BEFORE THE HEARINGS PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of submissions on the Proposed Otago Regional Policy Statement 2021 (non-freshwater parts)

EVIDENCE OF ALISON CLAIRE PAUL

FOR OCEANA GOLD NEW ZEALAND LIMITED

Dated 24 November 2022

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INTRODUCTION AND BACKGROUND

1. I am employed by Oceana Gold (New Zealand) Limited (**OGNZL**) as General Manager Corporate and Legal Affairs. I am authorised to give this evidence on behalf of OGNZL. I have a BA LLB from the University of Auckland and I have practised as a lawyer in New Zealand and England since 1992. I have specialised for most of that time in construction, heavy industry and mining.
2. I am responsible for, amongst other things, overseeing the regulatory environment within which OGNZL operates. This includes, where necessary, managing OGNZL's participation in the development of the relevant national, regional and district-level planning instruments under the Resource Management Act 1991 (**RMA**) relevant to OGNZL's current and potential future operations in New Zealand.
3. I have worked for OGNZL since September 2004 and therefore I am very familiar with OGNZL's operations and the developments that have taken place over that time at Macraes Mine. As OGNZL also operates the Martha Mine at Waihi and the Globe Progress Mine near Reefton[1], I am also familiar with operating mines in other regions and other regional and district planning regimes as well as some involvement in the review of permitting requirements at OceanaGold's mines at Didipio, Philippines, and Haile, South Carolina, USA.
4. I am also the Chair of Straterra, a group representing the New Zealand minerals and mining sector, which advocates publicly and to the Government for recognition of mining and minerals; and a member of the Mines Rescue Trust Board which

[1] Where construction began in 2004, the mine was operational from 2007 to 2016 and has been in closure and rehabilitation since that time, representing a full mine development life cycle.

undertakes statutory functions under the Mines Rescue Act in the provision of emergency response services to mines, and tunnels under construction.

5. As part of my roles at OGNZL and Straterra I have made or taken part in submissions on national, regional and district planning instruments including:
    a. Submissions on the 2019 Otago Regional Policy Statement;
    b. Providing submissions and consultation on the draft National Policy Statement on Indigenous Biodiversity (**NPS-IB**);
    c. Engaging with the Ministry for the Environment in relation to the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (**NES-FW**) and the proposed review of these; and
    d. I was a member of the Energy, Infrastructure and Transport Reference Group on the Proposed Otago Regional Policy Statement (**PORPS**). The Reference Groups were developed to enable community feedback and review of the pre-notification PORPS.
6. In preparing this evidence I have read the evidence of Mark Christensen, Scott Hooson, Mike Thorsen, Shamubeel Eaqub and Claire Hunter.

EXECUTIVE SUMMARY

7. In summary:
    a. Macraes Mine is a large employer and an important contributor to Otago's economy and the communities of Dunedin, and the Waikouaiti and Waihemo wards.
    b. Mining is locationally constrained, which means that it needs to locate where the mineral deposits are found. Because of this, and the scale of the operations, mining the mineral resources of the world class Macraes goldfield at times unavoidably impacts on biodiversity, wetland and heritage values.

c. Policies that retain important values through a combination of avoidance and, where impacts are unavoidable, mitigation, offsetting and compensation to achieve “no net loss” or a “net gain” overall, address this constraint and retain the “consenting pathway” that OGNZL needs to continue mining at Macraes.

d. Central government understands this and is providing appropriate national direction in this regard. In its submissions on PORPS, OGNZL is seeking consistency with this national approach.

e. OGNZL has a strong track record of managing impacts on indigenous biodiversity using offsetting and compensation as part of a wide suite of established mitigation measures.

f. Over 85% of the 13,500 ha that OGNZL owns at Macraes is undisturbed by mining, and is mainly used for farming. OGNZL is well placed to contribute into the future towards halting and reversing the decline in New Zealand’s indigenous biodiversity, as part of continuing to develop and operate at Macraes.

OUTLINE OF EVIDENCE

8. In this evidence I:

a. Summarise OGNZL’s mining operations at Macraes.

b. Describe the biodiversity and enhancement projects that have been undertaken to date at Macraes Mine.

c. Describe the significant social and economic benefits of the Macraes Mine to the Waitaki District and the Otago region.

d. Touch on the next stage of development at Macraes Mine.

e. Summarise OGNZL's concerns about the Proposed Otago Regional Policy Statement 2021 (**PORPS**) and how it is at odds with work being done nationally.

MINING OPERATIONS AT MACRAES

9. In Otago, OGNZL owns and operates New Zealand's largest gold and silver mine, at Macraes. The mine is located in East Otago, in the area around Macraes Flat, mostly within the Waitaki District but also in part within the Dunedin City boundary. The Macraes mine has operated under licences (now called mining permits) issued by the Crown since 1989 and the Macraes goldfield is a world class mineral resource – meaning investors view it as one of the roughly 10% of mined mineral deposits worldwide that, in the case of gold, have produced over 5 million ounces since mining began. Today, the only mines that operate at that scale across New Zealand are Macraes and Martha Mine at Waihi. They remain a rarity, and are extremely valuable to the districts and regions in which they are located, as well as providing important public benefits at a national level.
10. The company holds more than 200 resource consents for the Macraes mine, mostly granted by the Otago Regional Council, but also land use consents issued by the Waitaki District and Dunedin City Councils.
11. The Macraes mine comprises a mix of underground and open pit mines (the choice between those two methods depending on the nature and location of the mineral resource), as well as overburden rock stacks (**WRS**s), a large freshwater storage reservoir, a processing plant, several tailings storage impoundments (**TSF**s), and associated roads and other infrastructure. The mine operates in a net negative water balance environment, which means that we import more water onto the site

for processing purposes than is discharged into the receiving environment.[2] The physical footprint of the mine is actively managed to be as small as practicable. The company achieves this in part by preferentially using areas that have previously been disturbed for mining as sites for future rock and tailings storage and this is an important feature of the next phase of mining at Macraes (known as MP4) if mining retains a consenting pathway that allows the requisite consents to be sought to allow that next phase of operations to happen.

12. The Macraes mine is mostly located within a special-purpose zone in the operative Waitaki District Plan which recognises the significance of the mine to the Waitaki District. The boundaries of the zone were established over 10 years ago to reflect the then-boundaries of the Mining Permit issued under the Crown Minerals Act. Those boundaries are now out of date and changes are proposed in the draft Waitaki District Plan, which will be impacted by the PORPS.
13. OGNZL owns approximately 13,500 ha of mainly farmland at Macraes and is understood to be one of the 30 largest private landowners in New Zealand.[3] The majority of mine expansions involving the acquisition of land have occurred under the purview of the Overseas Investment Act 2005 (and its predecessor), with its requirement that the investment will realise a substantial and identifiable benefit for New Zealand.
14. The Macraes mine is located in a part of the Otago Region that is predominantly rural. While substantially modified from pre-settlement times, the Macraes Ecological District retains significant terrestrial and aquatic biodiversity values, as well as important historic heritage values relating to 19th century mining, early

[2] Over 90% of the water used at Macraes is recycled

[3] https://www.stuff.co.nz/business/farming/116661441/new-zealands-biggest-50-landowners-revealed

farming settlements and mana whenua. Many of these values are widespread throughout the area, hosted in pockets within a mix of developed pasture, forestry and low-producing grass, tussock and shrubland. Different forms of wetlands of various sizes, many measured in just metres, are common throughout the area. Mining is locationally constrained, which means that it needs to locate where the mineral deposits are found. Because of this, and the scale of the operations, mining the precious mineral resources of the Macraes goldfield at times unavoidably impacts on these biodiversity, wetland and heritage values.

15. The co-location of these historic and cultural, terrestrial and aquatic biodiversity values with the known unique mineral deposits that support the mine creates a need for tailored, fit-for-purpose planning policies and rules. Simply providing policy that requires adverse effects on significant values to be avoided is naïve and fails to engage with the reality that mining is locationally and functionally constrained. It also fails to engage with the reality that responsible operators such as OGNZL are prepared to invest in the techniques and approaches – such as biodiversity offsetting – that ensure important values can be maintained, and even improved, at the same time as the mineral resources society needs are being developed. Access to the full effects management hierarchy is needed to achieve that outcome, where it is not possible to avoid any and all impacts in the first place. Where the large-scale, location-specific landforms associated with mining encounter pockets of vegetation, wetlands or other features that are protected, a simple avoidance requirement in effect renders further mining at Macraes (mining on a scale that is, within Otago, exclusively confined to the Macraes "line-of-strike") prohibited.
16. Put simply, the nature of mining at Macraes makes it disproportionately vulnerable to avoidance-based "bottom lines" and bright-line tests. Policies that assume all features with protected values can be avoided, risk preventing future mining at Macraes even where the values impacted are relatively abundant and capable of

offset and compensation to achieve net positive outcomes for biodiversity. Policies that retain important values through a combination of avoidance and, where impacts are unavoidable, mitigation, offsetting and compensation to achieve "no net loss" or a "net gain" overall address this risk. Central government understands this necessity and as discussed later in this statement (in relation to recent policy and Exposure Drafts) is providing appropriate national direction in this regard. OGNZL is seeking consistency with the national approach within Otago, and is seeking consistency with the approach that was only recently settled in the partially operative RPS.

BIODIVERSITY AND ENHANCEMENT PROJECTS AT MACRAES MINE

17. Increasingly over the years, OGNZL has either offered up or been required to provide biodiversity enhancement as a condition of resource consents. In part this has been due to changing legislative requirements, and in part it has been due to changing corporate attitudes that recognise that biodiversity enhancement is "part of doing business" as well as the genuine desire to want to enhance the environments that we operate in. OGNZL is proud of the work it does in permanently retiring land from productive use to enable long-term management and enhancement of its ecological values, funding relevant research, conducting ongoing fieldwork at a scale seen in few other locations in New Zealand outside of the conservation estate, enhancing stream beds, and providing lizard refuges (to name just a few of the things we do).
18. These contributions are an important component of the biodiversity protection work which takes place in New Zealand. This is reflected in the time devoted to planning, developing and implementing these projects, ensuring that nationally recognised experts are used, and in the resources devoted to these projects. The estimated cost of the 50-year commitment to the biodiversity offset and compensation

program for the recently consented Deepdell North Project (2020), alone, is $8.3 million. This cost has been included in the environmental performance bond provided to the Councils, which is updated annually.

19. A particular component of this work is in offsetting or compensating for the impacts of the mine on indigenous biodiversity. OGNZL does not seek to suggest that it has applied, for the full 31-year duration of mining at Macraes, current "state of the art" biodiversity or aquatic offsetting measures aimed at achieving no net loss or a net gain for biodiversity in terrestrial, freshwater and wetland environments. Indeed, in earlier years of mining at Macraes these tools simply did not exist. Rather, the approach that seeks, at worst, a neutral outcome for ecology, has evolved over time, with each successive mine extension, and in line with changing attitudes to and expectations under the Resource Management Act. I do not think the mine would be alone in that evolution.
20. I do consider Macraes Mine to be a leader amongst land developers over the last 10 years, in taking up offsetting and applying it in increasingly formal ways to our development proposals. I base that conclusion on the academic literature and advice received from leading practitioners (such as Mark Christensen, who is giving evidence on behalf of OGNZL as part of this PORPS process). This suggests, amongst other things, that just a handful of projects have attempted formal offset accounting within the Otago region to date.
21. In the following paragraphs I have sought to explain some of the evolution in the approach taken at Macraes Mine, to put in context the intimation in the Section 42A

report and supporting evidence of the Otago Regional Council and its consultants that offsetting has not been a success at Macraes Mine.[4]

MPIII (2011)

22. The Macraes Phase III (MPIII) mine extension was a substantial project, extending the mining operations at Macraes from 2012 to beyond 2020. Elements of MPIII, such as the Top Tipperary TSF, Back Road WRS and several of the pit extensions, still form part of the current and planned mining operations at Macraes today.
23. Ecological assessments concluded that the project would impact several rare or threatened plant species and habitats, requiring mitigation measures that included fencing and restoration of tussock grasslands, fencing off of some plant communities and active propagation of threatened species. Significant adverse effects on several threatened species of fauna or their habitats, including that of lizards, falcons and pipits were similarly addressed through measures such as the protection and enhancement of tussock grassland, shrubland and wetlands, monitoring and management of predators and plant rescue.
24. Both the Department of Conservation (**DOC**) and Wildlands Consultants, for the District Council, assessed a substantial net loss from the original proposal, in the absence of more robust management plans than those initially offered by OGNZL including that mitigation measures be established in perpetuity.
25. The suite of mitigation measures that was ultimately agreed was designed to offset and compensate for the losses to significant indigenous diversity without in any way purporting to be a formal and complete offset. DOC, the Waitaki District Council and the Otago Regional Council and their experts were ultimately able to reach

[4] See: Section 42A Report, Chapter 10, paragraphs 57, 190, 194, 260, 568, 572, and Appendix 10c paragraphs 3.7 and 5.7 and evidence of Dr Kelvin Lloyd, 29 September 2022

agreement with OGNZL and its experts that the proposed mitigation was appropriate. The agreed measures included relocating part of the main overburden WRS to avoid wetlands and establishing three ecological covenants (Cranky Jims Creek, Highlay Creek and 100 ha of tussock grassland at a location to be agreed) which, importantly, addressed the need for protection to be established in perpetuity. Fencing of these areas, and ecological enhancement through propagation and planting of the Cranky Jims Creek and Highlay Creek areas was also specified.

26. For aquatic mitigation (for loss to galaxiid habitat and streams) a compensation payment to DOC was agreed, to pay for galaxiid habitat enhancement measures.
27. All of these measures were required to be implemented, monitored and controlled through a comprehensive terrestrial and aquatic Ecological Management Plan.
28. Defining features of the final package agreed for MPIII were the permanence of the covenants (a first for Macraes outside the area of heritage protection) and the comprehensive set of conditions developed to give confidence in the targeted outcomes, under the umbrella of the Ecological Management Plan.

CORONATION (2013)

29. Resource consents for the mining of the northern Macraes Mine extension known as Coronation were granted in November 2013, subject to an appeal that was subsequently resolved by agreement.
30. Ecological surveys indicated some threatened species and important habitats present within the Coronation mining footprint for which mitigation comprising off-site protection of land was judged appropriate. OGNZL agreed to covenant a 95 ha area adjoining the Cranky Jims wetland covenant, containing wetlands, significant plants and other ecological features of note. Low intensity grazing of the area was allowed but no farming activities such as burning, ploughing, fertilising

and vegetation clearance. Pest and weed management formed part of the agreed suite of mitigation measures and sowing pasture in the area was restricted by covenant.

31. The Coronation mitigation measures were settled late in the consenting process, in the course of discussions conducted after the in-person hearing was complete. As Dr Lloyd has noted in his evidence on behalf of Otago Regional Council the mitigation package that OGNZL initially offered at the hearing did not meet the expectations of DOC and the Councils' experts. It is not correct, however, to characterise the ultimate outcome as falling short of expectations, as Dr Lloyd's comments may be taken to suggest.
32. The views taken by DOC in respect of the mitigation package were informed by their witness, Dr Laurence Barea, who gave evidence about the Business and Biodiversity Offsets Programme (BBOP) and the draft guidance on Good Practise Biodiversity Offsetting in NZ, seeking to achieve no net loss and preferably a gain in biodiversity.
33. At the hearing, various witnesses for DOC and the Councils pointed to the process followed for MPIII and the outcome ultimately achieved in that process, which was described as "a good outcome" for ecology with conditions imposed that would be equally appropriate for the Coronation project. The issue to be resolved lay in part in conflict over the end use of the covenanted land and whether any level of grazing would remain, together with the end use of the rehabilitated footprint, back to indigenous species or improved pasture for farming.
34. OGNZL took the experts' concerns to heart in the discussions that followed and we were ultimately able to achieve a suite of mitigation measures with conditions that the Councils, DOC and OGNZL were able to settle on by agreement.
35. The application had not been prepared with a formal offsetting approach in mind, and the Panel of Commissioners agreed with OGNZL, that a condition requiring no

net loss of biodiversity could create uncertainty about what was required, given the development footprint was large and there was no inventory of all species within it.

36. Ultimately OGNZL agreed to a suite of measures that included the formal legal protection of an area with similar ecological characteristics to the area being lost through the mining proposal, including pest and weed control (including wilding pines) for the duration of mining and restricted grazing, to be managed under the supervision of a suitably qualified and experienced ecologist. Replanting of part of the project footprint in tussock, reconfiguration of pit and overburden WRS boundaries, riparian planting, translocation of galaxiids and construction of lizard habitat were all included in the final suite of measures. While this did not amount to a formal offset, it paved the way for more formal offsetting proposals that followed Coronation.

CORONATION NORTH (2016) AND CORONATION NORTH EXTENSION (2019)

37. For Coronation North, OGNZL sought to apply the lessons learned at Coronation, and conducted comprehensive surveys and early consultation with staff and consultant ecologists at DOC and the Councils aimed at establishing a net gain for biodiversity, ahead of applying for resource consents.

38. While Coronation North was located in an area of widely impacted and modified high-country farmland, its unmitigated effects on ecological values were assessed to be significant by the expert ecologists advising on the project. In addition to remediation at the end of mining, a suite of mitigation, offsetting and compensation measures was adopted to ensure that the project resulted in a net gain for biodiversity values. This suite of measures was generally supported by the various expert ecologists who gave evidence in the process.

39. The land to be cleared for the Coronation North project was a mosaic of indigenous biodiversity values. The various experts for DOC and the Councils were in broad

agreement with the experts advising OGNZL on the values and on the impacts of the project on indigenous biodiversity.

40. The project involved the clearance of land within three broad classes of existing land-use, all three typical of high-country farming:

    a. Cultivated exotic pasture and pine plantation, accounting for 50 hectares (16%);

    b. Lightly-grazed native tussock grassland and shrubland (matagouri, manuka and kanuka), which formed the greatest proportion of the land to be cleared, at 227 hectares (72%);

    c. Comparatively intact pockets of natural vegetation within gullies and bluffs (34 ha, 11%) and wetlands (4.5 ha, 1%). These pockets of vegetation and wetland areas were widely dispersed across the project footprint (buffered and connected by the other vegetation communities), occurring where plant and animal communities had survived the periodic burning and clearance of the tussock grassland and incursions by stock.

41. In the final analysis, 229 out of 278 hectares of directly impacted land (i.e.: everything except the exotic pasture and pine forest) were assessed to be primarily valuable representative indigenous vegetative cover, the mining effects representing the clearance of about 2% of the native tussock and scrub within the Macraes Ecological District ("ED").

42. It is worth noting, as an aside, that the indigenous vegetation community types recorded at Coronation North were subsequently tested against the significance criteria then proposed to be introduced under the NPS-IB upon its initial release for consultation in 2019 (similar criteria to those now proposed in the PORPS). The assessment resulted in multiple significance criteria being "checked" and all habitat types other than plantation forestry qualified as "significant" with pipits ("At Risk - Declining") noted in the exotic pasture areas.

43. Under the resource consents that were granted for the Coronation North project, the mine committed to remediate and protect a combined area of almost 500 hectares of native vegetation, comprising:
    a. Permanent fenced and pest controlled ecological covenants over 392 hectares of land known as Island Block and Highlay Hill, including ephemeral wetlands, tussock grasslands, riparian zones and rocky bluffs. In these areas wilding pine pest control will be provided for in perpetuity;
    b. Revegetation of about 100 hectares in native tussocks when mining has finished.
44. In addition, the indigenous biodiversity mitigation package provided for:
    a. The rescue and relocation of at least 12 out of 19 threatened or non-common species of terrestrial flora from relevant cleared areas;
    b. Construction of lizard habitats;
    c. Salvage and relocation of Koura and the Nationally Vulnerable Taieri Flathead Galaxias; and
    d. Combined targeted financial mitigation of $325,000 for residual, unmitigated impacts;
    e. A staged approach to WRS construction that ultimately allowed 50 ha of tussock grassland and gully habitat to be removed from the originally designed WRS footprint as part of the conditions of consent for incremental extensions to the Coronation and Coronation North development footprints in 2019.
45. It should be noted that a subsequent appeal against the decision to grant resource consents for the Coronation North project, brought by Macraes Community Inc, considered the mitigation ultimately agreed on went too far in its permanent removal of land from productive stock grazing. OGNZL has subsequently focussed part of its research work and community engagement on understanding how traditional

use of land for farming and protection and enhancement of indigenous biodiversity can co-exist, and what OGNZL might do to support and foster that approach at Macraes.

DEEPDELL NORTH (2020)

46. The Deepdell North Stage III mine-life extension project returned to land much closer to the processing plant and reworked and extended an old open pit. The project included a new 58 ha overburden WRS, which became the main focus for assessing mitigation measures targeted at achieving no net loss for indigenous biodiversity.

47. The application had the benefit of the broad offsetting approach developed since MPIII, offering protection in perpetuity combined with an Ecological Management Plan to implement and monitor steps taken to actively enhance indigenous biodiversity (through measures such as annual surveys, pest and predator control and translocation of plants and lizards). We also retained the lessons learned at Coronation and Coronation North – in particular, the benefits of early comprehensive stakeholder consultation to achieve a "no net loss" approach that had the support and confidence of the relevant experts from the outset. Deepdell North marked, for the first time, the encapsulation of that approach in a formal quantitative offsetting and compensation analysis.

48. Our first choice in managing the project's impacts was, of course, avoidance. The WRS was subject to a preliminary options analysis that considered four alternative locations, in consultation with DOC and other stakeholders conducted over more than a year preceding the application for consent. Of this, in considering objections raised by the Otago Regional Council policy team specifically in relation to impacts on wetlands, the Commissioners observed in their final decision that "the Applicant

had made a reasoned choice that avoided otherwise significant effects on terrestrial ecology in particular."

49. The suite of measures ultimately agreed was a mix of offsetting and compensation. Issues remaining for determination included the assessment of the ecological values that would be lost by the proposed placement of the WRS, whether proposed offsets at Red Bank and Middlemarch were adequate and/or "like for like", and whether or not the proposed Red Bank covenant could be grazed. Ultimately the various experts in freshwater aquatic ecology and the five terrestrial ecologists were able to reach agreement on almost all issues, subject to the view ultimately taken by the Commissioners on whether the proposal met the requirements of the partially operative ORPS for biodiversity offsetting and compensation.

50. A key point of contention was whether offsetting should be available for the small and degraded ephemeral and seepage wetland areas within the project footprint, with a combined area of less than a quarter of a hectare. There was some debate about the values of the wetland types that would be impacted by the project. While degraded by farming activities over the years, they were classified as historically rare and critically endangered (in the case of ephemeral wetland ecosystems) and historically rare and endangered (in the case of seepage wetland ecosystems). In their decision on the application the Commissioners observed that:

> *"Certainly these descriptions apply nationally, but both wetland types are common in the Macraes ED and in Otago generally. The Wildlands Report said that about 3,000 ephemeral wetlands, covering 332ha, have been mapped in Otago and Dr Thorsen said he had mapped 1,360 ephemeral wetlands of over 1ha in the Macraes ED. Similarly, Wildlands said there are over 1,000 seepage wetlands mapped in Otago."*

51. The Commissioners concluded that the wetlands within the Deepdell North footprint did not meet the criteria for being classed as outstanding given their degraded condition and notwithstanding their formal, national classification as endangered.

52. In then assessing the adequacy of the proposed mitigation for unavoidable residual impacts of the Deepdell North proposal on significant ecological values, including offsetting and compensation, the Commissioners had regard to guidelines produced by both the Environmental Institute of Australia and New Zealand (the EIANZ Guidelines) and in the BBOP. Again, wetlands were a main point of contention, and in particular the 5 ha ephemeral wetland at Middlemarch, which was proposed by way of offset for the far smaller combined area of degraded ephemeral wetland impacted by the proposal. The Commissioners considered the difference between offsetting and compensation, depending on whether substituted values are "like for like" or "unlike for like", albeit (in the phrasing used at the hearing to describe the Middlemarch wetland) “bigger and better”. In practice they observed that these distinctions can become blurred in a complex proposal such as Deepdell North. Their conclusion, which was key, was that each element of the offset/compensation package scored more highly than what will be lost as a result of the proposal, and so achieved no net loss.
53. Some mitigation was provided for all thirteen rare plants within the footprint to be rescued, cultivated and replanted into safe sites. In their decision, the commissioners commented on the willingness of Dr Thorsen[5] in particular to follow through similar commitments made for earlier developments, which had resulted in “a good deal of trust between DOC and OGNZL”.[6]
54. The Commissioners also included in their decision some observations on the cumulative effects of mining at Macraes over its 31 years of operations. At the same time as noting the resulting network of mine pits "which unless backfilled are

[5] OGNZL’s chief consulting ecologist, who is also giving evidence in this PORPS process

[6] Decision in *Deepdell North Stage III*, dated 24 September 2020, page 13

essentially very large holes in the ground", large "rehabilitated" waste rock stacks and associated activities "it has also resulted in a network of protected and/or covenanted areas set aside in perpetuity to offset and/or compensate for the effects of mining activities." OGNZL's aquatic ecology expert had been asked by Otago Regional Council's expert to quantify the cumulative loss/disturbance of watercourses in the Deepdell catchment as a result of all mining activities since 1990. This was estimated to be 14,449m, but on the other hand 12,620m had been protected in some way. The cumulative loss was 1,829m before accounting for qualitative effects.

EFFICACY OF MITIGATION AND OFFSETTING MEASURES

55. Over the duration of the four projects outlined above, OGNZL's track record of implementation of offsetting and mitigation measures at Macraes has included:

    a. *Covenants and protected land*. 692 ha of land are now protected formally under covenant or informally reserved for habitat protection, with the impacts of grazing by stock and afforestation now averted in perpetuity In my view, the ecological survey reports discussed in the following paragraphs, amply illustrate the impacts of pests, predators and stock grazing on indigenous biodiversity within the Macraes area and the protection that the use of covenants combined with active management will add to the enhancement of indigenous biodiversity at Macraes over time. The annual ecological surveys associated with these covenants are themselves an important biodiversity management tool. Across all of the covenanted areas that are managed by the mine, it has been found that the biodiversity known to be present in the covenanted areas at the time of their creation represents only a portion of the biodiversity that is discovered there during the annual covenant monitoring programme. Dr Thorsen has

previously estimated that on average, every year 4 indigenous species are newly discovered to occur in the Macraes region, many of these in the areas protected by covenants. Often these species are of considerable conservation interest.

b. *Management of wetlands*. The Cranky Jims covenant established under MPIII both included important freshwater and wetland ecosystems. For Deepdell North, OceanaGold established two further offset projects comprising the Redbank Ecological Enhancement Area and the Ephemeral Wetland Ecological Enhancement Area (Middlemarch), both under approved management plans. Activities in these areas have included establishing a complete biodiversity baseline for the site, seed collection for enhancement planting, trialling techniques for rare and uncommon species particularly pertaining to wetlands and mapping of exotic species incursions.

c. *Animal rescue*. At Deepdell North alone, over November 2020 to April 2021, around 1500 korero geckos and 320 southern grass skinks were salvaged. It is estimated that round 90 % of the relevant footprint, including much of the highest quality rock-tor habitat, was subject to salvage. The Deepdell North lizard salvage was one of the largest ever conducted in New Zealand and was the largest gecko rescue ever attempted.

d. *Lizard surveys*. OGNZL undertakes regular, detailed lizard studies and ongoing annual surveys of lizard populations under a variety of research conditions. At Coronation North, mitigation for impacts on lizards included the surrender of existing consent rights for part of the Coronation North footprint forming part of a 524 ha Recommended Area for Protection (RAP). This became known as the "give up" area. Subsequent survey of the “give up” area in March 2021 produced surprisingly low catch rates relative to surveys elsewhere within the mine environment, but also the presence of

mammalian predators, including feral cats. Similarly, an area of pine plantation was identified as suitable for deforestation and return to more suitable lizard habitat. Pre-harvesting survey work returned the expected low density of lizards but also lizards clearly present within the surrounding land and snow tussock landscape in particular. The knowledge gained from these and other surveys will be used to inform future lizard management planning. As part of lizard mitigation for Deepdell North, four research streams have been developed and generated an initial research report this year, indicating amongst other findings the importance of pest and predator control (mice, hedgehogs, feral cats, etc).

e. *Plant rescue*. Plant rescue projects are currently underway for the Coronation North, Coronation North Extension and Deepdell North projects. In addition, plant rescue activities are also undertaken under project Ecological Management Plans for the Coronation and Top Tipperary TSF (Macraes Phase III) projects. This work necessarily spans a number of years. In general, the work targets > 75% of plantings established or > 50% of plants increasing in size over 3 to 5 years. In some cases, plants are initially propagated and grown in a nursery prior to planting, adding to the timeline for establishing new plantings. In terms of species planted, Coronation North is the most advanced of the three main projects (as would be expected) with a number of species now at or exceeding target. Most of the other species planted are on a trajectory to achieve target in the next few years. Overall, results are encouraging. Disappointingly, as Dr Lloyd notes in his evidence,[7] survival rates have been impacted by the loss of a

[7] Dr Kelvin Lloyd, 29 September 2022, paragraph 30

number of plantings to stock incursion at the Cranky Jims Wetland and Deepdell covenants, demonstrating the need for, but also the effectiveness of, protection from grazing as part of mitigation and off-setting measures. I should add that at our closed Globe Progress mine at Reefton, OceanaGold has gained long-standing in-country experience of revegetation, as part of rehabilitating mine workings, using eco-sourced plantings (and we are on target to reach our estimated tally of 1 million plants by 2025, with the performance of the plantings to date exceeding initial expectations).

f. *Habitat Enhancement Fund*. In association with Coronation North, a Habitat Enhancement Fund has been established for the purpose of receiving ecological compensation. An initial payment of $117,000 was made in May 2018, with subsequent payments of $67,000 and $66,000 in December 2018, and July 2019 respectively.

g. *Social research*. Using researchers from the Otago Business School at the University of Otago, OceanaGold has invested in a "Common Ground Study" seeking to better understand local attitudes to land use and conservation and is using this research to design better conservation outcomes.

h. *Site Biodiversity Management Plan*. OceanaGold is planning how the biodiversity on its extensive holdings at Macraes will be managed into the future. This work includes vegetation mapping, which OceanaGold has commissioned based on the latest satellite imagery to help understand the extent of the current vegetation patterns. It hopes to be able to repeat this at regular intervals to understand trends, but also hopes to back-cast to see past trends. This mapping will be shared with local Councils as part of their development of programmes for managing indigenous biodiversity.

ECONOMIC BENEFITS OF MACRAES MINE

56. If PORPS is enacted in its current form, with no effective consenting pathway for future mine-life extensions at Macraes, the mine will be forced to close prematurely.

57. OGNZL is a significant employer in the Waitaki District and the Otago Region employing over 600 people directly and paying (in 2021) $61 million in wages to people living within Otago. Annual combined spending within Otago (wages and purchases from suppliers) was $123 million in 2021.

58. Economist Shamubeel Eaqub has undertaken some analysis of the economic contributions of Macraes Mine and the modelled impacts mine closure would be expected to have on the local and regional economy, which is presented in his separate statement of evidence. Based on Mr Eaqub's analysis:

    WAITAKI DISTRICT

    a. The mine injects an estimated $36 million into the Waitaki District, through incomes of Macraes staff who live there, and from suppliers located in the district. For context, the district's GDP is $1.5 billion.

    b. This spending supports 333 jobs in the district, compared to an estimated 12,268 jobs across all sectors. This gives a sense of the job losses that will most affect the local district.

    c. If the metal mining industry were to close, for each mining job, 3.7 jobs in other parts of the economy would be lost. Some of those workers would be redeployed in other sectors but in small regional economies, it is often difficult to quickly redeploy workers and resources to other uses, because there are few other large businesses who have need for such specialised resources.

DUNEDIN CITY

d. Dunedin City is a significant beneficiary of Macraes. This is because over half of Macraes staff live in Dunedin (380), bringing the related $41.6 million in income, added to which $40.6 million is injected via purchases from suppliers (a total of $82.2 million). For context, Dunedin's GDP is $7.2 billion.

e. I would add that the mine's local spend effects in the city, at approximately $82.2 million, equated to about 5% of Dunedin City's total consumer spending over the same period;[8]

f. Macraes supports 757 direct and indirect jobs in Dunedin, compared to an estimated 68,566 jobs across the district.

OTAGO

g. Macraes Mine directly and indirectly supports 1,132 workers in the Otago Region, making Macraes a large employer by national standards, but also one that operates in a single location (rather than spread across the country), added to which the jobs at the mine are paid at around double the local average.

h. I would add that at $123 million, estimated spend effects of the mine within Otago (based on 2021 numbers) would equate to almost 14% of tourism spend within Queenstown-Lakes over the 12 months to September 2022.[9]

59. The mine is also an important part of the local community where it operates, contributing significant population numbers to local schools and institutions within

[8] $1.7 billlion - https://qem.infometrics.co.nz/dunedin-city/indicators/spending?compare=new-zealand

[9] $907 million for 12 months to September 2022 - https://qem.infometrics.co.nz/queenstown-lakes-district/indicators/tourism?compare=new-zealand,queenstown-lakes-district

the Waihemo (Waitaki) and Waikouaiti Coast (Dunedin) wards. Its contributions over the last six years have included:

a. About $241 000 in donations to community-based organizations and events within the Palmerston/ Waihemo area between 2016 and 2021
b. About $246 000 in donations to schools in Palmerston/ Waihemo between 2016 and 2021
c. Macraes Emergency Response Team regular attendance as first responders to incidents within the Macraes area

NEXT STAGE OF DEVELOPMENT

60. The next planned stage of development at Macraes Mine is called MP4 (Macraes Phase 4), and if consented this will extend the life of the mine out to 2032.
61. MP4, like Deepdell North, is mainly located in previously disturbed areas, close to the heart of the existing operations. Nevertheless it is a mine expansion and we expect that some of its footprint will encounter or impact the types of low producing pasture, gullies, streams and potentially wetlands that are typical of the site.
62. Being able to consent development at Macraes Mine depends on a consenting pathway being available to OGNZL. As noted already, this is not the same as an expectation that consents will be granted, but what it means is that there is the ability for OGNZL to offer offsetting or compensation where effects cannot be avoided, remedied or mitigated.

CONCERNS ABOUT PORPS

63. OGNZL was heavily involved in the proceedings on the partially operative Otago Regional Policy Statement 2019. This version was notified in 2015, OGNZL made submissions and further submissions and was then involved in hearings in 2016. OGNZL appealed, and was involved in mediations and a hearing before the

Environment Court in 2018. OGNZL appealed that decision to the High Court, and one matter was referred back to the Environment Court and finally settled in 2020. The biodiversity offsetting and biodiversity compensation policies for mining were therefore subject to intense scrutiny and discussion. OGNZL was therefore surprised to see that in the 2021 PORPS, the Otago Regional Council had made absolutely no provision for a consenting pathway for mining in a significant natural area. OGNZL is not aware of anything which had changed in the short time between the 2019 partially operative RPS coming into effect and the PORPS 2021 being notified. Certainly, through my involvement in the Energy, Infrastructure and Transport Reference Group I was not made aware of anything to suggest there would be no consenting pathway for mining in a significant natural area.

64. In its submission OGNZL has raised a number of points and sought specific changes to the provisions, and OGNZL maintains those concerns. For the purpose of my evidence I would like to concentrate on the following two concerns about the PORPS.

SNA SIGNIFICANCE CRITERIA

65. As set out in the evidence of Dr Mike Thorsen, the significance criteria in App 2 will result in large areas of Macraes Mine becoming Significant Natural Areas (**SNAs**). Under App 2 an area needs to only meet one of the listed criteria, and there is no overriding discretion for the Council to conclude it is not a SNA. Although Macraes Ecological District does harbour unique and important biodiversity the criteria are such that almost all of the land where the mine is located including cultivated paddocks in the case of lizards and classification of Threatened habitat types is assessed as significant.

66. As discussed earlier, mining is a locationally constrained activity. We have to go where the gold is, and there is no option to choose to mine in an area outside of

the SNAs if the SNA coincides with the location of the ore or associated, essential, functionally constrained infrastructure such as TSFs and WRSs.

67. The implication of having a SNA is that we then need to follow ECO-P3, ECO-P4 and ECO-P6 for new activities. This leads onto my second main concern.

FAILURE TO PROVIDE A CONSENTING PATHWAY

68. ECO-P4 fails to provide a consenting pathway for mining activities. This is inconsistent with:

    a. Other locationally constrained activities, such as nationally and regionally significant infrastructure (which includes regionally important roads, electricity sub-transmissions infrastructure[10]) which is provided for in ECO-P4(1).

    b. The draft NPS-IB, which reached "Exposure Draft" stage in July (representing government decisions on broad policy settings) and preserves a consenting pathway for the purposes of mineral and aggregate extraction in clause 3.11(2);

    c. The work being done on the review of the NES-FW which also reached Exposure Draft stage (ie: an indication of the government's policy settings) in May, and which has recognised the importance of the extractives sector by similarly restoring a consenting pathway for quarries, landfills/cleanfills (which include TSFs and WRSs) and mining in regulations 45A, 45B and 45D;

[10] See the definition of regionally significant infrastructure in the PORPS at page 33.

d. The National Policy Statement for Highly Productive Land, which took effect on 17th October and which retains a consenting pathway for the purposes of mineral and aggregate extraction in clause 3.9(2);

e. What was learnt during the hearings and decisions on the 2019 Otago Regional Policy Statement, as shown by the Deepdell North hearing which I have touched on above and which is discussed further in the evidence of Claire Hunter.

EXPOSURE DRAFTS AND RECENT NATIONAL POLICY

69. As I mentioned, I have been involved in the consultation and submissions on the proposals to amend the wetland regulations in the NES-FW and proposed changes to the NPS-FM. I have also been involved in submissions and consultation on the NPS-IB which has occurred over a number of years, most recently the Exposure Draft.

70. In my experience, Exposure Drafts represent Government Policy which has been agreed on by Cabinet but is then being "tested" to ensure it works as intended and can also be used as a form of consultation. This is supported by the Legislation Design and Advisory Committee website[11] which, although discussing draft Bills, can equally apply to non-legislative documents. The website says releasing Exposure Drafts of Bills can deliver significant value.

71. Therefore, whilst I accept that the NPS-IB is not operative and therefore does not legally need to be given effect to under the RMA, it does show the Government's intention for providing a consenting pathway for mining activities which occur on

[11] http://www.ldac.org.nz/guidelines/supplementary-materials/exposure-draft-bills/

significant natural areas. This is also consistent with the proposed amendment to the NES-FW and NPS-FM.

72. I also consider the National Policy Statement for Highly Productive Land (**NPS-HPL**) which was released in September 2022 and came into effect on 17th October 2022 offers further policy guidance in this area, in providing a consenting pathway for the purposes of mineral and aggregate extraction, in a form similar to the pathways proposed to be provided in the NES-FW / NPS-FM and NPS-IB Exposure Drafts.

CONCLUSION

73. In my opinion, the ORC seems to have adopted a view that biodiversity will be maintained by a combination of highly prescriptive rules targeted at avoiding development in SNAs at all times and an assumed level of investment in the identification and subsequent management of those SNAs for which funding, from somewhere, needs to come.
74. An example is ECO-P9, which seeks to reduce the impact of wilding conifers on indigenous biodiversity by "avoiding" certain forms of forestry development on the one hand and "supporting initiatives to control existing wilding conifers and limit their further spread" on the other. This formula is repeated and expanded on, in the balance of the ECO chapter provisions concerned with indigenous biodiversity generally – protection through strict avoidance (ECO-P3) or avoidance in the first instance (ECO-P4 and P6) and "enhancement" (ECO-P8) through integrated management (ECO-P10) that "promotes collaboration between individuals and agencies with biodiversity responsibilities", "supports" management approaches and "recognises" the role of people and communities.
75. I question, however where the funding for the second part of this formula will come from. For wilding conifers, some significant funding appears to be in place but it is

mostly, as far as I can see, central government-sourced. In a December 2020 media release, Otago Regional Council announced it would receive $5.9 million in funding from government towards the eradication of wilding conifers over 2021. The Council's own contribution was identified as $200,000.

76. This example alone demonstrates the level of the central government funding required to combat a single pest plant category. Other biosecurity concerns – such as Kauri dieback – receive similar levels of attention from government. But the *Te Mana o te Taiao Aotearoa New Zealand Biodiversity Strategy 2020* refers to a full "*suite of predators and browsers that have been introduced to Aotearoa New Zealand [and] threaten many indigenous species. These introduced species include possums, stoats, ferrets, weasels, rats, mice, cats, hedgehogs, pigs, rabbits, deer, goats, invasive introduced fish and wallabies*".[12] Similarly in the range of threats to indigenous plants, "*Direct pressures include the historical and ongoing impacts of invasive species*".[13]

77. It is not clear to me that the same model of strict avoidance combined with active management will work for the full range of the pests and predators that threaten New Zealand's indigenous biodiversity in the absence of extremely significant funding from central government, and there is no indication in the evidence tendered by the Council that such funding is available or anticipated.

78. In the absence of such funding, it will fall to private landowners to fund active management of the indigenous biodiversity present on their land. Yet the ORC fails to appreciate the large amount of work already done by corporates such as OGNZL to enhance biodiversity, connected to their overall business investment in the land.

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[12] Te Mana o te Taiao Aotearoa New Zealand Biodiversity Strategy 2020, p19

[13] Te Mana o te Taiao Aotearoa New Zealand Biodiversity Strategy 2020, p12

79. While, at 13,500 ha, Macraes Mine is one of New Zealand's largest single, private landholdings, just a little over a 10th of that land has been disturbed for mining over the 31 years of operations. It is not expected that future development will materially alter that balance. In practice, most of "Macraes Mine" is farmed. A consenting pathway for Macraes Mine is needed, to avoid the combined loss, both direct and indirect, of contributions from the mine towards identifying and protecting significant habitats from ongoing degradation by current and future land use and actively managing the pests and predators that make up such a large part of the decline in New Zealand's indigenous biodiversity.

Alison Paul

24 November 2022