Your Comment on the Waihi North application

Please include all the contact details listed below with your comments and indicate whether you can receive further communications from us by email to substantive@fasttrack.govt.nz

1. Contact Details			
Please ensure that you have authority to comment on the application on behalf of those named on this form.			
Organisation name (if relevant)	Waikato Conservation Board		
First name			
Last name			
Postal address	73 Rostrevor Street, Hamilton 3204 | Private Bag 3072, Hamilton 3240		
Home phone / Mobile phone		**Work phone**	
Email ***(a valid email address enables us to communicate efficiently with you)***	waikatoconservationboard@doc.govt.nz		

2. We will email you draft conditions of consent for your comment			
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Thank you for your comments

25 August 2025

Oceana Gold (New Zealand) Limited Fast Track application

Waikato Conservation Board comments

Introduction

1. The Waikato Conservation Board (**the Board**) is the community's voice in conservation management in the region. The Board gives advice to the Department of Conservation (**DOC**) on local conservation matters and carries out important planning roles. A major responsibility of the Board is in the development and implementation of the Waikato Conservation Management Strategy 2014-2024 (**Waikato CMS**). This statutory plan identifies and establishes objectives for the integrated management of natural and historic resources within the region. The Board is involved in the preparation, review, amendment, and implementation monitoring of these plans.

2. Oceana Gold (New Zealand) Limited's (**OGNZL**) application seeks all necessary permits and permissions to expand their mining operations in and near Waihi town, including an underground mining complex and associated access tunnels underneath the Coromandel Forest Park at Wharekirauponga. Collectively this proposal is called the Waihi North Project (**WNP**).

3. The Board has been invited to comment on the OGNZL application under the Fast-track Approvals Act 2024. The Board welcomes the opportunity to comment.

Summary

4. The Board has focused its comments on particular areas given the size of the application. The Board has provided comments to the following areas/assessments:

   (a) Waikato CMS;
   (b) Biodiversity;
   (c) Matters relating to frogs;
   (d) Pest Management;
   (e) Recreation and Tourism Assessment; and
   (f) Ground Water Assessment.

Waikato CMS

5. The purpose of the Waikato CMS, as defined by section 17D of the Conservation Act 1987 (**Conservation Act**), is to implement general policies (including the Conservation General Policy 2005), and to establish objectives for the integrated management of natural and historic resources, including species managed by DOC, and for recreation, tourism, and other conservation purposes.

6. The Waikato CMS describes the conservation values present in Waikato, and provides guidance for DOC's work in the form of a vision, objectives, outcomes for places, policies, and milestones, translating DOC's Strategic Outcomes to the Waikato.

7. The Waikato CMS was prepared in consultation with the Board, with public participation, and was approved by the New Zealand Conservation Authority according to the process set out in the Conservation Act.

Status of the Waikato CMS

8. Conservation management strategies are part of a wider planning framework. In preparing the Waikato CMS, the Conservation General Policy 2005 requires that regard be had to local government planning documents. In turn, local government planning processes are required to have regard to DOC's statutory plans when preparing documents under the Resource Management Act 1991.

Biodiversity

9. The Waikato CMS describes the area of Wharekirauponga as a link to the remainder of the Coromandel Forest Park. It is described as follows:[1]

> *Part Two*
> *64 Waikato Conservation Management Strategy 2014–2024*
>
> *Hauraki–Coromandel Peninsula Place*
>
> *The Hauraki–Coromandel Peninsula Place comprises all public conservation land from the northern tip of Coromandel Peninsula to (but not including) the Karangahake Gorge (refer Maps 8.2 and8.2.1). The Department administers 38% of the total land area on the Coromandel Peninsula, including the 72 000-ha Coromandel Forest Park. Management of the land has a direct influence on the environment and opportunities available to those who live and visit the Peninsula.* ***The policy direction for this Place focuses on lands managed by the Department, and the protection of biodiversity values, outstanding natural landscapes and natural character****, including integrated management with others of pressures originating off public conservation lands, particularly with respect to coastal development****. This Place includes three discrete areas, each with specific management needs:***
>
> • ***Northern Coromandel***
> • *Thames Coast, Kauaeranga Valley and Broken Hills*
> • *Maratoto, Wentworth and* ***Wharekirauponga***
>
> *Description*
>
> *The Hauraki–Coromandel Peninsula Place contains a large forest continuum with rare coastal forests, and is valued for its diverse native flora and fauna, scenic natural landscapes, rich history, ecosystem services, and wide range of recreation and tourism opportunities.*

[1] Waikato CMS, at page 64.

This Place is characterised by indigenous forest, wetlands, and ecologically diverse coastal and marine ecosystems. Indigenous forests cover a large part of the Peninsula and include almost contiguous tracts of mixed podocarp-broadleaf forest along the main Coromandel Range (east–west and north–south). Remnant kauri, coastal pōhutukawa forest, and mānuka (Leptospermum scoparium) and kānuka (Kunzea ericoides) shrubland feature in many areas. Coastal pōhutukawa forest is present along the coastline, including at Northern Coromandel, Waiomu Ecological Area, Onemana, Whiritoa and the Thames Coast. ***Priority forest ecosystem sites identified by the Department are found at*** *Moehau, Papa Aroha, Horseshoe Bay, Whenuakite,* ***Kapowai-Kauaeranga, Papakai and Otahu.***

10. The policy direction for the Hauraki–Coromandel Peninsula Place under the DOC guiding strategy, the Waikato CMS, focuses on lands managed by DOC and the protection of biodiversity values, outstanding natural landscapes and natural character, including integrated management with others of pressures originating off public conservation lands and goes on to mention specifically Wharekirauponga as one of these sites.

11. The application as it has currently been provided does not build this specific Conservation direction implemented by the NZ Forest Service pre-1987, as a focus on protecting specific landscapes sites along the Coromandel Range. But rather adds such flippant remarks as "dewatering will have no impact on Archey's frogs." This is concerning for the Board as regard should be taken to the strategies within the Hauraki–Coromandel Peninsula Place.

Matters relating to frogs

12. Coromandel Forest Park, including Wharekirauponga, provides habitat for two species of endemic frogs; *Leiopelma archeyi* (**Archey's frog**), and *Leiopelma hochstetteri* (**Hochstetter's frog**). There are only three native species of amphibians in Aotearoa New Zealand; all three are Leiopelmatid frogs which exhibit a range of unusual, basal, characteristics, including the absence of middle and external ear organs.

13. Hochstetter's frogs are located in fragmented populations on North Island, with Archey's frogs limited to sites within the Coromandel Forest Park as well as two small populations (one translocated) in King Country. Both species are listed as "At Risk – Declining" under the New Zealand Threat Classification System, and Archey's frog is additionally recognised as the most Evolutionarily Distinct and Globally Endangered amphibian in the world.

14. Due to their unique biology and their threatened status, these frog species, especially Archey's frog, have received significant attention in the Waihi North application materials. With their specific requirements for mature, humid forests, and their vulnerability to invasive predators, it is justifiable that the survival and population growth of these frog populations would be an indicator of the overall health of the wider forest ecosystem and its flora and fauna. Following the precedent set by the application materials, in this submission we also focus on impact of the proposal on frogs as a proxy for the whole forest ecosystem, given that they are likely to be among the most vulnerable inhabitants of this forest.

The Proposed Mine and its Potential Impacts

15. The proposed Wharekirauponga Underground mine (**WUG**) is located underneath the Coromandel Forest Park, a conservation park gazetted under the Conservation Act. The purpose of such designation is to protect the land and its constituent ecosystems from

human activities that might threaten them. In the Conservation Act, section 19(1) states that:

"Every conservation park shall so be managed—
(a) that its natural and historic resources are protected; and
(b) subject to paragraph (a), to facilitate public recreation and enjoyment."

16. This requirement in the Act for the protection of the park's natural and historic resources as the primary purpose would normally exclude the potential for commercial exploitation of mineral resources within the park. The position of the WNP proposal is that by proposing an underground mine, the applicant will be able to benefit financially from mining of these minerals without substantially detracting from the ecological and cultural values of the park above ground. The actual and potential impacts of the mine's operation (including vegetation clearance for drilling and ventilation sites, vibrations from mining activities, dewatering, settlement/subsidence, and potential loss of species or forest cover), are portrayed in the application as leading to minor impacts on the Coromandel Forest Park compared to that of an open cast mine. While this is true, the more appropriate comparison is with a Forest Park that has been left unexploited. In this comparison, the actual and potential effects are a significant departure from the state that would normally be expected from protected lands of this status.

17. However, as is the case around the country, invasive species (particularly mammalian predators) are currently reducing the biodiversity values of the park, leading to a loss of species and reduced resilience of the forest ecosystem. To leave this to continue unchecked would also be against the principle of management to protect the natural resources as described in section 19(1) of the Act. The proposed Pest Animal Management Plan from the applicant would make a significant contribution to reducing the impact of invasive species across area proposed for management, and thus would help to combat the most serious threat to the ecosystem's health.

18. Therefore, from an ecological perspective, in considering whether this project should be allowed to proceed, and with what conditions, it is a matter of weighing up the potential risks of the proposed activity against the benefits of the proposed pest animal management plan. Based on the information provided in the application materials, physical damage to the park's ecosystem (such as loss of forest cover from excessive dewatering) from the mining activities is of low likelihood, but the effects could be hard, if not impossible, to reverse. For example, in Section 6.6.2.1, pg 448, it states:

> "If effects of dewatering are detected, it is proposed that remedial actions such as provision of supplementary water, grouting of fissures which drain shallow groundwater and / or reinjection of water into aquifers may occur to augment flows. If these measures are unsuccessful, inadequate or otherwise unable to be undertaken, an offsetting or compensation package will be developed to address any residual effects and ensure that the project results in no net loss of wetland habitat or wetland ecological value."

19. This implies that severe dewatering that cannot be addressed by the proposed mitigation measures would need to be offset or compensated for (i.e. at a different site) through the protection or creation of other wetland habitat. This type of outcome would lead to lasting, if not permanent, damage to the ecological values of the Coromandel Forest Park. Even if

there was no-net-loss of wetland area through compensatory action, there would still be the loss of the ecological values of this area of the Coromandel Forest Park.

20. The remote possibility of this sort of scale of impact is why this proposal has received considerable attention from concerned public and experts, and the applicant has commissioned numerous reports from experts to investigate the various matters in detail. While the depth of information presented in these reports is impressive, and the proposed management plans are commendable, it is our contention that the assessment panel needs to take a bigger picture view of the proposal when considering its decision. There are numerous uncertainties that on their own are not cause for much alarm, but when taken as a whole these uncertainties add to a substantial risk to the integrity of the forest ecosystem at the site, and it is necessary to carefully consider whether these risks are justified in the context of the requirement to protect the park's natural resources.

21. Here we consider the uncertainties presented in the application materials that relate to situation of the two endemic frog species within the footprint of the WUG, as a proxy for the potential wider impact of the project on the ecosystem. The uncertainties we address are as follows:

(a) Factors influencing frog density and population persistence;
(b) Total Archey frog abundance on site;
(c) Total Archey frog population in NZ;
(d) Likelihood of dewatering;
(e) Magnitude of dewatering;
(f) Ability to control/stop significant dewatering;
(g) Impact of vibration on frog behaviour and population persistence;
(h) Overlap of frog population with actual experienced vibration;
(i) Viability of maintaining low pest densities given the shape and landscape, context of the pest control area; and

Frog Populations

22. There is considerable discrepancy between the Archey's Frog population estimates presented in the application materials, and the sum total knowledge and estimates of the frog populations from before the surveys conducted on behalf of the applicant. The current conservation status of Archey's Frog was based on assessments that the total population of the species is less than 100,000 individuals, but following the surveys conducted for this application, the 2024 assessment states that the population is greater than 100,000 individuals[2]. In contrast, the Substantive Application Report states:[3]

> "The technical assessments undertaken in this field have concluded that both Archey's and Hochstetter's frog are prevalent in the surface area above the proposed WUG, with the Archey's frog population in this area ranging between 61,400 – 278,700 individuals (from a wider population of 8-25 million throughout the Coromandel), and the Hochstetter's frog population presenting as approximately 1 frog per 20 m stream / river reach."

[2] Burns RJ, Armstrong DP, Bell BD, Haigh A, Germano J, Rawlence NJ, Thurley T, Hitchmough RA, Makan T, Michel P (2025) Conservation Status of amphibians in Aotearoa New Zealand, 2024. *New Zealand Threat Classification Series 44.* Department of Conservation, Wellington. 19p.

[3] A.04. Part A – Substantive Application Report: Section 1- introduction, at page 21.

23. This extraordinary statement that the 315ha WUG vibration footprint may contain the same number of individual Archey's frogs as was estimated for the whole species globally prior to this survey, and that the overall population size in the Coromandel could be 80-250 times greater than this, requires robust scrutiny. The estimates for the WUG site population come from Report B.41[4], and these figures were then multiplied up to provide a total Coromandel population based on estimates that the site holds between 0.61 – 1.01% of the population (based on area). The Archey's frog population report provides thorough analysis of the most comprehensive Archey's frog surveys conducted to date, including sites within and outside of the WNP area and multiple survey methodologies.[5] As the underlying datasets are not provided, a full peer review of the analysis is not possible, but the methods appear to be appropriate.

24. However, the limitation of this approach is not due to the statistical modelling approach used to analyse the survey data, but rather the assumption that the survey sites were representative of a) the overall WUG footprint and b) the wider Coromandel Forest Park.

25. It is well established globally that amphibian populations are not distributed evenly across the landscape, but are largely driven by microhabitat variation and microsite conditions[6,7]. For this reason, it is considered that "coarse-filter" approaches to conservation planning, which use land-use cover databases to map vegetation diversity as a proxy for overall biodiversity, are inappropriate and inadequate to capture the microhabitat-scale features that determine amphibian population distributions[8,9].

26. The Archey's Frog population report analyses the vegetation, elevation, and climate of the survey sites where Archey's frogs were and were not located, in order to predict the overall available habitat for Archey's frogs in the Coromandel (including assuming that the entire 315ha WUG vibration footprint is equally appropriate frog habitat). Using a range of estimates of likely total frog numbers in the survey plots, these are then multiplied by the area of the site to derive potential population estimates for the whole site, and this is then used to compare to the total predicted available frog habitat in the Coromandel to estimate that this site holds 0.61 – 1.01% of the total population.

27. The author notes that the vegetation analyses are somewhat confounded by inaccuracies in the landcover database, in that some areas of forest have been lost in recent years, and other areas are given the wrong habitat type designation. But for frog populations, the problem is deeper than this: it is highly unlikely that coarse vegetation maps (i.e. "Kauri forest" vs "Lowland indigenous hardwood") accurately capture the environmental variables that best predict frog presence and abundance.

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[4] B.41. Estimating the Proportion of Coromandel's Archey's Frog Population in the Area Affected by Vibrations from the Proposed Wharekirauponga Underground Mine.

[5] B.41. Estimating the Proportion of Coromandel's Archey's Frog Population in the Area Affected by Vibrations from the Proposed Wharekirauponga Underground Mine.

[6] Ficetola GF, Lunghi E, Manenti R (2020) Microhabitat analyses support relationships between niche breadth and range size when spatial autocorrelation is strong. *Ecography* 42:724-734.

[7] Farallo VR, Miles DB (2016) The importance of microhabitat: a comparison of two microendemic species of *Plethodon* to the widespread *P. cinereus*. *Ichthyology & Herpetology* 104:67-77.

[8] Davidson A, Dunn L, Gergely K, McKerrow A, Williams S, Case M (2021) Refining the coarse filter approach: Using habitat-based species models to identify rarity and vulnerabilites in the protection of U.S. biodiversity. *Global Ecology & Conservation* 28: e01598

[9] Altmoos M, Henle K (2010) Relevance of multiple spatial scales in habitat models: a case study with amphibians and grasshoppers. *Acta Oecologia* 36: 548-560.

28. It is unfortunate that the full proposed surveys were not able to be conducted due to issues obtaining the correct permissions. Although this is not the fault of the report author, given the resultant patchy distribution of transects and plots within and outside of the WUG site it is necessary to be very careful in making assumptions about the representativeness of the survey results.

29. To assess whether the equal value habitat assumption is reasonable, we need to ask whether there is any evidence that a) Archey's frogs are not evenly distributed through the area of supposed available habitat (i.e. moist indigenous hardwood forest above 400 m a.s.l.), or that b) the survey plots were not randomly/evenly distributed across the WUG site.

30. There is strong evidence that Archey's frog populations are patchily distributed through their current ranges. Some plots and transects in the current survey effort had no records of frogs despite being in close proximity to other plots. In addition, there is a well-known gap in distribution on the Coromandel Peninsular despite the availability of otherwise suitable habitat.

31. Lastly, the other natural population of Archey's frog within Whareorino Conservation Area is located in one small restricted site within a large contiguous forest that would otherwise seem to be appropriate habitat. These facts strongly suggest that there are other factors determining the distribution of Archey's frogs that we do not currently understand. These may be microhabitats that we haven't yet identified, or it might be due to historical contingency based on predation from invasive species or barriers to dispersal. Regardless of the cause, these facts mean that minimum estimates of population size cannot be based on larger-scale habitat assessment presented in the report, but rather need to consider scenarios where known frog sites may represent a majority of actual extant populations.

32. Furthermore, the estimated population size of frogs at the WUG site may be inaccurate if there is systematic error in the sampling that artificially inflated the estimated population sizes. While it is likely that there are a number of factors that determine frog distributions that we don't currently understand, it is very hard to identify this without comprehensive sampling. However, despite this limitation, the reports already provide evidence that there was a significant bias in the location of survey plots and transects within just one of the four main geological profiles on the site.

33. A comparison of Figures 19 and 24 from report B.41 (Lloyd 2025)[10], with Figure 31 from report B.13 (Torvelainen 2025)[11], shows that the majority of Archey's frog survey sites were located within areas above rhyolite pyroclastics, with relatively few survey sites located on the adjacent rhyolite flow, andesite flow, or post-mineral andesite flow/colluvial cover. While there is no current evidence as to whether these soil profiles do or do not influence frog distributions, it is a clear example of a variation in sites that is not accounted for in the sampling design.

34. If this geology were a strong influence on Archey's frog population persistence, then the population estimate is likely to be significantly inflated. Likewise there may be other factors that we are not aware of that strongly influence Archey's frog populations, and this is in fact the most parsimonious explanation for the vast disparity between the previous Archey's frog population estimates (<100,000 individuals), and the data presented in this mining

[10] B.41. Estimating the Proportion of Coromandel's Archey's Frog Population in the Area Affected by Vibrations from the Proposed Wharekirauponga Underground Mine.

[11] B.13 Oceana Gold (New Zealand) Limited Waihi North Project Ground Settlement Report.

application (up to 25,000,000 individuals). Although these recent surveys led to the latest threat assessment concluding that there are likely >100,000 Archey's frogs, this does not mean that the population is actually in the millions. The estimate of between 8-25 million Archey's frogs should not be relied on in decision making until substantial further work is conducted to test this prediction.

35. Taken together, we argue that there is a high level of uncertainty about the factors driving frog presence and abundance, the population of frogs present at the WUG site, and the total population of Archey's frogs. While none of this uncertainty increases the material risk from the mining operations to the frogs present on site, it does further emphasise that we do not have sufficient information on how these impacts might affect the overall survival of the species in this area of the Coromandel Forest Park.

36. We contend that this uncertainty requires a greater level of precautionary approach than currently expressed in the application materials. At a minimum, the investment in frog monitoring and research needs to be increased to allow a) the completion of the full survey as proposed in Lloyd (2025), b) in-depth studies to uncover factors driving patterns in frog abundance, and then use this to revise predicted available habitat, and c) ongoing surveys in the WUG and wider area designed to not just assess the effects of mining vs predation, but also to track the extent and change in the distribution of the population across the wider site.

Dewatering

37. As discussed elsewhere in our submission, considerable uncertainty remains about the likelihood and scale of dewatering events, and the success of proposed mitigation measures. The proposed measures to stop inappropriate dewatering are not tested, and evidence is not presented in the application materials that these would be sufficient. We argue that these uncertainties interact with our uncertainties about the extent and distribution of the frog populations, resulting in higher risks than are currently acknowledged in the report.

38. The possibility of a severe dewatering that compromises the integrity of the freshwater and forest ecosystems on the site is discussed in Section 6.6.2.1, with the commitment to ensure no net-loss of total wetland habitat through compensatory or off-setting actions at other sites. However, for the frog populations in the WUG, such an event could mean that the site is no longer viable as a habitat, similar to much of the current remnant forest areas in Aotearoa New Zealand. The fact that this one small forest area sustains healthy populations of both frog species is evidence of how important this site is, not that this site is expendable and could be replaced with other wetlands elsewhere. We again refer to the purpose of the land's conservation status, that the natural resources be protected (Conservation Act); S19(1)); so why should commercial mineral extraction be allowed in this site when the vast majority of Aotearoa New Zealand is not protected under such a designation?

Vibrations

39. While it is acknowledged that frog populations of both species have survived in the presence of <2mm/s vibrations at the nearby Golden Cross mine, the vibration predictions show that the majority of vibration footprint on the site is expected to experience >4mm/s vibrations (Figure 17, Report B.41). The effect on frogs within this >4mm/s vibration footprint cannot not be extrapolated from the survival of frogs within the <2mm/s vibration footprint at the Golden Cross min site. The application identifies that the impact of vibrations on the frog

populations is uncertain, and needs to be assessed further (as addressed in the Frog monitoring plan), and that the potential impact is that vibrations could lead to desertion of egg clusters, high stress levels in individuals, and avoidance behaviours.

40. The conclusion of the assessment of impact is that even in the worst case scenario, the loss of these populations of frogs would represent a small fraction of the total population of frogs based on the population estimates in B.41. As detailed above, we highlight that there is uncertainty over these population estimates, which increases the risk that vibrations from the mine would cause unacceptably high impacts to the frog populations. It needs to be established whether this level of impact from a commercial activity is appropriate in land specifically designated as a conservation park.

Pest Management

Frogs

41. The proposed pest management plan is highly commendable. Invasive species present the biggest threat to Aotearoa New Zealand's indigenous biodiversity, and the establishment of a pest control operation within Coromandel Forest Park is welcomed. We address this plan more comprehensively elsewhere in our submission, but here we again draw attention to the uncertainties in this plan as it relates to the matter of the frog populations.

42. It is acknowledged that we lack a good understanding of the relationship between pest control and frog population persistence. The fact that these apparently high population densities of frogs occur at sites without any pest control suggests that there is not necessarily a direct link between invasive predators and frog population persistence. It may be that microhabitat features permit frogs to evade predation, which again highlights the fact that we do not fully understand what determines the distribution of frogs. However, experience at other sites shows that pest control operations are associated with the maintenance or an increase in frog populations, so it is unlikely that the pest control operations will have a negative impact on the frogs.

43. A second area of uncertainty is the ability of the proposed plan to provide sustained reductions in predator numbers given the characteristics of the site and the proposed control area. The control area is a 650ha ellipsoid within the wider forest park, leading to a very high boundary-to-area ratio. The extent of this is unusual, as most pest control projects follow a pattern of a moving front into a forest area from an access point, as opposed to this plan which encompasses an area around an underground mine.

44. There is likely to be considerable constant re-invasion pressure, and this relatively untested approach of an island of protection in a sea of unmanaged forest could struggle to suppress predator numbers within the site. This is not a reason not to do it, but rather just another area of uncertainty that needs to be acknowledged and managed, and added to the consideration of whether such uncertainty in the success of the pest control operation is sufficient to outweigh the risks to the ecosystem from the mining operations.

Deer

45. Within the Waikato CMS, Threats are identified as below which includes a desire to keep the Coromandel Peninsular deer free:[12]

[12] Waikato CMS, at page 65.

A wide range of threats are present, including introduced mammalian predators and herbivores, such as goats, pigs, possums, rats (Rattus spp.) and stoats (Mustela erminea). Wild deer are currently absent from the Peninsula, and the Department intends to keep the Peninsula free from wild deer. Threat management focuses on priority forest and coastal ecosystems, protection of threatened and at risk flora and fauna, and flood mitigation. Community projects assist the Department with protecting threatened species, such as pāteke/brown teal and Coromandel brown kiwi, and with ecosystem restoration. Hunters also contribute to goat and pig control, and commercial trappers contribute to possum control. The Department coordinates hunters and wild animal control efforts to target the protection of priority areas and values.

46. The Pest Management Plan Report[13] has been scribed by representatives of contractors Boffa Miskell and notes in the executive summary that "*the program was developed to address any impacts on the frogs (Archey's Leiopelma archeyii*) and further noted that "*it is expected to be minimal*".[14] Further again it is stated, *"the potential of dewatering will have no impact on the frogs".*[15]

47. <u>At no point does the document recognise that both species of native frog are known to reside within the Wharekireoponga Forest Park and that they require moisture for survival,</u> either running water or at least a moist environment.

48. This document outlines a proposed animal pest management programme and associated habitat enhancement with a focus on Archey's and Hochstetter's frogs in the Wharekirauponga Animal Pest Management Area but goes on to provide no mention of either deer, goats, ferrets, weasels or cats as pests.[16] Feral deer and goats are known to frequent this area as pest animals and have been a target historically for DOC management. Ferrets, weasels and cats have all been detected and caught within the location over time.

49. The Pest Management Plan Report lists the birds Whiteheads/Popokota *(Mohoua albicilla*) and Yellow Crowned Kakariki (*Cyanoramphus auriceps*) as being present.[17] Neither species have been recorded in this area nor anywhere along the Coromandel range. The nearest mainland opportunity would be a vagrant siting of either species on the volcanic plateau, alternately Whiteheads are resident on the island of Hauturu and were released on Tiritiri Matangi, and Yellow Crowned Kakariki were transferred to Tuhua/Mayor Island some years ago. There is no mention of Shining Cuckoo (*Chalcities luicidus*), a common visitor to the area using Grey Warblers (*Gerygone agata*) as surrogate parents.

50. The Pest Management Plan Report[18] allows for the use of 1080 for pest animal control but with pellets containing EPRO deer repellent. The document does not recognise deer as a pest animal in the area. Deer (Fallow at least) are known to be resident in the area (Stev Bolton DOC pers. comm.) and need to be included in any pest animal eradication plan.

[13] B.40: Pest Management Plan Section, Boffa Miskell, dated 24 February 2025.
[14] B.40: Pest Management Plan, 24 February 2025, at page 4.
[15] B.40: Pest Management Plan, 24 February 2025, at page 11.
[16] Page 4 of the *B.40: Pest Management Plan, Boffa Miskell, dated 24 February 2025*, should mention deer, goats, ferrets, weasels or cats as pests.
[17] B.40: Pest Management Plan, 24 February 2025, at page 24.
[18] B.40: Pest Management Plan, 24 February 2025, at page 40..

Coromandel has long been identified as one of just two deer free areas of Aotearoa. Deer have only recently been reported as released on the Coromandel Peninsular.

Recommended Conditions

51. The Terms of Reference for the Biodiversity Plan is currently unsigned. This needs to be approved and signed off by the Biodiversity Project Group.

52. Any Animal Pest Plan needs to approved by DOC and monitored for initial implementation and ongoing outcomes with a pest free target for all species – deer, ungulates, cats, mustelids, rodents and hedgehogs.

53. Given the recent outcomes of gut analysis of mustelids and cats at the Mahakirau Project off the 309 Road, several kilometres north of Wharekirauponga an ideal addition to the Pest Animal plan would be gut analysis of all cats and mustelids to identify prey. Those captures further north are showing evidence of frogs and reptiles but also seabirds.

54. Recognising the correct species would also be helpful to ensure the reporting and management is completed correctly.

Recreation and Tourism Assessment

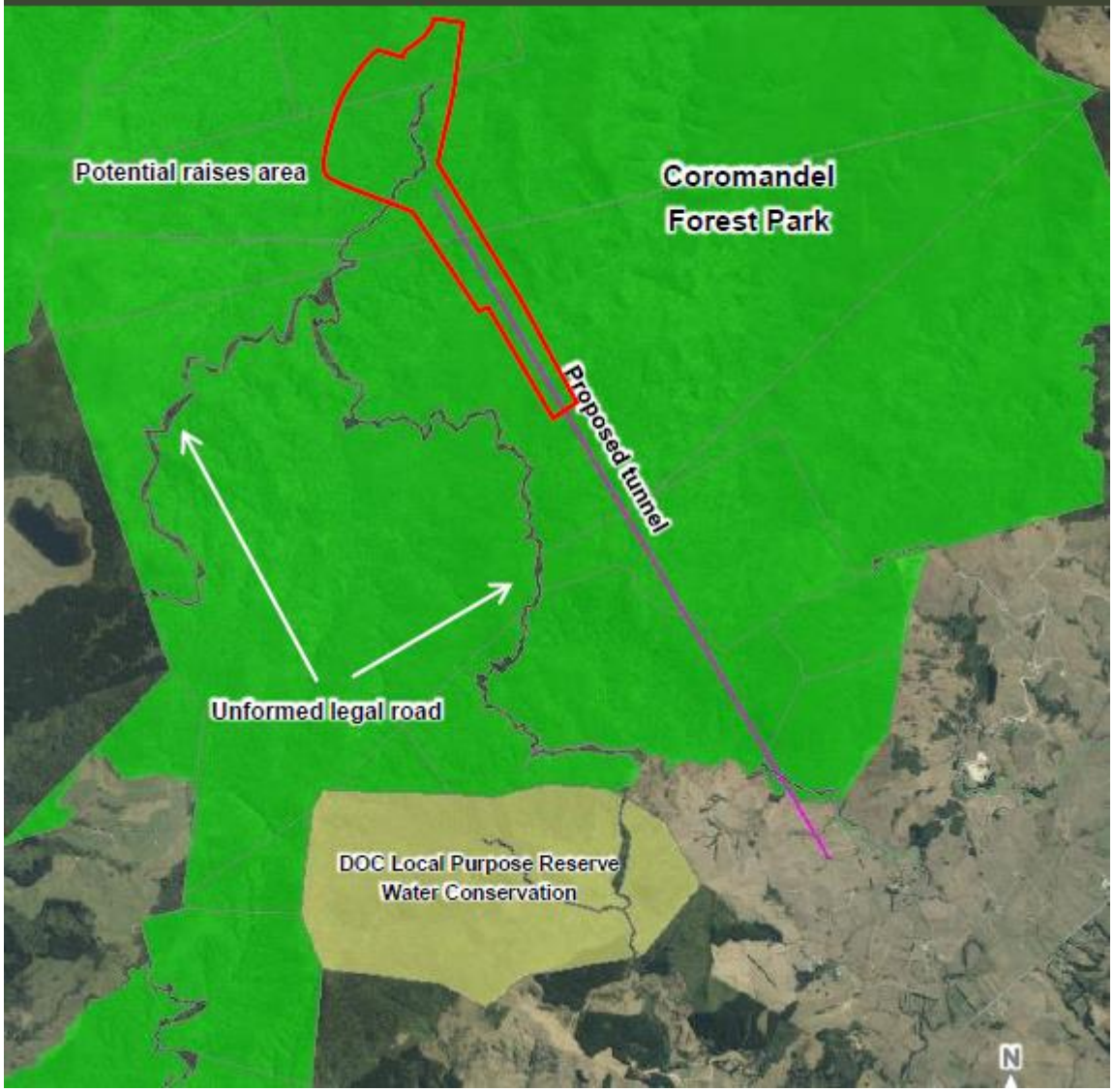
Proposed raises and the Waikato CMS

55. The Recreation and Tourism Assessment Report[19] has made reference to the Waikato CMS as it affects the Coromandel Forest Park. The Waikato CMS outlines the intention to further develop public access near the proposed raises. The raise is shown to be as follows:[20]

[19] B.55. OceanaGold Nz Ltd Waihi North Project Recreation and Tourism Assessment, dated February 2025.
[20] B.55. OceanaGold Nz Ltd Waihi North Project Recreation and Tourism Assessment, dated February 2025, page 23, Figure 9.

56. They will be located in the following area:[21]

Figure 10: Wharekirauponga proposed ventilation raise area



57. There are four DOC walking tracks within this area: Maratoto - Wentworth Crossing, Wentworth Valley Walks, Maratoto - Golden Cross Track, and Wharekirauponga Track.

58. The ventilation raises will be within the 'Maratoto, Wentworth and Wharekirauponga' area. The Recreation and Tourism Assessment Report correctly identifies the link to the Waikato CMS for this area. In particular, this area includes opportunities such as *camping, tramping, visiting historic mining and logging sites, picnicking and hunting, four-wheel driving, horse riding, and trail bike and mountain bike tracks*.[22]

59. The Waikato CMS outlines the following for the area:[23]

[21] B.55. OceanaGold Nz Ltd Waihi North Project Recreation and Tourism Assessment, dated February 2025, page 23, Figure 10.
[22] Waikato CMS, at page 70.
[23] Waikato CMS, at page 73.

The area comprising Maratoto, Wentworth and Wharekirauponga is recognised and highly valued for its natural and heritage values, and backcountry visitor setting.

The priority ecosystem at Otahu is maintained and restored, with forest health improving elsewhere, in partnership with other interested parties. Populations of Threatened and At Risk species (including Archey's frog) are protected with assistance from the community and interested parties. A community-led kiwi zone protects remnant Coromandel brown kiwi populations. Significant geological values are protected at Parakawai, and a native forest landscape prevails.

Important heritage artefacts associated with kauri logging, gold mining and telegraph communication, including the actively managed Royal Standard Tramway, are preserved and integrated with recreation experiences.

Visitors experience outdoor adventures with a sense of isolation, but accept some noise disturbance in the vicinity of four-wheel driving routes. Maratoto is the focal area for four-wheel driving and trail bike activities on the Peninsula. These are restricted to the existing track network and are managed in cooperation with users to minimise conflict between user groups. Four-wheel driving clubs maintain tracks and a basic campsite within the Maratoto area.

Mining history features at Wentworth and Wharekirauponga, with the Wentworth Valley Gateway destination (Wentworth Track and campsite) a focal point for walks and traditional camping in a bush setting. New recreation opportunities are developed in partnership with the community and interested parties, such as a new multi-day walk, which is open to the public.

60. It is the Board's view that the Waikato CMS and its goals and strategies are upheld. To uphold the Waikato CMS is to ensure the area is protected and respected for what it is preserved for. The effects from the mine will impact the area and the ability for the Waikato CMS to achieve what it is set out to do.

Effects

61. There will be a number of effects on the area that will affect the Waikato CMS and overall user experience of the area, which are of concern to the Board. These include:

(a) Visual effects of the vents;
(b) Noise from helicopters;
(c) Noise from the vents;
(d) Noise from construction; and
(e) Access to recreational areas.

62. To mitigate such effects should the mine does proceed, conditions should be imposed that will restrict the effect on our internationally recognised green spaces.

Recommended conditions

63. The WCB supports the recommended conditions as outlined in the Recreation and Tourism Assessment Report if consent is to be granted:

(a) Ensure drilling activity and helicopter activity to service drill sites within 400 m of the Wharekirauponga Track cease from 1 December to 28 February inclusive when the track is open.

(b) Should the tracks open during the consent period (and the Board supports that the tracks do not close), routine helicopter operations should cease near the Wharekirauponga Track.

64. The WCB also supports the mitigations suggested which should be used. These include:
(i) Locating the raises as far away as possible from established walking routes;
(ii) Avoiding locating the raises on any tramway formations;
(iii) Developing track detours away from the raise sites.

65. The Board would also support that the Wharekirauponga Track be upgraded by OGNZL at the time the mine is closed.

Ground Water Assessment

Context of the Technical Reports[24]

66. These Technical Reports provide hydro-geological modelling, predictive uncertainty assessments, hydrology analyses and water-management plans. They inform how the proposed underground mine will affect the region's water table and aquifers, streams and wetlands. For transparency, independent review and determining whether the project aligns with conservation policies is necessary, and clear information, at a technical level that is accessible to the public, should be prepared. Specifically regarding: Depth and extent of current regional and perched water tables under Wharekirauponga; Draw-down effects on springs, wetlands and streams from mine dewatering; Cumulative effects of the proposed subsurface drains, open pits and tailings embankments on groundwater levels; consented infrastructure and management plans need to be able to respond to climate-change scenarios (future rainfall, drought and recharge projections).

Importance of groundwater to ecological and community values

67. The Waikato CMS emphasises that large forest-park catchments not only provide ecological and recreation values but "sustain the quality of surface and ground water that are a source of the region's horticultural, agricultural and municipal drinking water supplies. Indigenous ecosystems on public conservation lands contribute to flood protection, soil conservation and carbon sequestration".[25] The Wharekirauponga catchment contains high-value indigenous forest and is part of the broader Coromandel Forest Park.

[24] Technical Reports refer to; B.26. Groundwater assessment part 1 and Part 2., B.27. Assessment of Groundwater Effects - Wharekirauponga Deposit, B.28. Groundwater Modelling for the OGC Waihi Project: Predictive Uncertainty Quantification, B.29. Wharekirauponga Downstream Reach Investigations, B.30. Assessment of Groundwater Effects – Tunnel Elements, B.31. Wharekirauponga Shallow and Deep Groundwater Movement, B.33. Hydrogeologic Conceptual Site Model, and B.34. Numerical Groundwater Model.

[25] Waikato CMS, at page 18.

68. Given these values, the mining proposal must demonstrate that dewatering and subsurface works will not adversely affect the water table or water quality. Public information on the predicted depth of the water table and potential inflow rates to tunnels is currently lacking.

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69. The degradation of intact ecosystems cannot be replaced or compensated for. If dewatering or unforeseen groundwater interceptions lead to the degradation of forest ecosystems wetlands or streams, the resulting loss of habitat and ecological integrity would be irreversible. No amount of financial bonding or replacement planting can restore the complex interactions of mature forests, soil biota, groundwater and surface-water.

70. The hydrological model must predict water-table draw-down under different mining scenarios (e.g., normal operations, accidental inflow, extreme rainfall). Consent conditions should specify threshold draw-down values or streamflow reductions beyond which operations must cease and mitigation must be implemented. Plans should detail contingency measures if tunnelling intersects pressurised aquifers or perched water bodies – including grouting, ground-freezing, bulkheads and temporary shutdowns.

71. The groundwater assessment should consider cumulative effects of existing Martha, Correnso and Gladstone operations on the regional aquifer. It must also evaluate the effect of potential climate-change-induced extreme rainfall events on the capacity of diversion drains and treatment plants and propose upgrades accordingly. Adaptive management triggers should be set to ensure that water-management infrastructure remains effective under altered climate scenarios.

72. The Board reiterates that conservation land policies require protection of surface and groundwater resources. The Waikato CMS notes that forest catchments sustain the quality of water supplies[26]; therefore, any dewatering must not degrade spring flows or water quality. Consent conditions should require that the project delivers no net decline in groundwater levels or stream flows within conservation lands and should provide for mitigation or offset measures if unforeseen impacts arise.

Reported information requiring further review

73. The underground mine dewatering assessment (**WWLA**) proposes significant effects. The assessment of groundwater effects concludes that dewatering the underground mine will require extracting around 2,200–3,300 m³/day of groundwater and predicts that effects at the surface will be less than minor.[27] The report estimates that leakage induced by mine dewatering could reduce stream baseflow by 2–13 % of the seven-day mean annual low flow and acknowledges a localised area where the andesite is absent and connectivity to streams may be higher.[28] It further notes that two springs are likely to cease flowing during mining, while predicting that most wetlands in the catchment are climate-supported and not reliant on groundwater. Recovery of the groundwater system is expected to take about thirty years after closure.[29] Minor reductions in baseflow can affect sensitive aquatic ecosystems. Any loss of flow in these springs due to dewatering would directly affect the ecological values of conservation lands.

[26] Waikato CMS, at page 18.
[27] B.27. Assessment of groundwater effects – Wharekirauponga deposit (Rev. 3), 4 February 2025, at Page ii.
[28] B.27. Assessment of groundwater effects – Wharekirauponga deposit (Rev. 3), 4 February 2025, at Page ii.
[29] B.27. Assessment of groundwater effects – Wharekirauponga deposit (Rev. 3), 4 February 2025, at Page ii.

74. The Wharekirauponga Downstream Reach Investigations[30] report unexpected decreases in streamflow at several sites along the Wharekirauponga Stream. These decreases could indicate loss of flow to groundwater, but the report cautions that they may also reflect measurement uncertainty in rocky channels[31]. To confirm whether groundwater discharges to or from the stream, the report recommends further work, including tracer tests using dye or chemical tracers and targeted drilling investigations to characterise geological and hydrogeological conditions.[32] The presence of unexplained losses highlights that the connection between groundwater and surface water in this catchment is not fully understood. We recommend that any consent conditions incorporate requirements to undertake such investigations and to adapt management plans if the results reveal greater connectivity than currently assumed.

Conclusion

75. The Board appreciates the opportunity to provide feedback on the WNP application and acknowledges the complexity of balancing conservation values with development proposals. However, the Board maintains that the proposal, as currently presented, does not sufficiently uphold the statutory purpose of conservation land under the Conservation Act, nor does it align with the objectives of the Waikato CMS.

76. The ecological uncertainties, particularly regarding endemic frog populations and groundwater impacts, warrant a precautionary approach. The Board recommends that any consent granted be subject to stringent conditions, including robust ecological monitoring, adaptive management, and full alignment with DOC's conservation priorities.

77. Ultimately, the Board urges decision-makers to consider the long-term integrity of Coromandel Forest Park and the irreplaceable biodiversity it supports. The protection of this unique landscape must remain paramount.

[30] B.29. Wharekirauponga downstream reach investigations (Rev. 6). Report prepared for OceanaGold Limited, 30 August 2024.
[31] B.29. Wharekirauponga downstream reach investigations (Rev. 6). Report prepared for OceanaGold Limited, 30 August 2024, at page 13.
[32] B.29. Wharekirauponga downstream reach investigations (Rev. 6). Report prepared for OceanaGold Limited, 30 August 2024, at page 13.