenson proposes can now be called an offset insofar as Dr Bramley advises an offset is proposed (and if Ms Mealey is correct about the need to use a model).

203 While the use of models is not compulsory[166], where recent decision makers have been presented with evidence and argument about the appropriate approach to modelling, they have favoured a more qualitative modelling approach rather than a quantitative accounting model.

204 Courts have approached the use of biodiversity offset modelling with caution. The 2013 interim Environment Court decision in the Escarpment Mine project[167] expressed concerns with the heavy emphasis placed on the computer model put forward by the applicant in that case, which was ultimately abandoned. The Court stated that it had become apparent that the Court was being used as a forum to settle vigorous technical scientific debates between two groups of ecologists as to appropriate modelling methodology. It was reiterated that the Court is neither a peer review panel nor an arbitrator between factions disputing scientific or computer modelling methodology; it is a consent authority whose duties are set by the RMA, which in this case include:

a. Assessing the strength or otherwise of the evidence about various species, ecosystems, and biodiversity;

b. To weigh the individual factors;

c. Assess whether adverse effects must be avoided, remedied or mitigated; and

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[166] Unless that is mandated in a statutory planning document. The only example I am aware of is the requirement to use Stream Ecological Valuation (SEV) and Environmental Compensation Ratio (ECR) in the Auckland region where there is loss of stream habitat. I note, however, that the draft NPSIB in Appendix 3 under the heading of one of the principles 'No net loss and preferably a net gain' states 'No net loss and net gain are measured by type, amount and condition at the impact and offset site and require an explicit loss and gain calculation'). This can be contrasted with the statement in the 2018 Guidance Document: 'The goal of a biodiversity offset is a measurable outcome… No-net-loss is measured by type, amount, and condition and requires explicit statements describing…'. The Business and Biodiversity Offset Programme's (BBOP's) Principles do not refer to 'explicit' statements or calculations, but it does state that a biodiversity offset should be designed and implemented to achieve in situ, measurable conservation outcomes. The West Coast RPS refers to neither measurable outcomes nor 'explicit statements'. Having 'measurable outcomes' does not necessarily mean that models have to be used. Outcomes can be measurable by way of comparing baseline condition with the effect of the offset through monitoring of type, amount as condition as set out in the 2018 Guidance document.

[167] *West Coast Environmental Network Inc v West Coast Regional Council* [ 2013] NZEnvC 47 paras [218] – [220].

d. Arrive at an overall broad judgement that serves the purpose of the Act as stated in section 5.

205 In a more recent decision of the Environment Court[168], the applicant had used both what is called a Biodiversity Offset Accounting Model (BOAM) and a Biodiversity Compensation Model (BCM) to calculate the offset and compensation required. The Court commented:

*[152] Our understanding of the models is that they:*

- *Place (where possible) a numerical value on the existing ecological quality of each ecological component ('attribute') of an area of vegetation or habitat;*
- *Compare that with a 'benchmark' (the value of a more-or-less intact ecosystem of the same habitat type), then record or calculate the loss of that value as a result of the activity in question*
- *Calculate the quantum of offset needed to achieve the replacement (leading to no net loss of biodiversity) or improvement (leading to a net gain in biodiversity) over a set period, with a 'discount' applied to account for model uncertainties and the lag time between biodiversity losses and gains.*

*[153] Where the attribute values and losses are able to be quantified and the outcome verified, that replacement or improvement is an offset. Where the values cannot be quantified and the losses and gains cannot be verified, that outcome is termed compensation.*

206 Expert witness conferencing in that case showed approval of the general approach the applicant had taken to offsetting and compensation, and also the modelling, but because of several detailed concerns raised by some experts at the conferencing, the applicant had re-run the model and presented that to the Court. The Court noted this did not alter the outcome and stated:

> *[170] …This has raised a question in our minds about the degree of refinement expected of the model and the efficacy of undertaking that additional work. There must be a point of*

[168] *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192. The use of a BOAM was approved by an Expert Consenting Panel convened under the COVID-19 Recovery (Fast-Track Consenting) Act 2020 in Record of Decision of the Expert Consenting Panel on the Matawii Water Storage Reservoir, 23 October 2020.

*diminishing returns at which the inclusion and refinement of additional attributes ceases to add value to the outcome and we wonder if some form of simpler sensitivity analysis might have been as effectively adopted for testing the modelling.*

207 With respect to the use of the models, the Court concluded:

> *[173] …From the Court's perspective, the model is intended to assist in determining reasonable and supportable offset and compensation quanta. The offset and compensation are intended to be measurable and that will be the case without the level of detail included in the EC conditions. The development of biodiversity offsetting and the use of models to achieve it is relatively recent. We appreciate the models' applicability as tools and that inputs can be at a very detailed level but* ***there is no compulsion to use any particular model or for the model to do more than assist the Court in making a decision as to whether reasonable mitigation is being applied.*** *(my emphasis)*

208 The most recent decision I am aware of on this topic is a decision of commissioners in the Dome Valley landfill application[169] which states:

> *Offset/compensation modelling is a tool to assist in decision making processes. Some submitters (e.g. Forest & Bird) were critical of the qualitative approach taken by the applicant, highlighting that quantitative data could have been used instead if more assessments were carried out. Regarding frogs, bats, and lizards, we do not consider that further assessment work (e.g., radio-tracking for bats, further frog surveys, quantitative fish data) would have allowed for meaningful quantitative modelling that would further assist with decision-making. While the quantitative results of such further assessment may give the impression of increased precision, survey and monitoring data for the fauna groups concerned are inherently variable and difficult to interpret. The applicant's approach to this uncertainty was to adopt a conservative approach towards assessing effects and applying a comprehensive effects management package that seeks to achieve a net gain, which provides more confidence in at least achieving no net loss. We accept the applicant's approach[170].*

209 The approach of suggesting the need for ever greater levels of detail has been a feature of experts giving evidence for parties opposing

[169] Application by Waste Management (NZ) Wayby Valley Landfill, Decision by Independent Commissioners dated 11 June 2021.
[170] At para [283].

developments. It is a theme which runs through many of the earlier decisions reaching perhaps its high point in the Escarpment Mine case, although the debate continues. More recently this debate seems to have focussed on whether to use BOAMs or BCMs. Dr Baber discusses the difference between the two types of models (primarily the requirements about inputs) in his first statement of rebuttal evidence[171].

210 Dr Bramley has, on the advice of Dr Baber, used a BCM. BCMs have been used on projects at the consenting stage to provide guidance on the type and magnitude of offsetting and compensation requirements that are expected to generate NNL/NG outcomes. BCMs are similar to BOAMs in that they are informed by field investigations at the impact site(s) and by expected gains at the proposed 'offset' site(s), and they account for uncertainty and the time lag between biodiversity losses and gains. BCMs include the use of science-based qualitative data where quantifiable data is not available or lacks adequate precision.

211 The purpose of BCMs is to help assess the likelihood of NNL/NG outcomes being achieved for a given biodiversity value through the proposed residual effects management package. These models provide a decision-support tool which aims to help to bridge the gap between the theoretical ideal of quantitative BOAMs at the consent stage, and real-world practice, i.e. when the quantitative information requirements for BOAM cannot be satisfied with sufficient confidence at the resource consenting stage to demonstrate an offset.

212 In comparison to BOAM, BCM does not rely on quantitative data to the same degree. Instead, determination of biodiversity value —both before and after impact and compensation measures— is based on the assignment of a value score that aligns with the Environment Institute of Australia and New Zealand's Guidelines (EcIAG) ecological value categories. To meet the stated requirements of the BCM, these value scores must be underpinned by professional judgement that is based on desktop and field investigations (including the use of quantitative data to support the assigned ecological value scores).

213 Because there may be increased potential for data input inaccuracies when using qualitative information. To address this, a BCM contains considerably greater conservative features than a BOAM.

[171] Dr Baber First Rebuttal Evidence paras 24 – 31, 38, Appendix B.

214 Dr Baber sets out the reasons why a BOAM cannot be used in this instance[172]. But it is critical to note that a BOAM is not necessarily superior with a BCM being 'second best'. Even in those very limited circumstances where it is possible to provide the sort of data required for a BOAM, it usually involves subjectivity, particularly with regard to predicting future gains at the offset site. Consequently, the use of a BOAM potentially carries greater risk of assuming the results have a higher level of precision that is warranted.

215 As noted, where modelling has been used, decision-makers have expressed concern that it is being asked to deliver outcomes which it is not equipped to deliver. For example, the Environment Court has recently said:

> *[175] … We maintain our view that the very detailed modelling and the level of monitoring for some attributes of the offset may place more confidence in the model outcomes than is warranted or reasonable.*[173]

216 Witnesses for Forest & Bird and the Director-General have been critical of the Applicant with respect to its approach to modelling. The criticisms range from one witness for the Director-General being critical that no modelling was initially used[174], to one witness for Forest & Bird being critical of the use of any model[175], and pretty much everything in between.[176]

217 While it may be an interesting academic debate on the finer points of biostatistical modelling (for some at least), it is the Applicant's position that that debate should be held elsewhere. The Applicant has resisted attempts by Forest & Bird in particular to use the appeal hearing for what should be an academic debate in a different forum.

218 Having said that, I submit that the concerns expressed by the witnesses for Forest & Bird and the Director-General are overstated and that those

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[172] Dr Baber First rebuttal evidence paras 22 – 24, 69, 70.
[173] *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192 at 175.
[174][174] Ms Mealey EIC para 55.
[175] Dr Giejsztowt rebuttal evidence paras 5.11, 5.17 and 5.18.
[176] JWS Offsets/Compensation section 6 – 10; Dr Giejsztowt rebuttal evidence; Dr D Smith rebuttal evidence; Ms McDonald supplementary evidence paras 18 – 20; Ms Mealey second supplementary evidence; Ms McDonald second supplementary evidence paras 13 – 28.

concerns can be fully addressed. The criticisms are responded to fully by Dr Baber,[177] Dr Craig,[178] and Dr Bramley.[179] Suffice to say in summary:

(a) While sound in concept, the use of BOAMs to 'demonstrate ecological equivalence' can rarely be achieved, and consequently has very rarely been applied at the consent stage to address effects on biodiversity values.

(b) BOAMs and BCMs ultimately share the same foundations with the key difference being that BCMs are more reliant on qualitative information that is underpinned by desktop and field investigations. To this end, a number of concerns raised by witnesses about BCMs are also relevant to BOAMs.

(c) Because BCMs apply additional contingency measures to address acknowledged uncertainty, in Dr Baber's experience, they have generated better environmental outcomes than BOAM when applied at the consent stage.

(d) Where witnesses have attempted to critique actual model inputs, the model inputs they suggest are inconsistent with the criteria set out in the User Guide, and inconsistent with relevant desktop information and field investigations, including investigations cited in their own evidence

(e) The appropriate application of BCMs for residual effects management is both consistent with — and can be used to assist — the traditional use of ecological expertise, experience and judgment. Dr Baber, Dr Craig and Dr Bramley are able to draw this conclusion based on their experience in the field of ecological effects assessments and effects management under the RMA.

(f) Employing expert judgement alongside desktop and field investigations in a BCM does not render an assessment somehow

[177] Dr Baber rebuttal evidence dated 14 April 2022 and second rebuttal evidence dated 17 June 2022.
[178] Dr Craig rebuttal evidence paras 76 – 87.
[179] Dr Bramley first statement of rebuttal on offsets/compensation dated 14 April 2022; Dr Bramley Avifauna rebuttal evidence dated 17 June 2022 paras 29 – 38.

arbitrary. To suggest this undermines the role of the professional ecologist and overplays the role of models[180]

(g) Witnesses for Forest & Bird and the Director-General have attempted to create a 'straw man' by implying that the model is intended by the Applicant to 'provide the answer'. That is not what the applicant has used the modelling for. The use of the BCMs assist, but do not and are not intended to, do more than that.

219 I submit that given the stated purpose of the BCM, the approach used by the Applicant and the mathematical foundation of the BCM is entirely appropriate in this RMA context.

## ASSESSMENT AGAINST THE PROVISIONS OF THE REGIONAL POLICY STATEMENT

220 The Court can look to the settled provisions of the RPS as giving effect to Part 2 of the RMA. There is no need to refer to Part 2 unless there is invalidity, incomplete coverage or uncertainty of meaning within the planning documents.[181]

### Objectives

221 The RPS sets out four objectives in relation to Ecosystems and Indigenous Biological Diversity (Chapter 7):

1. *Identify in regional and district plans, and through the resource consent process, areas of significant indigenous vegetation and significant habitats of indigenous fauna in a regionally consistent manner.*

2. *Protect significant indigenous vegetation and significant habitats of indigenous fauna.*

3. *Provide for sustainable subdivision, use and development to enable people and communities to maintain or enhance their economic, social, and cultural wellbeing in areas of significant indigenous vegetation and significant habitats of indigenous fauna.*

[180] Dr Baber second rebuttal evidence para 5.28.

[181] *Environmental Defence Society Inc v New Zealand King Salmon Co Ltd* [2014] NZSC 38; *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316.

4. *Maintain the region's terrestrial and freshwater indigenous biological diversity.*[182]

222 There is no priority as between these objectives. The objective of providing for sustainable development **in** areas of significant indigenous vegetation and significant habitats of indigenous fauna (my emphasis) is of equal importance to the objective of protecting those significant areas and habitats[183].

**Limits to offsets - Policy 7.2**

223 Policy 2 of Chapter 7 of the RPS provides that activities shall be designed and undertaken[184] in a way that does not cause certain listed effects. Ecologists advising the applicant are of the opinion that the project will not result in any of the listed effects, while ecologists advising Forest & Bird and the Director-General have a contrary view. The differences in opinion relate to whether the project will 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 …*

*d) A reasonably measurable reduction in the local population of threatened taxa [listed] in the Department of Conservation [2008] Threat Classification[185] Categories 1 – nationally critical, 2 – nationally endangered, and 3a – nationally vulnerable.*

224 In relation to Policy 7.2(a) the concerns relate to:

a. Invertebrates

b. Bryophyte associations

[182] RPS Chapter 7, page 26.
[183] This is reinforced by Anticipated Environmental Outcome 2: "Appropriate subdivision, use and development is able to occur, and regulatory processes do not unduly delay appropriate resource use and development taking place."
[184] The reference to 'undertaken' indicates that mitigation/rehabilitation and offsets should be part of the consideration on whether any of the listed effects will occur.
[185]Department of Conservation threat classification: Townsend, A, de Lange, P; Clinton, A; Duffy, A; Miskelly, C; Molly, J; Norton, D. 2008. New Zealand Threat Classification System Manual 2020.

c. Parkinson's rata

d. The ephemeral wetland community

e. *Mitrasacme montana* var *helmsii*[186]

225 As I noted above, Forest & Bird and the Director-General treat Policy 7.2 akin to a prohibited activity rule. While the policy is directive, it clearly contains elements which require a judgment based on the evidence. And just like the general approach to 'limits to offsets' established by BBOP as I discussed earlier, this policy requires judgment and there is no 'bright line test'.

226 Policy 7.2 is a 'limits to offsets' policy, rather than an 'ecological bottom line' as suggested by Forest & Bird's and the Director-General's witnesses. 'Ecological bottom lines' are not the words used in the policy itself. It is a concept which I submit is unhelpful in this context (whatever it may mean), even used as a shorthand[187]. Rather Policy 7.2 sets a threshold which, if not met, means policies 7.4 (offsets) and 7.5 (compensation) do not apply. It does not operate as a 'environmental bottom line' in the *King Salmon* sense, or prohibited activity rule as the witnesses for Forest & Bird and the Director-General imply.

227 In Policy 7.2(a) there are two terms which are not defined. They are:

a. <u>prevention</u> of an indigenous species' or a community's …

b. <u>ability to persist</u> in their habitats within their natural range

228 It is important to note that the policy itself sets out the context for both considerations as the Ngakawau Ecological District, and not the mine footprint itself, or the Te Kuha area around the proposed mine. I submit that the evidence of ecologists' advising Forest & Bird and the Director-General wrongly concentrates on the mine footprint, and not the effect of the proposal within the context of the ecological district. As I have noted, if the test is about the listed species' or community's ability to persist within the mine site, the proposal is likely to fail (at least until the

[186] Mealey EIC para 48(a). Sitarz EIC para 7.53.

[187] Notwithstanding the use of that term in the Explanation to the Policies on page 20 of the RPS. In *King Salmon* when the Supreme Court referred to 'environmental bottom lines' it was referring to policies in the NZCPS which had to be <u>given effect to</u> in deciding the plan change (not <u>had regard to</u> under s104(1)(b)) as in this situation, and the relevant policies in the NZCPS were to "avoid" the effects in question.

rehabilitation proposed has reached a state of maturity), just as all mining projects on the West Coast would similarly fail.

229 Nor does their evidence distinguish between preventing a species ability to persist, and having that ability adversely affected for a period of time.

230 Moreover, the ecologists for Forest & Bird and the Director-General appear to have completely disregarded the rehabilitation and other forms of mitigation proposed. All mitigation is relevant in assessing the project against Policy 7.2[188]. For example, the closure criteria, the rehabilitation conditions and the proposed pest control both off and on site all contribute to whether in the medium and longer term the listed species and communities (not individuals) will retain their ability to persist within their natural range within the ecological district.

231 It is of critical importance that the words used in Policy 7.2(a) refer to a 'species' or a 'communities'' ability to persist. This policy is not about individuals or assemblages of plants or animals. The direction in the policy is about preventing an entire species or community becoming extinct within their natural range.

232 Dr Bramley addresses Policy 7.2(a) in detail in his rebuttal evidence. In summary:

(a) None of the invertebrate species within the footprint at Te Kuha will be prevented from persisting within the Ecological District since they will continue to occur at other locations, including within the TKBMA, where they will be protected to a higher degree than they currently are.[189]

(b) None of the bryophyte species or associations present are known to be restricted to the footprint. Removal of vegetation and habitats associated with the mine will not affect the ability of individual species or communities to persist at other suitable habitats within the Ngakawau ED. Moreover, most bryophytes will return to the rehabilitated site over time.[190]

[188] Policy 7.2 begins with 'Activities shall be designed and undertaken in a way that does not cause…".
[189] Dr Bramley Invertebrate rebuttal evidence para 51.
[190] Dr Bramley Vegetation rebuttal evidence para 62.

(c) Parkinson's rātā is found throughout the Ngakawau Ecological District at a range of altitudes. The conditions[191] require Parkinson's rata to be present in rehabilitated shrubland habitats at closure.

(d) The ephemeral wetland will be removed, but as set out in Dr Simcock's evidence and as required by conditions, rehabilitation of this wetland types is proposed. [192]

(e) *Mitrasacme montana var. helmsii*, is reported as occurring at Mt William and Mt Frederick. It has been added to the list of species to be managed within the TKBMEP and the objective is to establish new populations which survive in ecologically appropriate locations.[193]

233 In relation to Policy 7.2(d) the concerns related to Great Spotted Kiwi/roroa, Parkinson's Rata, *Mitrasacme montana var. helmsii*, one threatened bryophyte and one threatened lichen.

234 Policy 7.2(d) uses the terms 'a reasonably measurable reduction' and 'local population' when referring to threatened taxa, both of which require a discretionary judgment having regard to all the evidence. That is, the policy is again focused on the relevant population rather than individuals.

235 Again, Forest & Bird and the Director-General appear to have concentrated solely on the mine site rather than the 'local population'. And they have also failed to have regard to:

a. The rehabilitation of the mine footprint which is intended to establish habitat which is suitable for roroa and other bird species; and

b. The mitigation of the effect of the proposal on the local population of roroa and other birds (which extends well beyond the mine site) by way of off-footprint pest control proposed which is intended (inter alia) to result in the enhancement of the local population of birds.

236 Both measures will not only maintain the local population of roroa and other bird species, but they will also enhance those populations.[194] Dr

[191] Condition 31(b).
[192] Condition 51(b). Dr Bramley Vegetation rebuttal evidence para 56.
[193] Dr Bramley Vegetation rebuttal evidence para 70.
[194] Dr Craig rebuttal evidence paras 67, 68..

Bramley's evidence is that considers that all the vegetation species occur outside the footprint. They will be managed via salvage and direct transfer (where possible) to appropriate locations. [195]

**Management and protection of SNAs - adoption of the effects management hierarchy – Policy 7.3**

237 Policies 7.3 – 7.5 provide a cascading framework to give direction to consideration of consent applications for activities in a SNA. The cascade follows the mitigation hierarchy, or effects management hierarchy, recognised in resource management practice[196].

238 Policy 7.3 of the RPS states that providing Policy 7.2 is met then the 'effects management hierarchy' is to be applied when managing effects of a proposal within a SNA. Putting aside the fact that the application of the effects management hierarchy is simply best practice for the management of all effects, at all stages of the planning for an activity, whether or not it takes place within a SNA, the applicant's evidence which I have summarised above describes how it has approached the application of the hierarchy. There is no real challenge to the applicant's use of the hierarchy.[197]

**Management and protection of SNAs – The use of biodiversity offsetting – Policy 7.4**

239 Policy 7.4 of the RPS then goes on to state:

*Provided that Policy 2 is met, and the adverse effects on a SNA cannot be avoided, remedied or mitigated, in accordance with Policy 3, then consider biodiversity offsetting if the following criteria are met:*

*a) Irreplaceable or significant indigenous biological diversity is maintained; and*

*b) There must be a high degree of certainty that the offset can be successfully delivered; and*

*c) The offset must be shown to be in accordance with the six key principles of:*

[195] Dr Bramley Vegetation rebuttal evidence paras 69 – 71.
[196] RPS Explanation to the Policies page 28.
[197] Although there is some dispute about whether some actions are 'mitigation' or 'offset' and whether other actions are 'offsets' or compensation'.

i. *Additionality: the offset will achieve indigenous biological diversity outcomes beyond results that would have occurred if the offset was not proposed;*

ii. *Permanence: the positive ecological outcomes of the offset last at least as long as the impact of the activity, preferably in perpetuity;*

iii. *No-net-loss: the offset achieves no net loss and preferably a net gain in indigenous biological diversity;*

iv. *Equivalence: the offset is applied so that the ecological values being achieved are the same or similar to those being lost;*

v. *Landscape context: the offset is close to the location of the development (Maseyk, F., Ussher, G., Kessels, G., Christensen, M., Brown, M., for the Biodiversity Working Group on behalf of the BioManagers Group, September 2018. Biodiversity Offsetting under the Resource Management Act: A guidance document. Pages 4, 5, 25.); and*

vi. *The delay between the loss of indigenous biological diversity through the proposal and the gain or maturation of the offset's indigenous biological diversity outcomes is minimised.*

*d) The offset maintains the values of the SNA.*

240 Forest & Bird's and the Director-General's witnesses take issue with the applicant's interpretation of each of the three elements of this policy.

(a) *Irreplaceable or significant indigenous biological diversity is maintained*

241 Dr Lloyd, Dr Marshall, and Dr Gruner consider that the proposal does not meet this policy with respect to 'coal measures ecosystem', bryophyte and lichen communities, sandstone erosion pavement ecosystem, boulderfield ecosystem, and the ephemeral wetland.[198]

[198] JWS Terrestrial Flora sections 18 and 19.

242 Neither 'irreplaceable' biodiversity nor "significant biodiversity' are defined in the RPS[199].

243 I submit that the term 'irreplaceable' biodiversity comes directly from the guidance about limits to offsets from BBOP – which I discussed above. The 'Pilgrim analysis' is a useful methodology to assess whether the biodiversity in question is irreplaceable. Dr Bramley's analyses indicate that none of the values are 'irreplaceable' as that word has been used in applying the concept from BBOP.[200] The reference in Policy 7.4(a) should similarly not be treated as a 'bright line' test. Rather, it should be seen in the context of the continuum of effects which I described above.

244 Policy 7.4 is about SNAs. 'Significant biodiversity' in (a) refers to both SNAs and 'species of conservation concern/interest'. So, in terms of areas and habitats, maintenance of the relevant biodiversity must relate to the wider SNA. Policy 7.4(d) is a broader concept as it relates to the wider SNA values.

245 But, throughout the opposing ecologists' evidence the biodiversity values within the site (ie the mine footprint) are treated as what require 'protection' or 'to be maintained'. Moreover, their evidence effectively treats 'maintain' as meaning 'preserve'.

246 'Maintained' or 'maintenance' is not defined in the RPS. In my submission, it does not mean 'preserved'. In the Brookby Quarry decision[201], the Court held that section 30 and 31 did not make it mandatory for regional councils to have objectives and policies to maintain indigenous biodiversity, and that this did not amount to an "environmental bottom line".[202]

247 Ms Mealey's evidence is that the mine will result in the permanent loss of some values, and therefore those values aren't maintained and therefore it doesn't meet the 'limits' for either offsets or compensation[203]

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[199] Contrasted with the term 'Significant indigenous biological diversity', when used in Chapter 9 Coastal Environment. RPS Glossary, page 56.
[200] Dr Bramley Vegetation Rebuttal evidence paras 83 – 94; Dr Bramley Fauna Rebuttal evidence paras 41 – 51; Dr Bramley Invertebrate Rebuttal evidence paras 54 – 65.
[201] *Brookby Quarries Limited v Auckland Council* [2021] NZEnvC 120.
[202] See paras [24] to [27].
[203] Ms Mealey EiC para 79, 86.

(and therefore presumably consent should be declined). The applicant's evidence is that it is not possible to offset some values with 'in kind' positive actions[204] and that is the reason for the proposed biodiversity compensation. I read Ms Mealey's evidence as saying because there is a permanent loss of some values which cannot be recreated, then it cannot meet either the offset or compensation policies. If her interpretation is correct, it would mean that removing any coal measures in the Ecological District is effectively a prohibited activity.

248 Where the opposing witnesses have gone wrong when interpreting both Policy 7.4(a) and 7.4(d) is to equate the significant area and habitats with only the mine footprint itself, and to equate protection and/or 'maintenance' with preservation in a strict sense at that location.

249 Rather, the question should be whether, for each affected area of significant vegetation and for each affected habitat, the proposal (including the mitigation and rehabilitation proposed) would maintain the values which made the area or habitat significant[205]. The values would not be maintained if the proposal significantly compromised the SNA's value and function in the long term in relation to the relevant criteria listed in the RPS Appendix. In other words, will the areas and habitats overall maintain their value and function in the long term in terms of the listed criteria?

250 This is quite a different inquiry to the one that the opponents' witnesses are taking. As I have noted, the suggestion is that maintenance (by which they appear to mean nothing more than an effect which is only minor), relates to the footprint itself. That is an impossible test to meet, because plainly the values and functions of the area of vegetation and those parts of the habitats of fauna are not preserved within the footprint itself. Even in the long term, the vegetation and habitats will be different.

251 But that is not what s6(c) or the RPS require. Rather, the inquiry is a wider one in scope about the extent of the areas of vegetation and habitats in question, and the overall effects on them.

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[204] Dr Bramley EIC Vegetation paras 243 – 245.

[205] Anticipated Environmental Result 7.1 of the RPS is "1. Maintenance and enhancement of areas with significant indigenous biological diversity values in the West Coast region" (page 30).

252 The result of the approach taken by the ecologists for Forest & Bird and the Director-General (equating maintenance in the policies with preservation and then saying that because there is an effect there cannot be maintenance) is circular reasoning and gives no room for either the offset policy or the compensation policy to work. That is not taking a 'real world' approach[206].

253 Dr Bramley addresses Policy 7.4(d) and the comments of other witnesses in his rebuttal evidence.[207] In summary, Dr Bramley has correctly considered 'maintenance' within the context of the relevant SNA[208], rather than simply considering if there is some permanent removal of the value from within the mine footprint. In all instances those values will be maintained within the SNA as a whole. I submit that the proposal is not contrary to Policy 7.4(a).

(b) *high degree of certainty that the offset can be successfully delivered*

254 The pest control undertaken in 2020 confirms that there is a pest problem within the wider Te Kuha Biodiversity Management Area. Strategies and methodologies for suppressing pest animals are now well developed nationwide. There is no reason why we should think that animal pest control that is undertaken by the Department and a myriad of other organisations and collaborations nationwide will not work here.[209]

255 The conditions require a detailed Mammalian Predators and Browsers Plan section of the Te Kuha Biodiversity Management and Enhancement Plan[210] as well as a suite of detailed monitoring and reporting requirements, including the ability for the Councils to require

[206] In the "Principal reasons for adopting objectives, policies and methods" section of the RPS it states: "The Objectives, Policies and Methods in this Chapter implement these statutory requirements in a pragmatic, efficient and effective way to ensure that both the protection of SNAs, and provision for the economic, social and cultural wellbeing of the West Coast, are achieved (page 29).
[207] Dr Bramley Vegetation rebuttal evidence paras 72 – 85.
[208] Ms Mealey agrees this is the context to be applies – Ms Mealey EiC para 84.
[209] Indeed, De Craig makes the point that what the Department does is inadequate. Their own publications that be quotes show that they do not work at edges etc. Dr Craig considers the work on this project could achieve better results.
[210] Conditions 182, 183.

changes are made to the pest control actions to ensure the outcomes predicted are achieved.[211]

256 I have commented above on the responses to concerns raised in the evidence about the effectiveness of the proposed pest control.[212]

257 I submit there is a high level of certainty that the proposed pest control can be successfully delivered.

(c) *In accordance with six principles*

258 The six principles in Policy 7.4 are based on, but are not the same as, the BBOP principles, or subsequent New Zealand guidance.

259 As I have noted above, the applicant has considered the possibility of offsetting the residual effects of the proposal. I have also submitted above that the off-footprint pest control can be considered mitigation for some residual effects. That position is contested by Forest & Bird and the Director-General. There are also some residual effects related to effects on the habitats of birds that Dr Bramley and Dr Craig consider can be addressed with biodiversity offsets, using both the criteria in this policy and the BBOP principles. Dr Baber has taken a more conservative approach. While Dr Baber has not assessed the proposal against the RPS (because I did not ask him to), he is of the opinion that, because of the highly prescriptive and detailed requirements of the use of a Biodiversity Offset Accounting Model[213], (the use of which, Ms Mealey at least, appears to be saying is the only way of demonstrating a biodiversity offset[214]), there are no residual values which could be shown quantitively to result in an offset in the way a BOAM model defines it. For that reason, Dr Baber prefers to call the various measures proposed 'biodiversity compensation'. However, despite that, Dr Baber is of the opinion that, while the measures may not strictly be defined as offsets, they are nonetheless as close as possible to an offset (because they otherwise comply with the BBOP principles and the principles set out in the 2018 guidance document), and would constitute an offset if

[211] Conditions 15, 69(a), 169, 184.
[212] Paragraphs 166, 167.
[213] Maseyk, F., M. Maron, R. Seaton, and G. Dutson (2015). A Biodiversity Offsets Accounting Model for New Zealand. Contract Report No: 2014-008, prepared for Department of Conservation Hamilton Service Centre Private Bag 3072 Hamilton New Zealand.
[214] Ms Mealey EiC para 55(b).

the use of a BOAM were not treated as a necessary component in defining what is an offset[215].

260 When interpreting this policy, the witnesses for Forest & Bird and the Director-General again appear to treat this as akin to a rule rather than a policy. Rather than operating as a rule, the six 'principles' (they are not drafted as 'criteria' notwithstanding the use of that word in the chapeau to Policy 7.4) guide how the applicant's proposal should be assessed.

261 Ms Mealey considers that the package does not include offsets because "it would be an out-of-kind exchange", "a loss:gain calculation is not possible", and "the predicted positive biodiversity outcomes are largely based on subjective judgment".[216]

262 However, Policy 7.4(c)(iv) does not require the biodiversity being lost and gained to be "the same". Rather, the principle is that "*the ecological values being achieved are the same <u>or similar to</u> those being lost"* (my emphasis).

263 Moreover, Policy 7.4 does not require the use of any model, let alone requiring the use of a Biodiversity Offset Accounting model.[217] Nor does this policy require that the losses and gains be quantified in some way. BBOP Principle 4 is:

*No net loss: A biodiversity offset should be designed and implemented to achieve in situ, measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity[218].*

264 In terms of 'measurement' of no net loss, BBOP recognised the need to balance rigour, certainty and feasibility:

***Quantified loss and gain****: A feature that distinguishes offsets from other forms of ecological COMPENSATION (such as compensatory conservation, biodiversity enhancement) is the requirement to demonstrate 'no net loss' or a 'net gain'. What this means and how to measure it lies at the heart of biodiversity offsetting. It is not always easy*

[215] Dr Baber Rebuttal evidence 14 April 2022 para 58.
[216] Mealey EIC para 55.
[217] Dr Baber First rebuttal evidence para 22.
[218] Business and Biodiversity Offsets Programme (BBOP). 2012. Guidance Notes to the Standard on Biodiversity Offsets. BBOP, Washington, D.C. page 29.

*to determine what should be measured or accounted for in an offset. Biodiversity in its entirety is impossible to measure, so the process of offset design involves decisions about suitable 'metrics' or 'currencies'. As it is impossible to count every individual in every population of every species, and as no two sites are identical in biodiversity terms, the choice of metrics often involves selecting 'surrogates' or 'proxies' which can be quantified and which can be considered representative of 'overall' biodiversity… There are many possible approaches to designing, selecting and applying metrics appropriate for a given situation, and several are under development.*[219]

*The underlying theoretical assumption is that the offset should address all residual losses for all affected biodiversity, but it is rarely either possible or practical to document and quantify losses for every component of biodiversity or for all dimensions of structure and function. Most approaches therefore demonstrate no net loss using METRICS based on SURROGATES for the entirety of biodiversity which can realistically be measured. These metrics are used in the calculations used of 'no net loss'. The use of surrogates is a practical approach. It cannot do justice to all components of biodiversity, but has the benefit of being workable.*[220]

265 Policy 7.4 does not prohibit 'subjective judgment', especially where that judgement is made by an expert with considerable experience working in the Ngakawau Ecological District and informed by many years of studies by a range of experts about the biodiversity of the Ecological District.

266 The other elements of Policy 7.4(c) have been discussed above with one exception. Witnesses are concerned that "future mining elsewhere within the mining permit could adversely affect compensation outcomes within the TKBMA".[221] This is an issue which was discussed in both of the Environment Court interim decisions and in the final decision on the Escarpment Mine proposal.[222]

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[219] Business and Biodiversity Offsets Programme (BBOP). 2009. Biodiversity Offset Design Handbook. BBOP, Washington, D.C. Page 13.
[220] Ibid page 28.
[221] Ms Yozin EiC para 209; Ms Mealey EiC paras 69 - 74.
[222] *West Coast Environmental Network Inc v West Coast Regional Council* [2013] NZEnvC 47 at [347] – [350]. *West Coast Environmental Network Inc v West Coast Regional*

267 In addition to a condition providing that the consent holder must not make an application for consent within the 'offset' area[223], the Escarpment decision includes a condition requiring the applicant to 'use best endeavours to establish a legal mechanism to protect the [offset area] from future open cast mining'.[224]

268 While a similar condition could be imposed here, I submit it is unnecessary for the following reasons:

(a) The area is proposed to be reclassified from stewardship land to conservation park which is said will provide the land with a higher level of protection.[225]

(b) If a third party were to make an application for mining within the TKBMA, the fact that it is used for the 'offset package' for Te Kuha would be a major factor in the consideration of the merits of that proposal. It would in effect become 'doubly difficult' to justify mining in that area. The risk of undermining the TKBMA is negligible.

**Management and protection of SNAs – The role of biodiversity compensation – Policy 7.5**

269 Policy 7.5 of the RPS then provides:

*Provided that Policy 2 is met, in the absence of being able to satisfy Policies 3 and 4, consider the use of biodiversity compensation provided that it meets the following:*

*a) Irreplaceable or significant indigenous biological diversity is maintained; and*

*b) The compensation is at least proportionate to the adverse effect; and*

*c) The compensation is undertaken where it will result in the best practicable ecological outcome, and is preferably:*

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*Council* [2013] NZEnvC 178 at [20] – [37]. *West Coast Environmental Network Inc v West Coast Regional Council* [2013] NZEnvC 253 at [5] – [10], [29] – [34].

[223] The equivalent of condition 168 proposed here.

[224] Condition 149 of the final decision, page 113.

[225] The entire area is identified as KAW_26-Ballarat, with the Department's Technical Report DOC-6865816 supporting the National Panel for the West Coast region's recommendation of the change in classification.

*i. Close to the location of development; or*

*ii. Within the same Ecological District; and*

*d) The compensation will achieve positive indigenous biological diversity outcomes that would not have occurred without that compensation; and*

*e) The positive ecological outcomes of the compensation last for at least as long as the adverse effects of the activity; and*

*f) The delay between the loss of indigenous biological diversity through the proposal and the gain or maturation of the compensation's indigenous biological diversity outcomes is minimised.*

270 The criticisms made in respect of Policy 7.4 apply equally to Policy 7.5. The only substantive difference between the two policies is that Policy 7.5 adds that 'the compensation is at least proportionate to the adverse effect".[226] While this is not simply a matter of the size of the area which is to be the subject of ongoing management, [227] Ms Mealey's evidence implies that a like for like exchange must be made in order for the compensation to be proportionate.[228] That cannot be the case. If there were to be a like for like exchange, then it would be an offset. But compensation is by its nature something other than a like for like exchange. Dr Craig sets out his reasons why compensation in the form of enhancement of avifauna habitat is a 'trading up' type of compensation.[229] The compensation is, I submit, proportional to the effect.

**Taking a co-ordinated and integrated approach – Policy 7.8**

271 The proposed biodiversity trust provides a vehicle for the coordinated and integrated delivery of positive conservation action in the Buller District.

[226] Policy 7.5(b).
[227] Ms Mealey EiC para 108.
[228] Ms Mealey EiC paras 110 – 112.
[229] Dr Craig rebuttal evidence paras 73 – 75.

**Opportunities for Poutini Ngāi Tahu to exercise their kaitiakitanga role – Policy 7.9**

272 Policy 7.9(a) of the RPS is to "Give effect to Objective 2 of Chapter 3 by: a) Providing for the kaitiakitanga role of Poutini Ngāi Tahu in the management of indigenous biological diversity". The RPS also provides that the following result from the application of the section 7 provisions is anticipated:

> 4. Opportunities are provided for Poutini Ngāi Tahu to exercise their kaitiakitanga role in relation to the use and protection of indigenous biological diversity where this is consistent with the West Coast Councils' RMA roles.

273 This anticipated result in consistent with Chapter 3 of the RPS which sets out the resource management issue of significance to Poutini Ngāi Tahu.

274 The proposed biodiversity trust includes a major role for Ngāti Waewae which will support the kaitiakitanga role of Poutini Ngāi Tahu in the management of indigenous biological diversity

**Principal Reasons and Anticipated Environmental Results**

275 Chapter 7 of the RPS is explicit in directing that these policies should not be considered in a silo but need to be seen as part of the wider policy context. It states under the heading 'Application of Provisions across the RPS':

*The objectives and policies in this chapter of the RPS must be read together with Chapter 3 and other relevant chapters, including Chapter 6, which set out the direction for the sustainable management of natural and physical resources in more specific contexts.*

276 This requires consideration of Chapter 5 of the RPS: 'Use and Development of Resources'. That chapter has two objectives:

*1. 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.*

*2. Incompatible use and development of natural and physical resources are managed to avoid or minimise conflict.*

277 The Principal Reasons for adopting the provisions includes the statement:

*… The Objectives, Policies and Methods in this Chapter implement these statutory requirements in a pragmatic, efficient and effective way to ensure that both the protection of SNAs, and provision for the economic, social and cultural wellbeing of the West Coast, are achieved.*[230]

278 One of the Anticipated Environmental Results is:

*2. Appropriate subdivision, use and development is able to occur, and regulatory processes do not unduly delay appropriate resource use and development taking place*[231]*.*

**Conclusion on RPS policies**

279 I submit that considering each policy individually, the proposal meets all the requirements of each policy. It is not contrary to any of them.

280 The Part 7 objectives and policies need to be considered as a whole, including across the rest of the RPS. The RPS looks to have both protection and development in SNAs. It is notable that Result 2 in the Chapter on Use and Development of Resources refers to the development of resources being "managed to avoid or minimise conflict" (my emphasis). This is a clear signal that the protection of values in SNAs does not mean 'no effects'.

281 Moreover, the policies in Chapter 7 are not expressed in black and white or 'pass/fail' terms. Rather, to the extent that any specific part of a policy may not be fully met, the question is the degree of non-compliance and the effect of that non-compliance in an overall sense. It is not necessary to achieve total compliance with every aspect of every policy to conclude that, overall, the proposal is not contrary to the objectives and policies.[232]

282 I note also that whatever conclusion you reach about whether the proposed 'offsets package' is consistent with the policies in the RPS,

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[230] RPS page 29.
[231] RPS page 30.
[232] *Brial v Queenstown Lakes District Council* [2021] NZHC 3609, confirmed in *Brial v Queenstown Lakes District Council* [2022] NZCA 206.

that does not affect your ability to take those positive effects into account under s104(1)(a).[233].

**ASSESSMENT AGAINST THE PROVISIONS OF THE DISTRICT PLAN**

283 The District Plan is relevant, although I submit that it should be given less weight where it directly addresses the same issues as the more recent RPS.[234] That is the case with the criteria for assessing significance[235].

284 There are aspects of the District Plan which do not address the same issues as the RPS. This is where the District Plan applies the more general requirements of ecological significance to the particular circumstances of the Buller District. I submit the fact this area is within the Rural Character Area in the District Plan and not the Paparoa or Natural Environments Areas is relevant to a consideration of what is adequate protection in this situation. Likewise, the Objectives and Policies of the Mineral Resources section of the District Plan assists with determining what the District Plan considers to be adequate protection.

285 Objective 4.5.4.2 of the Plan refers to "safeguard[ing] the life-supporting capacity of ecosystems" and avoiding, remedying and mitigating adverse effects of mining. That is reinforced by Policy 4.5.5.4. Importantly, the Plan notes that it is concerned about retaining the life-supporting capacity of ecosystems in the long term:

> 4.5.7.1. … *The policies reflect the need to ensure that the impact of mineral related activities on environmental quality, including land and water resources, is avoided, remedied or mitigated. The Council is particularly concerned about long-term effects on*

[233] While s104(1)(ab) may not apply because this application was lodged in 2016 prior to the introduction of that clause, s104(1)(ab) is merely declaratory of the existing laws about positive effects under s104(1)(a), rather than changing the previous law. Decision makers have always been able to take into account proposed biodiversity offsets and biodiversity compensation, irrespective of what a plan or policy statement may say.

[234] Because the forthcoming West Coast wide district plan will need to give effect to the RPS – s75(3) RMA. To the extent that the Buller District Plan is inconsistent with the RPS the new plan will need to make the necessary changes.

[235] Rule 5.3.2.4.3.6 requires the criteria listed in Policy 4.8.7.4 to be used as a guideline to determine the adequacy of the measures proposed. These requirements overlap, and in some cases are inconsistent with Appendix 1 to the RPS.

*resources while recognising that mining, by its very nature, will generally have some short term effects*.

286 The Plan notes the importance of rehabilitation in this regard:

> Policy 4.5.5.5. *To require mineral resource related activities to incorporate measures to protect water quality and ecosystems, and provide for the rehabilitation of disturbed areas to generally their original condition or another suitable condition as approved by Council.*
>
> Reason 4.5.7.2. *In addition to immediate effects on resources, mining may jeopardise future use of that resource, for example, through contamination or removal of topsoil. Rehabilitation does provide an alternative where appropriate technology and expertise allow for the effective mitigation of adverse environmental effects.*
>
> Outcome 4.5.8.1. *Maintenance and protection of environmental quality in the long-term on mineral extraction sites.*
>
> Outcome 4.5.8,3. *Rehabilitation of mined areas to standards which take into account what is practically achievable, desired by the community and environmentally appropriate.*

287 Adequate protection is therefore to be assessed over the “long term” (which is not defined by the District Plan) having regard to rehabilitation. Rehabilitation, mitigation and biodiversity offsets all play a role in determining the adequacy of the protection of areas of vegetation and habitats.

**THE 2020 NPS FRESHWATER AND THE 2020 NES**

288 The National Policy Statement for Freshwater Management ("NPS-FM") and the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 ("NES-F") both came into force on 3 September 2020.

289 Policy 6.3.6 of the RPS has been inserted from the NPSFM 2020. This policy provides that the loss of extent of natural inland wetlands is avoided, and their values are protected, and their restoration is promoted, except where the loss arises from certain listed activities.

290 The proposal will result in the removal within the mine footprint of.

- Mānuka shrubland - 5.78 ha
- Wire rush wetlands – 0.24 ha

- Ephemeral tarn – 0.06 ha

291 The applicant's position with respect to Policy 6.3.6 of the NPSFM is:

a. there will, in the medium to longer term, not be a loss of wetland extent because recreated wetlands are a specific requirement of the rehabilitation. The values of those wetlands, will over time, be the same or similar to those removed.

b. Nonetheless, the applicant has applied the effects management hierarchy in Clauses 3.21 and 3.23(3) NPSFM which includes consideration of offsets/compensation which result in a net gain in wetland values. Aquatic offsets are not available. If aquatic compensation is required to address any values which are lost in the short to medium term, there are opportunities for such compensation by way of supporting creation or enhancement of wetlands near Westport.[236]

292 On I June 2022, the Government released the report 'Managing our wetlands: Report, recommendations and summary of submissions' together with the Exposure Draft of amendments to the National Policy Statement for Freshwater Management 2020[237]. While this is a non-statutory document, I submit that this Exposure Draft is a matter that is relevant and can be considered under s104(1)(c) RMA. Following gazettal of the NPSFM and Freshwater Regulations in 2020, serious concerns were raised by councils and sector groups about the practical application of the 'Freshwater Package' which Ministry for the Environment guidance alone could not resolve. The Government agreed to consult on amendments to the regulations in August 2021, and public consultation occurred from 1 September to 27 October 2021. A total of 262 individual submissions, and approximately 5,860 form submissions from Forest and Bird, were received on the proposals[238].

293 There are two aspects, in particular, of the Exposure Draft that are relevant to this appeal. First, it is proposed that mining and quarrying be added to infrastructure as activities for which a consenting partway is

[236] Dr Bramley Vegetation rebuttal evidence para 57.
[237] Ministry for the Environment. 2022 Essential Freshwater Amendments: Report, recommendations and summary of submissions: Managing our wetlands: Proposed changes to the wetlands regulations. Wellington: Ministry for the Environment. Ms Courtier Rebuttal Evidence paras 44, 45.
[238] Ibid page 6.

potentially available through the application of the effects management hierarchy.[239]

294 Secondly, the Exposure Draft proposes to insert two appendices to the NPSFM which set out principles for both aquatic offsets and aquatic compensation. The report accompanying the Exposure Draft[240] states:

> *…we agree with Forest and Bird that there is a need for offsetting principles to be included within the NPS-FM (rather than in guidance). We recommend including, in an appendix to the NPS-FM, principles for both offsets and compensation and linking these to the effects management hierarchy.*
>
> *The proposed principles are set out in Appendix 1 of this report. We have consulted with DOC on developing these. They are based on those in the proposed National Policy Statement for Indigenous Biodiversity (NPSIB). This ensures alignment between the NPSIB and NPS-FM. The principles are a mandatory set of best practices specific to aquatic offsets and therefore include biodiversity but also hydrological functioning etc. The principles would apply to offsetting for both rivers and wetlands.*

295 It is, I submit, significant that the Exposure Draft proposes to link the principles with the effects management hierarchy by providing that regional plans must add a provision that that a consent may not be granted unless "the council is satisfied that, if aquatic offsetting or aquatic compensation is applied, **the applicant has had regard to the principles** in Appendix 6 or 7, as appropriate".[241] (my emphasis)

296 By attempting to treat the principles set out in the policies in Chapter 7 of the RPS as fixed criteria, and not reading the words for what they say, the evidence of witnesses for the Director-General and Forest & Bird is contrary to this approach to how the principles fit within the effects management hierarchy. I submit that the approach to the policies I set

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[239] By amending Clause 3.22 by adding a new clause (e) – see page 27. The reasons for this are discussed in Part 2C of the Report, recommendations and summary of submissions document, page 45ff.

[240] Ministry for the Environment. 2022. Essential Freshwater Amendments: Report recommendations and summary of submissions: Managing our wetlands: Proposed changes to the wetlands regulations. Wellington: Ministry for the Environment, page 36.

[241] Amendment to Clause 3.22(3)(b).

out earlier is more consistent with what we see as the latest government policy in the 2022 NPSFM Exposure Draft.

297 Policy 6.3.6 has intervened in the middle of the application process. Clause 43B(7) recognises that the activity classification should not change – this is the normal approach to changes in legislation. But the planners for Forest & Bird and the Director-General appear to be suggesting that this application has effectively become a prohibited activity – they say that (a) there is a loss in extent, (2) the proposal is not specified infrastructure (3) the effects management hierarchy cannot be considered, and consequently (4) the directive to 'avoid' in Policy 6.3.6 means that consent must be declined[242]. The logic of that undermines the operation of Clause 43B(7) RMA

## ECONOMIC EFFECTS

### Introduction

298 While there are several substantive evidential matters of disagreement between Mr Copeland and Mr Counsell which I discuss below, there are two areas where Mr Counsell's evidence is predicated on an approach which is inconsistent with the judicial authorities. They are:

(a) the extent to which, if at all, the cost of environmental 'externalities' should be included in a wider economic cost benefit analysis;[243] and

(b) the extent to which the Court should consider the economic feasibility of the project.[244]

299 The undertaking of economic assessments, including cost-benefit analyses within resource consent decisions, has primarily been addressed through application of section 7(b) of the RMA. That sub-section requires decision makers to have regard to the efficient use and development of natural and physical resources. The use of economic or

[242] Ms Sitarz EiC para 9.43; Ms Yozin EiC para 66.
[243] JWS Economics section 2.2 and 3.3.
[244] JWS Economics section 4.

efficiency assessments has been identified as particularly useful when comparing a proposal with other uses of land or resources.[245]

300 Similar issues were considered by the Court in the Escarpment decision.[246]There are some immediate differences between Te Kuha and the Escarpment proposal:

(a) Stevenson Mining is a longstanding New Zealand family-owned company rather than an overseas owned company, and is in partnership with an iwi organisation, Rangitira Developments Ltd, so profits are returned to New Zealand[247].

(b) The way in which the operation will be managed means that it will most likely be staffed by permanent residents of the district.[248]

**Economic analysis of environmental externalities**

301 It has been consistently recognised by the courts that it is not possible, or useful, to try to assign economic values of any precise nature on biodiversity, social or cultural values.[249]As the Court put it in the Escarpment decision:

> *Mr Butcher has not attempted to deny that the project will result in losses to the natural character and ecology of the mined area and to its surrounding landscape. What he said is that the Court has been provided expert evaluation of what those losses are from witnesses with expertise in these areas, and having read their evidence and heard cross-examination, is in the best position to weight up the effects that these witnesses anticipate alongside those for which he is able to calculate (within a range) financial consequences. We acknowledge that as a correct and appropriate view*.[250]

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[245]See for example *Bunnings Ltd v Queenstown Lakes District Council* [2019] NZEnvC 59 at [169] – [195]

[246]*West Coast Environmental Network Inc v West Coast Regional Council* [ 2013] NZEnvC 47paras [101] to [112] and [126] to [127]

[247] Escarpment first interim decision para [103]. Recognising that the current owners are free to sell the company at any point to any person if they wish.

[248]Ms Brewster evidence paragraph 49; Escarpment first interim decision para [112]

[249]*Meridian Energy Ltd v Central Otago District Council* [2011] 1 NZLR 482 at [107] –[116].

[250]*West Coast Environmental Network Inc v West Coast Regional Council* [ 2013] NZEnvC 47 para [111]; For a similar assessment under section 59(2)(f) of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 see*Taranaki-*

302 Mr Copeland concurs with the approach of Mr Butcher and the Court in the Escarpment decision, and also explains his concerns with Mr Counsell's suggestion from an expert perspective.[251]

**The use of a cost-benefit analysis**

303 Mr Counsell is of the opinion that the economic effects analysis should be complemented by a cost benefit analysis.[252] Mr Copeland disagrees.[253]

304 The courts have also noted that economic assessments should not be used as the definitive means of assessing an application or its worth, and applicants should not be penalised for not undertaking a comprehensive cost-benefit analysis.[254] The courts have identified that where too great an emphasis is placed on economic analysis, consent authorities can falsely consider this to enable an "objective" analysis of a project, masking the inherent subjectivity of evaluating the social, environmental and cultural effects of proposals.[255]

305 I submit that the High Court's decision in *Meridian r*emains the leading authority.

**The financial viability of the project**

306 Mr Counsell considers the coal price to be relevant as it affects the profitability of the project.[256] Mr Copeland considers the coal price to be largely irrelevant.[257]

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*Whanganui Conservation Board v Environmental Protection Authority* [2021] NZSC 127 at [195] – [196].

[251] Mr Copeland EiC paras 35(b), 48 – 52.

[252] JWS Economics para 2.2.1.

[253] JWS Economics para 2.2.2.

[254] *Meridian Energy Ltd v Central Otago District Council* [2011] 1 NZLR 482 at [95] – [116], [148(h)]. See also *Taranaki-Whanganui Conservation Board v Environmental Protection Authority* [2018] NZHC 2217 paras [178] –[191] where the High Court considered authorities under the RMA on this issue.

[255] At [111].

[256] JWS Economics para 4.1.1.

[257] JWS Economics para 4.1.2.

307 It is not appropriate for a consent authority to attempt to "second guess" business decisions of an applicant, such as those around viability, profitability or demand:

> *Decisions on costs and economic viability, or profitability of a project are not matters for the court. Ass Justice Wild in Friends and Community of Ngawha Inc and Others v Minister of Corrections said, these matters should:*
>
> > *… sensibly be regarded as decisions for the promoter of the project. Otherwise, the Environment Court would be drawn into making, at least second-guessing business decisions. That is surely not its task*.[258]

308 Evidence on the coal price and volatility in the coal market was also provided for the Escarpment project. After considering the various views of the two economists who gave evidence on price fluctuations of coal, the Environment Court concluded:

> *… The price of coal affects the profitability to the company that does not greatly affect the economic benefit to New Zealand other than (mainly) in relation to royalties.*
>
> *Provided the project proceeds (which may depend on BCL perceiving a positive NPV), economic benefits to New Zealand will accrue. Otherwise, fluctuations in coal price are of very limited interest in the context of matters we must consider… . In summary, our main concern must be that if the project commences but subsequently stops, that affects the environment will have been adequately avoided, remedied, or mitigated. If we decide to grant consent, this will become a matter of setting appropriate conditions. Securitisation of performance of conditions would become relevant in the event that there was any risk that the consent holder might cease operations and disappear.*[259]

309 Mr Bragg and Ms Brewster set out why Stevenson Mining is in a different position to Buller Coal Limited (the consent holder for the Escarpment

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[258] *Re: Queenstown Airport Corporation* [2012] NZEnvC206 at [211]; *Bunnings Limited v Queenstown Lakes District Council* [2019] NZEnvC 59 at para [176].
[259] *West Coast Environmental Network Inc v West Coast Regional Council* [ 2013] NZEnvC 47 paras [126], [127].

Mine) with respect to exposure to the volatility of international coal prices.[260]

310 The proposed conditions require a comprehensive bond.[261]

**The nature of economic effects**

311 Mr Counsell says the mine project may result in a short-term impact on growth and infers it is not economically efficient.[262]Mr Copeland states the project will give an immediate stimulus to the Buller (and West Coast) economies, has a 1 year construction period, 16 year life, 10 year rehabilitation period (27 years in total) and its life may be extended if additional coal resources are identified.[263] Therefore, Mr Copeland does not consider the economic growth stimulus to be solely short term. Also,Mr Copeland considers the project to be efficient as it relies on private sector funding in contrast to Mr Counsell's unidentified new start-ups or expansion of existing industries possibly reliant on government subsidies. In purely economic terms the project is efficient because it will provide positive economic benefits to local residents and businesses and central and local government agencies without economic costs to them, and the applicant will also receive net positive financial benefits.

**Economic impact of the proposal**

312 Mr Counsell says the project will not provide economic stimulus but will "crowd out" other economic activity. Mr Copeland disagrees.[264] If that were the case, we would have expected as mining and manufacturing have contracted during the last decade, corresponding growth within other industries within the Buller economy. This has not occurred – for the most part other industries have contracted along with mining and manufacturing.

313 Mr Counsell raises concerns about job losses when the project ceases. That implies that he accepts that there will be economic benefits from job creation at the start and during the project.

**Economic efficiency of the project**

[260]Mr Bragg evidence paras 26 – 33; Ms Brewster evidence paras 108 – 119.
[261] Conditions 18 – 35.
[262]Mr Counsell EiC para 38.
[263] Mr Copeland rebuttal evidence para7.
[264] Mr Copeland rebuttal evidence paras 8,9.

314 In addition to the more general concern about Mr Counsell wishing to use a cost benefit approach, Mr Copeland points out the serious deficiencies in the approach and data Mr Counsell uses – so much so that Mr Copeland's view is that Mr Counsell's"back of the envelope" analysis is not "better than nothing" but is misleading. On the costs side (i.e. the environmental costs) Mr Counsell uses data from a 2006 US survey which is unrelated to the Te Kuha project.[265] On the benefits side, Mr Counsell relies on the financial returns/"producers surplus" to the private sector investor. Mr Copeland (correctly in my submission) gives limited weight to financial returns/"producers surplus" under the RMA.[266]Correctly, Mr Copeland gives greater weight to economic externalities – i.e. economic benefits to Buller/West Coast residents and businesses and central and local government. Mr Counsell says such economic externality benefits are small. Mr Copeland disagrees.[267]

**2021 Buller Economic Profile**

315 The exit of mining and manufacturing jobs from the Buller District has led to a significant "aging" in the population. In 2012, 16.4% of the district's population was aged 65 and older. By 2021 this had increased to 28.0%. For NZ as a whole in 2012, 13.6% of the population was aged 65 and older, increasing to only 16.1% in 2021. The project by creating directly higher than average paying jobs and indirectly additional jobs will add balance and diversity to the local economy.[268]

**Conclusion**

316 The proposal aligns with the Regional Policy Statement and District Plan objectives and policies.[269]For the reasons discussed above, the utilisation of the resource is efficient, will be done according to best practice and reasonably avoids, remedies, mitigates and compensates for adverse effects in accordance with the RPS and District Plan provisions.

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[265] Ibid para 15.
[266] Ibid para 16.
[267] Ibid paras 18 – 23.
[268] Ibid para 29.
[269] Ms Clark evidence paras 29 – 36; Ms Inwood evidence para 128; Ms Courtier EiC paras 91 – 93, 154 – 161.

## LANDSCAPE AND VISUAL EFFECTS

### Introduction - the issues which are agreed, and which are in dispute

317 Mr Rough and Mr Brown agree on most issues. They include:

(a) that part of the mine (less than 10% of the disturbed area, excluding the access road) is within, but at the boundary of, an outstanding natural landscape.[270]

(b) The key attributes, landscape characteristics, and values of the ONL characteristics and values of the ONL are those listed in the JWS Landscape.[271]

(c) The viewpoints adopted by Mr Rough are sufficient for the purposes of assessment.[272]

(d) Photo-simulations and video-simulations are useful but are a surrogate and need to be used with care and extrapolated to reality.[273]

(e) While they have used different rating scales, those scales are broadly comparable.[274]

(f) From almost all viewpoints, their assessment of landscape and visual effects is the same or similar. In making their assessments they agree that the appropriate approach is to use the 'primary human field of view panorama' approach, which spans approximately 120 degrees horizontally in a static view, rather than considering just the central portion of the primary human field of view that is conveyed in a single 50 mm photograph.

(g) The viewpoint assessments are based on the ‘most obvious’ effects which are not constant throughout the life of the mine.

(h) Considering viewpoint ratings alone is not, or does not provide, the full answer. Rather, it is important to consider all viewpoints and what the accumulation of viewpoints tell us about the effects.

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[270] JWS Landscape section 1.2.
[271] JWS Landscape section 1.3.
[272] JWS Landscape section 3.1.
[273] Mr Rough rebuttal evidence para 36.
[274] JWS Landscape section 3.2.

The overall conclusions of the two experts relate to the effects of the proposal as a whole on the relevant values, whereas scoring is about viewpoint visual effects of the proposal.

(i) The most obvious viewpoints from a visual effects perspective are viewpoints 9, 10, 10A, 11 and 13.[275]

(j) The Lower Buller Gorge is more significant than many other significant landscapes on the West Coast because it is adjacent to the river being one of only four main routes to the West Coast.[276]

(k) The stretch of road between Norris Creek to Windy Point could be regarded as the gateway to the Lower Buller Gorge.[277]

(l) From Viewpoint 11, visual effects will be substantial or severe for a period.[278]

318 The key issues which are in dispute are:

(a) The precise western boundary of the ONL.[279]

(b) The representativeness of the simulations for the haul road,[280]

(c) The extent to which the rehabilitation will mitigate and remedy effects.[281]

(d) The magnitude of visual effects from certain viewpoints after remediation has occurred.[282]

(e) Whether the project will have adverse effects on the ONL as seen from the west.[283]

319 In summary, the essential difference between Mr Brown and Mr Rough is that Mr Brown considers that the effect is greater from some locations, but more importantly, Mr Brown considers that the duration of effect

[275] JWS Landscape section 4.3.
[276] JWS Landscape section 1.4.
[277] JWS Landscape section 2.1.
[278] JWS Landscape section 5.2
[279] JWS Landscape section 1.2.
[280] JWS Landscape section 4.1.
[281] JWS Landscape sections 5.3, 5.4.
[282] JWS Landscape section 4.3.
[283] JWS Landscape section 5.1.

(before rehabilitation has sufficiently ameliorated the effect) is more significant than does Mr Rough.

**Section 104(1)(a) – What are landscape and visual effects of the proposal?**

320 S6(b) RMA provides for:

> *The protection of outstanding natural features and landscapes from inappropriate subdivision, use, and development*.

321 That part of the site within the ONL is integral to the proposal. A mine which is restricted to the western slopes of the hill and therefore outside the ONL is impractical and uneconomic. The district plan provisions on landscape only apply to that part of the site which is within the ONL. For the remainder of the site, section 7(c) which refers to amenity values applies. But for practical purposes I submit the district plan provisions on landscape can be taken to apply to the entire proposal as a whole on the basis that if the activity is appropriate in the ONL, it will also be appropriate outside of the ONL (indeed, likely more so).

322 Consideration of landscape and visual effects goes to both the scale and duration of effect.

*The precise western boundary of the ONL*

323 There is a difference in opinion about the western boundary of the ONL.[284] However, I submit that in the end nothing of significance to the outcome turns on this difference in opinion.

*Visual effects of the haul road*

324 Mr Brown considers that the visual effects of the proposed haul road are considerably greater than does Mr Rough.[285] However, Mr Brown's evidence on this is unclear, and it appears that he may have been referring (at least in places) to the 2018 evidence which has been revised updated and replaced.[286]

[284] Explained in Mr Rough's EiC paras 84 – 94, and Mr Rough rebuttal evidence paras 24 – 28..
[285] Mr Brown evidence paras 24 – 27, 98 – 105; Mr Rough EiC paras 107 – 113; Mr Rough rebuttal evidence paras 7 – 11, 46 – 54.
[286] Eg, Mr Rough rebuttal evidence paras 40, 44, 46, 51.

325 Mr Rough has addressed Mr Brown's concerns in detail in his rebuttal evidence. In summary:

(a) In choosing the access/haul road alignment every effort has been made to minimise views of possible scarring caused by the road's formation.[287]

(b) Existing vegetation on the downhill side of the assists in concealing Denniston Road from the coastal plain.[288]

(c) The passing bays (where the road is wider) are invariably located on flattish areas adjacent to the route of the access/haul road and consequently will not require extensive (if any at all) cutting of existing landforms.[289]

(d) Mr Brown's claims about visibility of the road corridor from Westport are inaccurate.[290]

(e) While areas of land surface disturbance involving both cut and fill will be immediately obvious following construction of the road, areas of fill, will be relatively easy to revegetate. Although it may be less easy to revegetate the cut slopes, especially if they are cut into rock, even vertical rock faces become revegetated to a considerable degree.[291]

(f) The haul road has not been finally designed. A condition requires that during design and construction a landscape architect must advise on ways to minimise visibility from specific viewpoints.[292]

(g) Mr Brown is incorrect about the visibility of the haul road from viewpoint 11 in the Buller Gorge.[293]

(h) There are no views of the surface of the access/haul road other than a short section at the very top of the road in the photo-simulations from Buckland Peaks and a short section of road surface from Viewpoint 10a[294]. The effects Mr Brown is concerned

[287] Mr Rough rebuttal evidence para 9.
[288] Mr Rough rebuttal evidence para 10.
[289] Mr Rough rebuttal evidence para 11.
[290] Mr Rough rebuttal evidence paras 46 – 47.
[291] Mr Rough rebuttal evidence paras 48 – 50.
[292] As part of the construction management plan, condition 49(m).
[293] Mr Rough rebuttal evidence para 52.
[294] Mr Rough's Graphic Supplement Sheets 74, 75, 100.

about (those from the unrelated power project road) will not occur on Te Kuha access/haul road because the surface of the haul road directly does not directly face any relevant viewpoints. [295]

*The role of rehabilitation in mitigating and remedying effects*

326 Here, there is a contest in the evidence about the likelihood of the proposed rehabilitation being adequate in terms of mitigation and remedy and the acceptability of the timeframes for rehabilitation.[296]

327 Conditions on rehabilitation are proposed that specifically require consideration of visual and landscape effects, or the ongoing advice from a landscape architect.[297]

328 I submit that overall, the Court should prefer Mr Rough's evidence and his conclusion that from the viewing locations and sections of SH 6 that Mr Brown also addresses, rehabilitation will have taken complete effect over the whole of Te Kuha Coal Project site, including the access/haul road and coal loadout facility by Year 25, and certainly by Year 35. Rehabilitation, involving backfilling, recontouring and revegetation will be such that following the cessation of mining and the achievement of revegetation canopy closure it will be difficult to discern from the salient and representative viewpoints, including sections of the highway on both the approach to the mouth of the Lower Buller Gorge from the west and within the gorge, that Te Kuha mine existed.[298]

*The magnitude of effects from four viewpoints*

329 The witnesses differ in their opinions on the magnitude of effects after remediation from viewpoints 9, 10, 10a, 11 and 13.[299] Again, this is a contest of evidence. I submit that here, also, Mr Rough's assessment should be preferred. His is the most careful[300], he uses best practice in the form of the ratings in the NZILA 2021 guidelines[301], and he is better informed about the type and extent of remediation and rehabilitation.

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[295] Mr Rough rebuttal evidence paras 53 – 54.
[296] Mr Rough EiC paras 123 – 131. Note that the rehabilitation objectives have been clarified and strengthened – Dr Simcock rebuttal evidence. Mr Rough rebuttal evidence paras 20, 67, 72, 73, 76. Mr Brown evidence paras 120, 138.
[297] Conditions 49(m), 50, 50(a), 50(b), 50(c), 50(f), 51(j)(vii), 52, 54, 58, 154.
[298] Mr Rough rebuttal evidence paras 71 – 73, 76.
[299] JWS Landscape sections 4.3, 4.4, 5.1, 5.2, 5.4.
[300] Eg Mr Rough rebuttal evidence paras 57 – 70.
[301] Mr Rough EiC page 67.

330 Moreover, Mr Brown's concerns about the visibility of the project while traveling in a car appear overstated.[302] Mr Brown is particularly concerned about that effect on tourists and visitors. On the other hand, Mr Rough points to the fact that the view is experienced for 45 seconds or less and only by people travelling east to west (if they happen to be looking in that specific direction). While people may stop at that location when travelling west to east and look both up and down the river (although it is probably used more by people admiring the upstream river view – looking upstream certainly has much more of the river in the scene), crossing the road to stop there when travelling down the gorge would be dangerous.

331 Mr Brown accepts that in the longer term, both the visual effects and the effects on naturalness of the ONL as experienced from Viewpoint 11 will be 'low to minimal'.[303] Given that condition 52 requires a landscape architect to advise on the final design of the ridgeline with the express purpose of recreating as natural a morphology as reasonably practicable, I submit that the ridge will look natural to the extent that after rehabilitation one would not know from Viewpoint 11 that the ridgeline had been subjected to mining.

**Section 104(1)(b) – the Regional Policy Statement**

332 Chapter 7B of the RPS provides:

> *Objective 7B.1 – Protect the region's outstanding natural features and outstanding natural landscapes from inappropriate subdivision, use and development.*
>
> *Objective 7B.2 – Provide for appropriate subdivision, use and development on, in or adjacent to outstanding natural features and outstanding natural landscapes to enable people and communities to maintain or enhance their economic, social and cultural wellbeing.*
>
> *Policy 7B.1 – Use regionally consistent criteria to identify outstanding natural features and outstanding natural landscapes.*

[302] Mr Rough rebuttal evidence paras 37 – 39, 55 - 57.
[303] Mr Rough Graphic Supplement Sheet 89.

*Policy 7B.2 – Protect the values which together contribute to a natural feature or landscape being outstanding, from inappropriate subdivision, use and development.*

*Policy 7B.3 – When determining if an activity is appropriate, the following matters must be considered:*

*(a) Whether the activity will cause the loss of those values that contribute to making the natural feature or landscape outstanding;*

*(b) The extent to which the outstanding natural feature or landscape will be modified or damaged including the duration, frequency, magnitude or scale of any effect;*

*(c) The irreversibility of any adverse effects in the values that contribute to making the natural feature or landscape outstanding;*

*(d) The resilience of the outstanding natural feature or landscape to change;*

*(e) Whether the activity will lead to cumulative adverse effects on the outstanding natural feature or landscape.*

**Policy 7B2 – Protecting outstanding values**

333 The accompanying explanation to Policy 7B.2 states that what is 'inappropriate' is to be assessed by reference to what is to be 'protected'.[304] As I discuss below, inappropriateness in the Buller context is given greater context by the provisions of the Buller District Plan. That is, inappropriateness is to be assessed, not in the abstract against section 6(b) of the Act, but against how section 6(b) is given effect to ultimately through the district plan.

334 The protection required in section 6(b) is not preservation. While this does not prevent a planning document from giving primacy to preservation and protection in particular circumstances[305] that is not the case here. There is no suggestion that adverse landscape and visual effects are to be 'avoided'.

[304] Consistent with *Environmental Defence Society Incorporated v The New Zealand King Salmon Company Limited and ors* [2014] NZSC 38 para [101].
[305] Ibid.

335 Mr Rough acknowledges that the ONL values relating to continuity and intactness of landforms, cover of vegetation and high levels of naturalness and visual amenity will be compromised during the period of mining.[306] However, his opinion is that rehabilitation of the site will ensure that the values that contribute to the site being part of an ONL will not be compromised.[307]

336 The proposed rehabilitation will involve backfilling to reinstate the landforms to as close to the original contour as is practicable and a revegetation programme that, while it will not mimic the complex array of ecosystems currently present will result in the site appearing natural in character and 'marrying-in' with the natural surroundings.[308]

**Policy 7B3 – Assessing what is appropriate within an ONL**

337 The key policy considerations for the Proposal are contained in clauses (b) to (d) of Policy 7B.3.[309]

338 Policy 7B.3(b) requires consideration of the extent to which the ONL will be modified including the duration, magnitude and scale of any effect. Rehabilitation of the project site will ensure that values that contribute to the site being part of an ONL will not be lost. Even if the Court considers that the ONL extends onto the coastal hillslopes, the 12 ha of rehabilitated mine will still be relatively insignificant in the context of the overall scale and size of the ONL. Because the adverse effects on the values that contribute to making the subject landscape outstanding will be able to be rehabilitated, the effects cannot be considered as being irreversible. And because the project area can be rehabilitated by remodelling disturbed landform to appear natural and then be revegetated with plant species native to the mine permit area locality, the part of the ONL that will be disturbed by the project can be considered to be very resilient to change. With no other mines or other development present within the ONL the coal mining project will not lead to cumulative effects on the ONL.[310]

[306] Mr Rough EiC Appendix 3, para 9.
[307] Mr Rough EiC para 25.
[308] Mr Rough EiC para 20.
[309] Ms Inwood EiC para 90.
[310] Mr Rough EiC Appendix 3 paras 10 – 13.

**Section 104(1)(b) – the Buller District Plan**

339 The sole Objective is 4.9.3.1 which is:

> *To protect the distinctive character and unique values of outstanding landscapes and natural features*.

340 How does the plan identify what it means by the 'distinctive character' of various landscapes?

Policy 4.9.4.2. is:

> *Character areas shall be identified in the Plan and shall reflect the distinctive landscape elements and natural values held for each region*.

341 Policy 4.9.4.2 links back to the Objective. The 'distinctive character' of a landscape is comprised of its 'distinctive elements'. So, the Character areas identified in the plan help us to identify what the 'distinctive character' of various areas are that need to be protected from inappropriate development.

342 The Explanation to the section on Landscape includes 4.9.6.3 which says:

> *Some areas of the District make a greater contribution than others to the District's character. Rules in the Plan aim to implement stricter controls and standards for activities in these areas. While individual outstanding sites are recognised, on a broader level the District has been divided into four "character areas" based on the natural and physical landscape and on the degree of susceptibility to change within each area (see Parts 5.2, 5.3, 5.4 and 5.5.*

343 One of the 'environmental outcomes' of part 4.9 is 4.9.7.2 which is the:

*Protection and enhancement of the character of different landscapes.*

344 The plan therefore provides a structure whereby some character areas are considered to be 'more sensitive' than others. Moreover, there is nothing in the operative plan which distinguishes ONLs from other areas within these character areas – the same provisions apply. That is, even within ONLs the plan's framework is that there are different 'levels' of 'sensitivity/importance' depending on what Character Area the ONL is in.

345 Part 5 provides for the Character Areas, and confirms that they give effect to the significant resource management issues, objectives and policies in Part 4. Provision 5.1.2 says:

> *The District has been divided broadly in to character areas, within which more specific activity zones have been defined where appropriate. The approach is consistent with the methods and direction for management given in Part 4.*

346 The Character Areas are then described in 5.1.3.

Four character areas are identified in Buller namely:

| | |
|---|---|
| **Urban** | Covers the settlements and towns in the District. Includes the Port Zone. |
| **Rural** | Includes the non-urban land in the District (other than the Paparoa or Natural Environments areas) which is recognised as having a distinctive rural and open space character, as well as the airport. Includes the Cement Production Zone. |
| **Paparoa** | Encompasses the area of the Paparoa coast where the scenic values of the coastal landscape are particularly high. |
| **Natural Environments** | Covers those parts of the District with high conservation values where protection of conservation values is the primary management aim. Generally these areas will be on public conservation land. |

347 The Te Kuha site is in the Rural Character area and within the Rural Zone. The Paparoa and Natural Environment Character Areas refer to scenic and conservation values, while the Rural Character Area description is more general.

348 Provision 5.1.4 then says:

> *Rules apply to each of these areas which aim primarily to avoid, mitigate or remedy any adverse environmental effects arising from activities. Activities will fall into either the permitted, controlled or*

*discretionary categories (see Figure 5.1). Where an activity does not it shall automatically become non-complying.*

349 Therefore, the rules of the various character areas and zones have been drafted to (amongst other things) "reflect the distinctive landscape elements and natural values held for each region" (Policy 4.9.4.2).

350 Mining is a non-complying activity in both the Paparoa and Natural Environment Character Areas. This reflects the 'elements and natural values' of those areas. In contrast, mining is a restricted discretionary activity in the Rural Character Area. Significantly, mining is also a restricted discretionary activity within any area identified as an ONL in the Rural Character Area – whether the ONL has been identified in the plan itself (as the plan proposed), or otherwise. That is, there is no rule which says that mining in an identified ONL in the Rural Character Area is a non-complying activity, despite the plan recognising there was to be a process to identify those ONLs. On the contrary, while provision 4.9.5.2 states that the intention was for ONLs to be identified by December 2002, mining was still to be a restricted discretionary within any identified ONL in the Rural Character Area. That is quite a different approach to how mining is considered in the 'more sensitive' Paparoa and Natural Character Areas.

351 Provision 5.3.1.8 (part of the Introduction to the Rural Character Area) is then instructive about the appropriateness of mining in the Rural Character area (including within an ONL):

> *Within the Rural Character Area significant mineral resources exist. These resources have the potential to contribute to the social and economic wellbeing of the District. It is in the District's best interests that these be identified and where feasible utilised, provided that the adverse effects are avoided, remedied or mitigated and having regard to the natural areas and habitats in the Rural Character Area. The rules provide for the prospecting, exploration and mining of mineral resources within the Character Area, subject to compliance with standards and District wide rules.*

352 Thus, the Plan generally promotes mining in the Rural Character Area, including within ONLs in that Area. The Plan is not saying, however, that any sort of mining in any location is appropriate – hence the restricted

discretionary activity status, rather than making mining a controlled or permitted activity.

353 Provision 5.3.1.5 (also part of the Introduction to the Rural Character Area) emphasises this point:

> *On Crown land and land managed by the Department of Conservation mechanisms are already in place to protect conservation values; the Council does not wish to unnecessarily duplicate consent procedures for potential applicants*.

354 This is saying that the Council will primarily rely on the Department to address/protect conservation values (which include visual/landscape values) while the Council wants minerals to be utilised, subject to ensuring the mining is undertaken responsibly.

355 The Explanation/Reasons for the Rural Character Area rules (providing/encouraging mining providing it is done responsibly) reinforce this interpretation:

> *5.3.2.5.2. Generally, a permissive approach is taken to activities wishing to locate in the rural area by making a wide range of activities discretionary as the Paparoa and Natural Environments Character Areas retain most of the land which should be conserved through the more strict provisions.*
>
> *5.3.2.5.9. The investigation and utilisation of the District's mineral resources, a significant proportion of which are located in the Rural Character Area, are provided for. The effects of mineral related activities depend to an extent on their scale, and for this reason a distinction is drawn between prospecting which is provided for as a permitted activity, exploration (in cases, a restricted controlled activity) and mining which are provided for as limited discretionary activities.*

356 Overall, the Plan provides a clear direction that the district plan considers that mining is generally appropriate in the Rural Character Area, whether or not it is also in an ONL, provided visual and landscape effects are avoided, remedied and mitigated. The Landscape Objective and Policies only apply to ONLs in the various Character Areas and not to the Character Areas more generally. This is consistent with the rules framework for the Rural Zone and the objectives and policies for the

Mineral Resources section of the Plan (particularly Objective 4.5.4.2 and Policies 4.5.5.1, 4.5.5.2, 4.5.5.4 and 4.5.5.5)

357 Policy 4.9.4.2 is only one of the two policies which give effect to the overall outstanding landscape Objective 4.9.3.1. The second policy (4.9.4.1) is:

> *To discourage activities which would significantly alter the character of outstanding landscapes*

358 There are two points to note here. First, the policy says 'discourage' rather than 'avoid' such activities. The use of that word is important, given the direction by the Supreme Court in the King Salmon decision that avoid means avoid. By using 'discourage' rather than 'avoid' the policy admits of the possibility that an activity is appropriate even if it does significantly alter the character of the ONL. For the reasons set out below the applicant does not need to rely on this 'exception', but it further strengthens the interpretation that the Buller District Plan is 'less strict' with mining than with other activities in ONLs.

359 Second, an activity is only to be discouraged where it would 'significantly alter the character' of the ONL. Again, the 'character' of an ONL in this policy is to be determined by reference to the Character Areas in the Plan – as per Policy 4.9.4.2. The description of the Rural Character Area (5.1.3 and 5.3.1.8) is more permissive than the Paparoa and Natural Environment Areas, and specifically refers to the presence of minerals and their development. Thus, in terms of Policy 4.9.4.1, the character of the ONL in the Buller Gorge includes a recognition of the presence of minerals and the Plan's desire to facilitate their utilisation, subject to the mining being carried out according to best practice.

360 Moreover, mining in an ONL within the Rural Character Area can be consented where it has more than minor effects (otherwise it would have been a non-complying activity).

361 So, I submit that when considering landscape and visual effects and how they relate to the Objective and these two Policies, it is important to place that in the context of what the Plan describes as the character of ONLs within the Rural Character Area.

362 In my submission, these two policies supporting the Objective when read together, mean:

(a) The character of any ONL within the Rural Character area includes a recognition of the presence of mineral resources which are in the best interests of the district to be utilised;

(b) Mining in an ONL within the Rural Character Area is appropriate in terms of s6(b) if it avoids, remedies and mitigates effects – and the Mineral Resources policies of the Plan indicate that to appropriately address effects, mining must be undertaken according to best practice; and

363 Mining per se does not significantly alter the character of any ONL within the Rural Character Area because the possibility of mining is part of the character.

364 So, what activities might significantly alter the character of an ONL in the Rural Character area so as to be contrary to Policy 4.9.4.1? I submit there are three types. First, activities other than mining because they are not identified in the Plan as part of the character of the ONL. Secondly, mining which does not avoid, remedy or mitigate effects by operating according to best practice (eg by not reasonably minimising the footprint or failing to use best practice rehabilitation methods). Thirdly, it might be possible that mining, even when done according to best practice is of such a scale and the sensitivity of the ONL in question is so high that, despite the Plan's provision for and promotion of mining in the Rural Character area to be in the best interests of the District, the mine is inappropriate in the same way as a mine may be inappropriate in the Paparoa and Natural Environment Character Areas. This third category is likely only to apply to truly significant large-scale mining in a highly sensitive ONL.

**Is the proposal consistent with the District Plan Landscape Objective and Policies?**

365 In light of the above comments on the landscape and visual effects, I submit that the proposal is consistent with the landscape Objective and Policies in section 4.9 of the District Plan.

366 The proposal cannot be contrary to the policy about significantly altering the character of the ONL simply because it is mining. However, the way in which Mr Brown has approached the issue would mean that any substantive opencast mine in this ONL would be contrary to the policy. By approaching it in that way, his consideration of Policy 4.9.4.1

undermines policy 4.9.4.2 and the overall scheme of the plan for an ONL in the Rural Character Area which is to allow for best practice mining.

367 The evidence is that the mine has adopted the 'mitigation hierarchy' by minimising the footprint as much as practicable, then mitigating and remedying landscape and visual effects as much as practicable by committing to best practice rehabilitation, which specifically has regard to landform and landscape objectives.

368 In my submission, Mr Brown has taken an inappropriately 'reductionist approach' by focussing too much on the land affected, and not enough on the site in the broader context. There is no doubt that the landscape within the actual footprint of the mine will be altered, but that is not the test in the policy. Clearly, an opencast mine, even if it is operated and rehabilitated consistent with best practice, must alter the character of the actual footprint itself, at least for a period. But that type of alteration is not what the policy is referring to. Rather, it is about the character of the ONL in a broader sense, and recognising minerals to be part of that character – which is more the perspective that Mr Rough has taken.

369 This is a relatively small mining opencast coal operation, right on the boundary of an ONL, which will be rehabilitated according to best practice so that in the medium to long term the landscape changes to the site will no longer be evident. Mr Brown and Mr Rough agree the effect is on a small part of a much larger ONL, and that in time the effect will be mitigated.

370 Mr Brown is particularly concerned about the effects of the proposal on the tourism experience which he says will be for an unacceptably long period of time. Of course, the effect on each individual tourist is no different whatever the duration of mining (unless that tourist happens to visit more than once over the life of the mine). Rather, the effect on individual tourists relates to the number who might be affected over the life of the mine (recognising also that the scale of effect is not constant over the life of the mine – that is, the greatest effect, which is what the experts have rightly considered, does not occur for the entire duration of the proposal)

371 I submit, that this concern does not mean the proposal is contrary to the Policies because:

(a) The effect on any individual or group of tourists is transitory. If they happen to be looking in the direction of the mine as they are travelling, they will see it for a very short period of time relative to their overall experience in the Lower Buller Gorge and more generally in the context of their experience in the Buller District and the West Coast region.

(b) Tourists (as well as locals and visitors from other parts of the country) may well be aware of the history and ongoing activity of mining (and farming) in the district. That may impact on their experience.

(c) The District Plan does not see this as a specific issue of concern in relation to mining. It certainly identifies tourism as a major asset and economic activity (like it does agriculture and mining), but it does not talk about ensuring landscape and visual effects of mining on tourism is to be avoided or addressed in any particular way. The Plan does however, expect mining to be carried out according to best practice, including rehabilitation.

(d) The District Plan recognises what it refers to as 'short term' effects of mining, but its emphasis is on the 'long term'.

372 The Plan states that the character of the site includes the presence of minerals which the Plan encourages to be utilised. Non-permanent effects on this small part of the ONL will not 'significantly alter the character' of the ONL in a wider sense.

373 Even if the effects of the mine are more significant than Mr Rough considers to be the case and are as significant as Mr Brown believes, the proposal is, I submit, nonetheless consistent with Policy 4.9.4.1. At the very least, even if the Court prefers Mr Brown's assessment of effects rather than Mr Rough's assessment, the proposal is nonetheless not contrary to the landscape Objective and Policies.

**25 July 2022**

Mark Christensen

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