Contents

PART E: EFFECTS

E1: MANAGEMENT PLANS

General comments

[1] OGNZL has proposed a suite of management plans that will manage the detailed design and construction of certain aspects of the WNP together with some of the effects of those activities.

[2] Management plans are routinely used for major infrastructure and construction projects. They are a suitable mechanism for ensuring that "outcome based" conditions are complied with and detailed environmental effects are managed appropriately.

[3] Management plans avoid cluttering conditions with detail in respect of say construction works or mitigation actions that may not respond appropriately to circumstances as they develop over time. Where implementation of a project will occur over many years (in the case of the WNP over 18 years), it is likely to be impracticable to anticipate all circumstances that may arise and how such circumstances can be best addressed when they do. In part this is because it will not necessarily be possible to anticipate technological developments or the advance of knowledge in respects that are material to the effects to be managed (either generally or in relation to specific effects). These considerations apply particularly in respect of a project of the scale and technical complexity of the WNP.

[4] The caveat is that each management plan condition must specify the purpose or objective of the plan; the minimum contents of the plan; who is to prepare it; and who else should be consulted or involved in that process. If there is conflict between the management plan and the conditions, then the conditions must prevail.

[5] The management plan conditions proposed by OGNZL generally met the above requirements. The primary issue with them is that they did not specify a certification process. Accordingly, we have inserted Condition C4B in the Combined HDC and WRC suite of conditions setting out a certification process. The wording of that condition draws on wording used for the Taheke Geothermal Project which was granted consent in November 2024 under the COVID-19 Recovery (Fast-Track Consenting) Act 2020.

[6] It is routine for a management plan to be submitted to the appropriate council and thereafter 'certified'. In this case OGNZL initially proposed that several management plans should instead be approved by the Panel, namely the:

(a) WUG Ecology and Landscape Management Plan (WUG-ELMP);

(b) Waihi Area Ecology and Landscape Management Plan (WA-ELMP);

(c) Coromandel Forest Park Kauri Dieback Management Plan (CFP-KDMP).

(d) Blasting and Vibration Management Plan (BVMP);

(e) Wharekirauponga Pest Animal Management Plan (WPAMP);

(f) Wharekirauponga Underground Mine Water Management Plan (WUG-WMP);and

(g) Archaeological Management Plan.

[7] We prefer the orthodox approach that management plans are submitted to the relevant council for assessment and certification. Councils can draw on appropriate specialist expertise (whether in-house or contracted) to determine if each management plan satisfies the requirements of the relevant conditions. Having the councils initially certify these management plans is also consistent with the proposed procedure in relation to amendments – any amendments to the plans will be subject to a 'recertification' by the councils. It is efficient to have the councils undertake both the initial certification and any subsequent recertification.

[8] We note and agree with HDC's planning assessment comment that OGNZL initially proposed several conditions that included provision for certification by parties other than the consent authority. HDC considered that certification was the respective council's responsibility and that could not be abrogated or delegated to a third party. HDC considered third parties could be involved in a review process for a matter prior to it being submitted for certification.

[9] Accordingly, we have required all of the WNP management plans to be certified by the relevant councils, including those that OGNZL sought to have approved by the Panel. We do

not consider that would impose an undue time or cost burden on OGNZL because the plans that OGNZL sought to have the Panel approve were included in the Application and we understand that the relevant councils are aware of their contents due to the previous extensive liaison between OGNZL and the councils.

[10] We were initially of the view that the management plans that OGNZL sought to have the Panel approve should be provided to the councils within 20 working days of the commencement of the consents, given that they were included in the Application. However, on 20 November 2025 we received a Memorandum from counsel for OGNZL advising that in recognition of the Panel's 3 October 2025 preliminary advice that we would be requiring all management plans to be certified by the councils, OGNZL subsequently proposed amendments to the 1 September 2025 conditions to that effect.

[11] In that same Memorandum counsel suggested numerous changes to the dates by which all of the various management plans (including those that OGNZL had initially sought to have certified by the Panel) would need to be provided to the councils. Counsel advised that these changes had been discussed and agreed with the Waikato Regional Council and Hauraki District Council. Accordingly, we have shown those changes in our draft conditions for the Combined HDC and WRC Consent.

[12] Counsel also suggested that the Native Frog Monitoring Plan should be provided at least four years prior to the commencement of WUG stoping activities, noting that DOC had not agreed to that timeframe. We included the four year time frame in our draft conditions pending the receipt of comments on those conditions.

Particular comments

[13] In its comments TCDC expressed concern about having a certification role for the WUG - ELMP, noting it did not have any in-house experts on the matters addressed by that document and having to certify it would impose a significant cost burden on the Council. TCDC also suggested that works affected by the Accidental Discovery Protocol should be addressed in a detailed Construction Management Plan.

[14] In its s 51 report DOC report expressed concern about the way management plans are used in conjunction with conditions in relation to the DOC approvals. DOC considered its role

in considering amendments to the management plans for the purposes of the conservation approvals was unclear. DOC was also concerned about the lack of specificity in some management plan objectives, including the Waihi Area Water Quality Management Plan.

[15] Coromandel Watchdog was concerned that there was no cyanide management plan and considered there should be a Social Impact Management Plan.

[16] The Waihi Community Forum was concerned that management plans that are required to be certified could be changed without further community input.

[17] Ngāti Porou ki Hauraki was concerned with what it saw as over-reliance on management plans given the lack of a requirement for consultation with mana whenua regarding any variations to the management plans. Comments from iwi groups also noted the need for a comprehensive groundwater management plan and concerns as to the lateral extent of the GOP and the lack of tangible benefits for iwi members from recent mining activity around Waihi.

[18] There were also plan specific concerns from Waikato Conservation Board, DOC, Forest and Bird and Coromandel Watchdog. These are addressed, where relevant, in other Part E sections of this Decision.

OGNZL response to comments

[19] OGNZL said that it was clear that the management plan approach it had proposed for the approvals administered by DOC would introduce unfamiliar requirements, with associated risks of administrative complexity and delay. Accordingly, OGNZL recast the proposed DOC approval conditions to significantly reduce reliance on management plans and instead to include more detail in the conditions themselves. We find that to be appropriate.

[20] Regarding the Waihi Community Forum's concerns, OGNZL noted that any amendments to management plans can only be made if they do not result in effects that are greater than those anticipated at the time of any approvals being granted.

[21] As to specific concerns from the iwi authorities, Kyle Welton (external affairs and social performance manager of OGNZL) noted that a Groundwater Management Plan and Settlement

Monitoring and Management Plan had been developed that incorporated the measures requested, there would be a Gladstone Open Pit Ground Control Management Plan, and the Social Impact Management Plan and a Waihi Skills and Development Training Action Plan would help to ensure that the WNP delivered tangible positive outcomes, including for iwi members.

Panel findings

[22] We find the proposed use of management plans to be appropriate provided that the conditions of consent associated with them are robust.

[23] Given the minor activities occurring in the TCDC district (monitoring and restoration), we have limited certification of the WUG-ELMP to the HDC and WRC in consultation with the TCDC. We have required any proposed amendment to the WUG-ELMP that is specific to the TCDC District to be submitted to that Council for its information, with the Council having an opportunity to comment on the amendment prior to its finalisation. This is the same process that will be followed for input from DOC.

[24] We considered that it might be unduly onerous to require the Portable Drill Rig Site works affected by the Accidental Discovery Protocol in the TCDC District to be addressed in a detailed Construction Management Plan. Nevertheless, OGNZL volunteered consent conditions to that effect in response to the TCDC's comments and so we have included those conditions in the TCDC consent, subject to omitting what we considered to be irrelevant clauses.

[25] Regarding DOC's concerns, the management plans to which DOC is able to have input are listed in Combined HDC and WRC condition C8A. Conditions C8B to C8D set out the process for DOC involvement in considering amendments to a certified management plan. We regard those conditions as clear and certain and have not changed them in response to DOC's concerns. We also find that WRC conditions G30 and G31 regarding the Waihi Area Water Quality Management Plan are sufficiently clear and certain, noting WRC did not seek any amendments to those conditions.

[26] We acknowledge the concerns of the Waihi Community Forum and iwi group concerns as to limited participation in the certification and variation process. We are, however,

comfortable with what is proposed. Conditions C10 and C11 of the HDC and WRC conditions provide for input into the development of particular management plans. As well, it must be remembered that the management plans address how outcomes specified in conditions will be met, which is largely a technical matter. Further, as noted in OGNZL's responses, there is no opportunity to increase the envelope of effects through amendments to a management plan.

Conditions

[27] As discussed above we have amended the Combined HDC and WRC conditions to:

(a) Require all management plans to be certified by the relevant councils;

(b) Specify a certification process (condition C4B);

(c) Require all activities authorised by the consents to be carried out in accordance with the certified monitoring plans, management plans or other certified documents (condition C5B); and

(d) Specify that in the event of any conflict or inconsistency between the conditions of the consents and the provisions of a certified a management plan, monitoring plan or any other document, the conditions must prevail (condition C5C).

[28] We have amended the TCDC conditions as outlined above.

[29] Any unresolved dispute between the consent-holder and a certifying Council as to whether a proposed management plan is required to be certified will have to be resolved by the courts.

E2: CULTURAL EFFECTS

Focus

[30] The cultural effects considered most relevant are those that affect iwi, hapū and their members, recognising the centrality of whakapapa (genealogy), whenua (land), and Mātauranga Māori in their identity and wellbeing.

Engagement with iwi, hapū

[31] As noted, we invited (under s 53) the "relevant iwi, hapū entities for the project area" as identified in MfE's s 18 report to comment including Ngāti Porou ki Hauraki, in accordance with the principles of partnership and active protection under Te Tiriti o Waitangi.

[32] Comments were received from:

(a) Ngāti Porou ki Hauraki;

(b) Ngāti Tara Tokanui, Ngāti Koi; and

(c) Hako Tūpuna Trust.

We also received a cultural impact assessment prepared on behalf of Ngāti Pū.

[33] The Panel extended further opportunities for engagement to the four iwi and hapū. These were taken up. .

Cultural impacts

[34] The iwi, hapū involved have raised a wide range of concerns, many of which overlap environmental issues raised by others who oppose the WNP. However, these concerns are from a Te Ao Māori world view, reflecting centuries of whakapapa-based association with the land and waterways affected.[1] The assessment of these impacts must acknowledge the historical

[1] One very specific concern involves the Pukehangi Maunga which, under reasonably advanced treaty settlement negotiations, is to be vested (above the 580-metre contour) in Ngāti Hako and Ngāti Maru. This we have addressed in the conditions.

context of mining in and around Waihi, which has resulted in significant harm to iwi and hapū including:[2]

(a) Degradation of the Ohinemuri River and associated mahinga kai (food gathering sites);

(b) Damage to wāhi tapu (sacred sites);

(c) Loss of Māori land and tino rangatiratanga over resources;

(d) Severe limitations on the exercise of kaitiakitanga, including in relation to taonga species;

(e) Inadequate engagement by mining companies with Māori; and

(f) Ongoing scepticism about the benefits of recent mining activity for Māori communities (see Part E24 – Social impacts).

[35] There is widespread frustration with consultation processes that are perceived as tokenistic or "tick-box" exercises. There is a clear aspiration for meaningful, ongoing iwi involvement in decision-making, consistent with the principles of partnership and co-governance.

[36] Iwi responses to s 53 invitations are summarised in Appendix J of this Decision and many are dealt with in later sections of this Part.

Our approach

[37] Across all groups engaged, there is a recognised cultural deficit with the FTAA process, and for many, this cultural deficit will increase if the WNP is implemented. The WNP will affect land and taonga species with which iwi, hapū have deep and enduring connections. We acknowledge that the implementation of the WNP (and the FTAA process) will cause distress to Māori, and for many, this may feel like a continuation of historical injustices.

---

2 These were discussed at length in *The Hauraki Report*, the Waitangi Tribunal (WAI 686, 2006).

[38] In weighing these cultural deficits, we note:

(a) There is no single Māori view as to the WNP. Of the four iwi and hapū who engaged with the process, one supports the WNP (subject to strict conditions) while the other three oppose it. There is diversity of opinion within iwi and hapū.

(b) The assessments of environmental effects that are provided later in this Part.

[39] Under the amended conditions we impose:

(a) Ngāti Porou ki Hauraki, Ngāti Pū are added to the Iwi Advisory Group (IAG), (see condition C9 of the Combined HDC and WRC conditions);

(b) Conditions C10 and C15 of the Combined HDC and WRC conditions clarify that iwi, hapū may form their own or relationship agreements with OGNZL and generally engage directly with OGNZL;

(c) The Iwi Advisory Group (IAG) will appoint members to the Peer Review Committee (Combined HDC and WRC conditions C50–C58) and the Expert Groundwater Panel (Combined HDC and WRC conditions UG-33–UG38), with minutes circulated to all IAG members.

(d) Under Combined HDC and WRC conditions C10, C16 and C18A, the IAG is involved in the development of the Cultural Practices Plan and the Mātauranga Māori Monitoring Programme, ensuring Mātauranga Māori is embedded in monitoring and management.

(e) Under conditions C10, C11 and C12 of the Combined HDC and WRC conditions, the IAG will provide input into critical management and other plans.

(f) Conditions C16 - C22 of the Combined HDC and WRC conditions provide for a cultural awareness programme to be prepared and delivered by IAG members.

(g) Condition C29 of the Combined HDC and WRC conditions ensure that iwi and hapū are central to implementing the accidental discovery protocol.

(h) Under conditions C30-C42 of the Combined HDC and WRC conditions, iwi and hapū will be involved in the design, implementation and governance of the Waihi North Biodiversity Project; and

(i) Conditions C93–C99 of the Combined HDC conditions provide for a Waihi Skills Development and Training Action Plan, to be developed collaboratively with iwi and hapū supporting Māori employment and capacity-building.

[40] Iwi expressed discomfort with current operations of the IAG. The IAG structure was not co-designed and does not always reflect the overlapping and distinct interests of iwi, hapū, nor the diversity of active, verses non-active iwi, hapū or membership.

[41] It may assist if an independent facilitator nominated by iwi or hapū is engaged by OGNZL to facilitate the operation of the IAG so as to result in collaborative outcomes for Te Ao Māori, workstreams, nominations to committees, co-design of support programmes, communications, reporting, and representation in other forums (such as the Martha Trust). We have amended condition C9 of the HDC and WRC conditions to allow for this.

Where we get to

[42] The conditions outlined offer Māori significant opportunities for participation in the implementation of the WNP, including monitoring, supervision, kaitiakitanga, and co-governance. While these measures do not fully address the cultural deficits identified, they represent steps towards genuine partnership and the recognition of Mātauranga Māori in decision-making.

E3: EFFECTS ON GROUNDWATER FLOWS AND STREAM DEPLETION

[43] Effects on surface and groundwater are spread across a range of proposed areas, mine operations and infrastructure. There are also significant areas of cross-over with other specific sections of this Decision. Rather than split effects based on the geographical Areas set out in the Application, we have instead chosen to divide effects on surface water and groundwater into underground elements and surface elements.

[44] This section of the Decision addresses physical effects on streams and stream flow as well as physical effects on groundwater. Water quality effects are addressed in sections E4 and E9, geochemistry effects are addressed in section E13, and effects on wetlands are assessed in section E10.

Effects associated with WUG

[45] WWLA 2025a provided an overall assessment that covered the underground elements of the WUG. That document draws on additional groundwater modelling work undertaken by Intera (2024), Flow Solutions (2023) and GHD (2025e).

[46] The key geological unit for mining is the mineralised Rhyolite of the Edmonds and Maratoto Formations. The mineralised units are overlain by post-mineralisation Andesites and there is typically a weathered zone and a zone of clay alteration encountered between these two units, which has been identified as an aquiclude.

[47] For large parts of the proposed WUG the upper Andesite overlies Rhyolite. WWLA (2025a) indicated that the overlying Andesite rock is not expected to drain as a result of dewatering the Rhyolite rockmass, because of its lower permeability and the presence of a weathering layer at the top of the Rhyolite that acts as an aquitard, limiting the amount of vertical drainage. However, the overlying Andesite is not present in the central part of the catchment, in an area located around the confluence of the Teawaotemutu Stream, Edmonds Stream and start of the Wharekirauponga Stream.

[48] Additionally, in the area that the Rhyolite is exposed at surface, the main EG Vein, the T stream vein and a number of other veins are present. Immediately adjacent to the veins, rock

is silicified and highly fractured with variable permeability expected depending on the degree of fracturing.

[49] The conceptual groundwater model prepared by WWLA indicated that groundwater recharge is primarily through direct rainfall and catchment through flow. Groundwater discharges occur at the contact with the overlying Andesite at or around RL 300m, through the T Stream and EG veins where these are intercepted or truncated by stream channels (at RL 180m and RL 100m respectively), and through a warm spring located at the intersection of the EG main vein and the Wharekirauponga Stream.

[50] Outside of these deeper outflows, WWLA considered that the stream section below an elevation of around RL 250m had no deep groundwater discharge from the Rhyolite rock mass and given it does not create baseflow, no loss to stream flows was expected to occur due to mine dewatering.

[51] Intera (2024) modelling of groundwater inflows to the mine indicated maximum groundwater inflow rates of 38 l/s for peak flows at upper 95th percentile, stabilizing to values under 28 l/s from 2029 until the end of mining. These long-term inflows are expected to result in significant groundwater drawdown within the Rhyolite rock mass, with the largest drawdowns at and adjacent to the vein network. This could result in connection between the deep and shallow aquifer systems within the area where Rhyolite host rocks are exposed at the surface. This is identified by WWLA as around 1.5 km^2 or 2% of the catchment surface area.

[52] Effects on groundwater aquifers are expected to be limited to the Rhyolite host rock, where significant dewatering is expected during mining, but no adverse effects are anticipated, and coastal flows are expected to be maintained.

[53] Catchment wide, dewatering effects on surface water flows have been modelled as a 2-13% reduction in 7-day mean annual low flow. WWLA (2025a) described "*larger modelled reductions…"* in the Edmonds and Thompson catchments, where *"…reductions in 7 Day MALF approach the lower end of the current estimated Annual Low Flow (ALF)"*.

[54] Additionally, WWLA indicated that there is *"…one location where the Wharekirauponga Stream bed passes over the mining area where deep dewatering could create*

connectivity to the shallow aquifer system and, therefore, affect surface waters." This is expected to affect a cumulative 1,200 m of second and third order streams.

[55] WWLA indicated that the two springs (Warm Spring and EG Vein discharge point) that source deep groundwater within the catchment are expected to cease flowing for the duration of mining. They note further that:

(a) The springs are expected to recommence flowing once groundwater has recovered post mining (noting that the warm spring is expected become a cold spring post-mining); and

(b) The loss in flow of 3.5 l/s and 5 l/s from these two springs is considered by WWLA to be minor in the context of average catchment flows that exceed 200 l/s.

Comments Received

[56] Groundwater and surface water effects of the WUG are a key part of the WNP and comments were received from WRC; DOC; iwi groups Ngāti Hako, Ngāti Pu, Ngāti Porou ki Hauraki and Ngāti Tara Tokanui, Ngāti Koi; Waikato Conservation Board; Forest and Bird; Coromandel Watchdog and various lay submitters.

[57] The main issues raised can be broadly summarised as:

(a) concerns around the current level of uncertainty in the modelling of groundwater dewatering and the associated effects on surface water;

(b) potential for direct connection between the underground mine and surface water;

(c) the loss of the warm spring and associated uncertainty as to whether it will return post mining and in what capacity (warm or cold);

(d) the effectiveness of the proposed monitoring and contingency measures; and

(e) potential for drawdown to impact on nearby groundwater takes.

[58] Alan Pattle from PDP (2025) provided a technical review of groundwater and surface water effects for WRC. He also had a role in the technical review of documents in the previous consent application process. Mr Pattle's key issue with the assessments completed related to the level of certainty in the conceptual site model (CSM), specifically the clay altered weathered layer that separates deep and shallow groundwater in the Wharekirauponga Catchment, and the permeability of the silicified zone around veins within the stream channel (a potential source of connection of surface water to the underground mine).

[59] Mr Pattle noted the unsaturated zone and strong vertical flow gradients in deep groundwater reduced the likelihood of reductions in stream flow in the Wharekirauponga Catchment. He also identified the extent of predictive modelling that had been undertaken and the attempts to allow for uncertainty in the CSM by increasing the permeability of the clay altered weathered layer. However, he suggested that while this was a reasonable modelling approach, the modelling did not allow for uncertainty in the configuration and extent of the clay altered weathered layer in the CSM itself.

[60] Mr Pattle's review of the proposed Water Management Plan indicated that the approach proposed by OGNZL had been successfully applied at other sites and was reasonable. He also considered that the proposed monitoring approach was reasonable, noting it may require revision as more data is gathered during mining operations.

[61] Subject to minor modifications proposed to the conditions (incorporated in OGNZL's updated WRC conditions) Mr Pattle was satisfied that the conditions were *"…well structured and comprehensive.."* and that *"…the conditions are sufficiently rigorous to ensure that any unexpected effects will be addressed and mitigated in a timely manner"*.

OGNZL response to comments

[62] For OGNZL Chris Simpson provided a response to comments on groundwater and surface water effects.[3] He specifically addressed the comments made by Coromandel Watchdog, Forest and Bird and Iwi groups. Mr Simpson noted that OGNZL's effects assessment conservatively assumed a high level of connectivity between deep and shallow groundwater and that was the basis of the stream depletion assessments.

---

3 Statement of evidence dated 1 September 2025.

[63] He also noted that ongoing pump tests completed since the technical reports were issued with the Application documents *"...supports the conceptual hydrogeological model of the deep aquifer being separated from the shallow aquifer and surface water i.e. a low level of connectivity between the aquifers"*. He considered that this meant that *"...the envelope of effect will only reduce relative to the conservative assessment presented in the AEE"*.

[64] Mr Simpson noted the effectiveness of resin and cement grouting in reducing groundwater inflows to underground tunnels and mines in Waihi, and that this was a suitable method of managing zones of highly fractured ground exhibiting high inflow. He re-iterated OGNZL's proposed monitoring allowed for the early detection of groundwater depressurisation at depth, monitoring of the shallow groundwater system and surface stream gauging. He considered *"...responses to observed trends or trigger level exceedances will essentially be immediate if the situation that arises necessitates an immediate response. Condition UG.7 is clear about that."*

[65] Mr Simpson acknowledged the loss of the warm spring and the long-term uncertainty around whether it may or may not return on completion of mining activities.

[66] In their tabulated response to comments OGNZL reiterated the significant distance (several km) between dewatering effects and neighbouring groundwater bores. This was also addressed in the Application documentation.

Statutory Instruments

[67] The primary statutory documents of relevance are the NPS;FM and the Waikato RPS and regional plan. We discuss those documents in Part G of this Decision.

Panel Findings

[68] While the Panel recognises that there is still some uncertainty associated with the groundwater models and consequential effects on surface water flows, this is not unusual for pre-development investigations and is acceptable in this instance given restrictions on investigations within the Coromandel Forest Park. We need to balance this remaining uncertainty against the robustness of the work completed to date, the level of conservatism in the assessments, whether adequate provision is made for monitoring, whether appropriate

contingencies and mitigation measures exist, and whether the proposed consent conditions appropriately address these issues.

[69] On balance, we find that the groundwater and surface water effects of the WUG are largely temporary (with the noted potential for permanent loss of the warm spring) and that subject to the imposition of appropriate conditions of consent those effects can be appropriately avoided, remedied or mitigated.

Conditions

[70] Overall, we find that the revised 1 September 2025 conditions that were proposed by OGNZL will appropriately manage groundwater and surface water effects associated with the WUG. However, we undertook refinement of several conditions as follows:

(a) Amending conditions WRC conditions UG4.c and UG22.b.iii to clarify what is meant by more than minor.

(b) Amending WRC condition UG 33 to specify a minimum membership of the Expert Panel, including a tangata whenua representative. And

(c) Including Area 1 in the conditions C43 and C45 of the Combined HDC and WRC conditions. Given the uncertainties in the groundwater and settlement modelling, the panel consider that this is needed so that the predicted effects can be verified by actual response data recorded during mining.

Effects Associated with the WUG Dual Tunnel

[71] WWLA (2025c) prepared an assessment of the dewatering effects associated with the WUG dual tunnel based on a conceptual ground model prepared by GHD in 2022. No ground investigation or testing was completed for the WUG dual tunnel. The conceptual geological model indicated that low permeability andesite was expected for a large part of the dual tunnel alignment, with a localised fault zone adjacent to the Waiharakeke Stream expected to be the main location where connection between tunnel dewatering and surface effects could eventuate.

[72] The conceptualised nature of the assessment is recognised by WWLA, but they consider that it is justified based on similar geology to that at Waihi and that the proposed tunnelling methodology will "…*ensure drainage effects are avoided or managed to be minimal.*"

[73] Proposed mitigation includes sealing any high inflow zones within the tunnels and allowing only rock mass drainage to occur. WWLA indicated that the key risk was "…*how much baseflow loss will occur in the Waiharakeke Stream when the tunnel passes beneath it*." They calculated this to be 520 m^3/day assuming free draining conditions exist for 30 days before the tunnel is sealed in this zone. They indicated that the stream losses would be insignificant compared to the baseflow in the Waiharakeke Stream. WWLA considered this effect on stream flows and springs to be less than minor.

[74] Due to the limited connectivity expected between the deep groundwater and surface groundwater and the limited spatial effect of dewatering, the effects on aquifers, nearby bores, saline intrusion and ground and surface water quality were all considered to be less than minor.

Comments received

[75] The comments received on the WUG as set out above equally apply to the dual tunnels, recognising the dual tunnels' limited spatial footprint compared to the WUG itself.

[76] Forest and Bird made specific comment on ground and surface water effects in relation to the WUG dual tunnel. They were of the opinion (at para 116 of their comments) that monitoring of the Dual Tunnel should be undertaken as the assessment undertaken "…*does not account for effects that may have low probability but high potential impact, including dewatering of wetlands and other waterbodies.*"

OGNZL response to comments

[77] For OGNZL Chris Simpson provided a response to Forest and Birds' comments relating to groundwater effects of the WUG dual tunnel. He was of the view that monitoring was not required as any effects would be limited in magnitude, short lived and localised. That was based on the ability of OGNZL to grout zones of significant inflows encountered and the low permeability of the surrounding rock mass outside of significant zones of faulting or veining.

Statutory Instruments

[78] The primary statutory documents of relevance are the NPS;FM and the Waikato RPS and regional plan. We discuss those documents in Part G of this Decision.

Panel Findings

[79] The Panel understands that access to the WUG dual tunnel alignment has not been possible and that the groundwater model that has formed the basis for the assessment of groundwater and surface water effects for this element of the WNP is highly conceptualised. That results in a significant level of uncertainty in the model, with in-situ conditions being assumed to be like those that exist throughout OGNZL's existing Waihi underground mining operations. OGNZL is of the view that the ability to drill ahead of the tunnel advance and treat high inflow areas by grouting is sufficient to mitigate any groundwater and surface water risks that may result from the dual tunnel.

[80] In general, the level of monitoring that should be considered for any infrastructure element is directly related to the risk of an adverse environmental outcome and how much detail is available for the design of that element. In this instance, the entire alignment of the dual tunnel's geology is at a conceptual level only, and on that basis the Panel considers that this necessitates some form of surface water monitoring.

[81] Overall, we consider that the WUG dual tunnel groundwater and surface water effects can be appropriately avoided, remedied or mitigated, subject to the imposition of appropriate conditions of consent. We have however inserted additional consent conditions as set out below.

Conditions

[82] Having considered the above matters the Panel concluded that additional resource consent conditions were required to ensure that adequate monitoring was undertaken in terms of potential adverse effects from the dual access tunnels on groundwater and surface water flows. That monitoring should include:

(a) The monitoring of surface water flows in Waiharakeke Stream in accordance with new WRC condition UG.18A;

(b) Specific monitoring of all collected groundwater inflows into the tunnel within a zone defined by a distance of 70 m either side of the alignment of the overlying Waiharakeke Stream invert to assess the effectiveness of grouting and potential for direct connection with the stream above. If collected groundwater inflows are in general accordance with rock mass groundwater inflows from elsewhere within the dual tunnels then then monitoring may be discontinued after a period of 12 months. We inserted new WRC conditions UG.22.ca and UG.22.cb to achieve that outcome.

[83] The Panel finds that the most appropriate place for this monitoring to be captured is within the proposed dewatering and settlement monitoring plan proposed in conditions C43 to C46 of the combined HDC and WRC conditions. Consequently, we have included Area 1 in conditions C43 and C46.

Effects associated with WUG Access Tunnel

[84] Effects on groundwater and surface water associated with the WUG access tunnel were addressed in WWLA (2025c). The main area of potential effect was expected to be at the tunnel decline where the first 300m may traverse through younger volcanics (ignimbrite). This has the potential to dewater the shallow near surface groundwater table.

[85] Between chainage 300m and 700m of the tunnel there is an identified risk of mixed face conditions with transitions between younger volcanics (ignimbrite) and older underlying andesite (inferred to be Whiritoa Andesite or the Waipupu Formation andesite, based on Golder, Sept 2021 appended to WWLA 2025c).

[86] At the decline section of the tunnel, in the vicinity of the WTP, groundwater monitoring (P60, P61, P64, P75) indicated a lowered or absent water table in the near surface and depressurised conditions in the andesite due to existing mine dewatering from the Favona underground mine. This existing dewatered state was expected to extend to a depth of 70m.

[87] Once the decline has entered into the underlying andesite, dewatering effects are expected to be limited to immediately around the tunnel itself due to the low permeability of these materials and the separation of the perched shallow groundwater system which has

substantially greater storage and rainfall recharge. This effect has been demonstrated by long term groundwater monitoring records provided in EGL (2025f).

[88] The exception to this are the fault zones. Two of these are shown in long section along the tunnel length, and more permeable fracture zones are expected to be encountered which may result in a higher rate of dewatering. Specific treatment by grout sealing is proposed to address these zones and mitigate the effect of inflows.

[89] Through chainage 1000 m to 2400 m. the tunnel is in a down-thrown graben, where younger (Whiritoa Formation) andesites are overlain by Ohinemuri Subgroup tuffs and ignimbrites. WWLA acknowledge that the contact between these units is poorly defined and that there is a risk of the tunnel intersecting the younger volcanics which could result in much higher groundwater inflows requiring mitigation measures. However, the nature of those mitigation measures is not defined.

[90] The low permeability in the andesite rock mass within which the tunnel will be driven is a key basis for WWLA concluding that there is likely to be little effect (less than minor) on either aquifers, springs and streams or nearby water bores. Mitigation proposed is by way of probe drilling ahead of the advancing face and grouting of more permeable structures. WWLA (2025c) proposed groundwater monitoring for the decline by way of existing piezometers, while impacts on water wells are proposed to be monitored at the wells, within the existing network or in new purpose-built piezometers.

Comments received

[91] Few comments were received specific to the WUG Access Tunnel in relation groundwater and surface water effects. However, we acknowledge the general view of Iwi groups regarding groundwater and surface water, and the comments of Mr Alan Pattle remain relevant for this aspect of the WNP. Mary O'Donohue (Culgen Farms) was concerned about the potential for groundwater drawdown to affect local bore water. Her property boundary is located approximately 400 m from the alignment of the WUG access tunnel.

OGNZL response to comments

[92] OGNZL responded to Ms O'Donohue's concern, indicating that monitoring of groundwater at the Willows SFA is part of the proposal and that mine dewatering is no closer than 5 km from the nearest bore. However, it is apparent that the closest mine infrastructure to Ms O'Donohue's property is the proposed WUG Access tunnel not the mine itself. OGNZL have noted elsewhere in responses and in the Application documents that the proposal to undertake drilling ahead of the WUG access tunnel during construction and the grouting of high permeability fractured zones or vein systems is what is proposed to mitigate against groundwater drawdown related to the WUG access tunnel construction and operation.

Panel findings

[93] Overall, the Panel consider that the groundwater and surface water effects associated with the WUG access tunnel can be appropriately avoided, remedied or mitigated. However, it is apparent that the groundwater model that supports the dewatering assessment is highly conceptual, with an identified risk of intercepting the overlying younger volcanics, which could result in much more significant inflows during construction.

Conditions

[94] Proposed conditions to monitor and manage dewatering are set out in the combined HDC and WRC conditions at conditions C43 to C46. The scope of these conditions is considered appropriate to manage dewatering risks for the WUG access tunnel.

Effects Associated with the Gladstone Open Pit and the Gladstone Open Pit Tailings Storage Facility

[95] Surface and groundwater effects associated with the Gladstone Open Pit (GOP) and Tailings Storage Facility (GOP TSF) were addressed by GHD (2025d). The GOP is expected to remove a portion of the upper catchment of the TB5 tributary and part of the upper catchment and channel of the TB4 tributary. It is also anticipated that both shallow and deep dewatering will occur around the GOP. The initial effects relate to dewatering the GOP during excavation, and early stages of tailings placement. The dewatering effect is expected to be temporary, lasting for the duration of mining and operation the GOP TSF underdrainage system.

[96] GHD (2025d) indicated that there is a separation between shallow and deep groundwater systems in the vicinity of the proposed GOP. Deeper groundwater has already been largely depressurised due to existing underground mining and this has provided under drainage to the shallow system in places, despite a weathering layer separating the upper and lower volcanic units. Consequently, little effect is anticipated on deep groundwater beyond the vein system itself, which is expected to be further dewatered to the southwest of the GOP. Dewatering of the andesite rock mass beyond the vein system itself is not expected, based on experience with the vein system in mining elsewhere in Waihi.

[97] Locally shallow groundwater is expected to be reduced by 3-8 m with a zone of influence extending up to 290 m to the south and 210 m to the west, with smaller zones of influence predicted to the north and east. Modelling of the dewatering associated with GOP excavation indicated a reduction in baseflow to the Ohinemuri River of approximately 55 m^3/day west of the pit and less than 1 m^3/day to the east. These reductions are considered to be unmeasurable as the median flows in the Ohinemuri River are in the order of 63,200 m^3/day.

[98] OGNZL proposes to return dewatered groundwater and rainfall runoff captured within the GOP back into the Ohinemuri River via the WTP. Accordingly, OGNZL anticipates the actual effect on flows in the Ohinemuri River will be net neutral or a slight increase in flows. No effects on groundwater users are anticipated because there are no groundwater users within the zone of expected dewatering.

[99] When the GOP is reconfigured to support tailings disposal, dewatering is expected to continue via the underdrainage system which presents a similar dewatering scenario to the GOP operations. Once mining has been completed, the proposed Martha Pit lake will have an expected level of RL 1104 m. Widespread recovery of deep groundwater levels throughout Waihi is expected to occur at that time due to the interconnected underground mine network. For the GOP TSF, this is expected to result in upward flow gradients into the shallow groundwater system.

[100] In the long term post-closure, groundwater discharge is expected towards the west where the GOP face comprises permeable younger volcanics which will be in contact with the saturated rock backfill that makes up the foundation of the GOP TSF. A flow of approximately

65 m^3/day is expected into shallow groundwater, which will discharge subsequently to surface water and eventually the Ohinemuri River.

[101] After the deep groundwater system recovers post-mining, an additional 100 m^3/day is predicted to discharge to the Ohinemuri River from the catchment area west of the GOP TSF (OH6). This is considered to be a negligible long-term effect in the context of the wider increase in groundwater flows in the Waihi area and in the context of average flows of 63,200 m^3/day in the Ohinemuri River.

[102] In the long term, post-closure, no impacts are expected on groundwater users or users of surface water from the Ohinemuri River in terms of increased or decreased flows.

Comments received

[103] Forest and Bird were concerned about the loss of the headwaters of the Gladstone Stream (comprising 47 m of intermittent stream length), and temporary reductions in surface water flow to the stream channel (and eventually the Gladstone Wetland), as well as the drawdown of shallow groundwater in this area.

OGNZL response to comments

[104] There was no specific response to the Forest and Bird comments related to temporary flow loss to the Gladstone Stream headwaters.

Statutory Instruments

[105] No specific Statutory instrument provisions were brought to our attention by commentators. We address the NPS:FM and relevant WRC instruments in Part G of this Decision.

Panel Findings

[106] Subject to the imposition of appropriate conditions of consent, notwithstanding Forest and Bird's concerns, we find that groundwater and surface water effects associated with the GOP and GOP TSF will be appropriately avoided, remedied or mitigated.

Conditions

[107] Having considered that above matters, the Panel considered that OGNZL's proposed 1 September 2025 consent conditions appropriately manage groundwater and surface water effects relating to GOP and GOP TSF.

Effects Associated with the Northern Rock Stack

[108] The Northern Rock Stack (NRS) is proposed to temporarily store both NAF and PAF materials to a maximum elevation of RL 1,173 m. The stored materials are to be used to backfill and rehabilitate mining areas as part of mine closure, leaving a remnant rock stack with an elevation of approximately RL 1148 m. The effects on groundwater and surface water were set out in GHD (2025d). These included effects of or on:

(a) Construction over an existing perennial stream and its tributaries, which currently discharge into the Ohinemuri River.

(b) Groundwater levels and baseflow to the Ohinemuri River during operation and after closure. And

(c) Groundwater and river water quality arising from seepage through the NRS during operations and post closure. This aspect is related to geochemistry and is addressed in section E13 of this Decision.

[109] At the site of the NRS the groundwater system is entirely shallow, due to downthrow across the Golden Valley Fault, meaning that separation between a deep and shallow groundwater system is not apparent locally below the NRS.

[110] The assessment completed by GHD (2025d) indicated only small changes to shallow groundwater levels in the foundation and immediate surrounds of the NRS. Local groundwater discharge to the Ohinemuri River is expected to be significantly reduced due to the collection of groundwater by the sub-soil drainage network and due to rainfall recharge being intercepted by the NRS and its perimeter drains. Additionally, there is expected to be a permanent, small drawdown of shallow groundwater in the southeastern boundary of the NRS where the proposed uphill diversion drain will intercept shallow groundwater. A zone of influence of 1-

10 m is predicted there, which is anticipated to intercept shallow groundwater flows of around 10-70 m^3/day, reducing over time. This is not expected to significantly influence the wider groundwater and surface water flow regime.

[111] While changes to the groundwater regime are expected to result from the construction of the NRS, OGNZL expect that the overall effect on the eventual receiving waters will not be significantly different due to:

(a) the slow percolation of leachate through the soil liner; and

(b) treated water sourced from the sub-soil drains and perimeter drains being discharged directly to the Ohinemuri River.

[112] Surface water effects related to the removal of a large portion of the TS1 Ohinemuri tributary and its replacement with the Uphill Diversion drain, along with the interception of rainfall over the footprint of the NRS. While the NRS will modify surface water flow paths and potential locations for infiltration to groundwater, GHD considered that the volume of discharge to the Ohinemuri River would be similar to the current conditions as no additional water is being introduced to the system.

[113] Consequently, GHD anticipated that effects "…*on surface water flow and levels in the Ohinemuri River during operation and after closure of the NRS are therefore expected to be unmeasurable.*"

Comments received

[114] There were no specific comments made on the groundwater and surface water effects associated with the NRS.

Statutory instruments

[115] No specific Statutory instrument provisions were brought to our attention by commentators. We address the NPS;FM and relevant WRC instruments in in Part G of this Decision.

Panel findings

[116] Subject to the imposition of appropriate conditions of consent we find that groundwater and surface water effects associated with the NRS will be appropriately avoided, remedied or mitigated.

Conditions

[117] The Panel consider that OGNZL's proposed 1 September 2025 consent conditions appropriately manage groundwater and surface water effects relating to NRS.

Effects Associated with Tailings Storage Facility 3

[118] Tailings Storage Facility 3 **(**TSF3) will be developed within the Ruahorehore catchment, immediately adjacent to TSF1 which will form the western flank of TSF3. It will be constructed against elevated topography towards the north and east will have a constructed rock and soil embankment along its southern edge to detain the tailings slurry and supernatant water.

[119] Conceptually, the proposed footprint of TSF3 is underlain by alluvium, colluvium and reworked rhyolitic tuff containing shallow groundwater. This is in turn underlain by welded and non-welded rhyolitic tuff and rhyolite flows within which deeper groundwater occurs. Shallow groundwater is affected by farm drains and the Ruahorehore Stream, while deeper groundwater is affected by flows from the ridgeline to the north, resulting in slight artesian groundwater pressures being reported in wells near the Ruahorehore Stream.

[120] In terms of groundwater and surface water effects, there are three key stages to TSF3, namely construction, operations and closure.

[121] During construction a large-scale undercut is required of weak and soft soils, which are up to 20 m deep under the footprint of the TSF3 embankment. A section of the Ruahorehore Stream will also need to be diverted to allow for the construction of the TSF3 collection pond. This undercut is expected to result in the temporary dewatering of shallow groundwater, with a zone of influence expected to be up to 600 m. Inflows from shallow groundwater and from artesian flows from the deep groundwater system to the undercut are expected to be up to 2,450

m^3/day when excavation works are at their greatest depth. Once the excavation has been backfilled, groundwater levels are expected to recover, flooding the backfilled excavation.

[122] Potential effects on Ruahorehore Stream flow during construction will be mitigated by pumping clean abstracted groundwater from the foundation excavation and discharging it into the Stream. There are not expected to be any effects on groundwater or surface water users during the construction period.

[123] In the operational phase subsoil drains are expected to capture any seepage flows from TSF3, but after mine closure drains are expected to reduce in efficiency and eventually fail. During the operational and closure phases an increase in seepage flows into groundwater and an increase in groundwater levels is anticipated, but the expected contribution is small (5-10%) and long term groundwater levels are expected to rise by approximately 25%. Increased seepage flows to groundwater are expected to eventually discharge to the Ohinemuri River. The increased groundwater levels may result in longer periods of waterlogged soils over the winter months in adjacent paddocks, but this is expected to be managed by the provision of surface drains.

[124] In the long term the Ruahorehore Stream is predicted to see an increase in surface water flows of 0.5 m^3/day over the length of stream adjacent to TSF3. Increased stream flows are expected to be sourced from clean water infiltration and runoff from the collection pond crest. This increase in flows is expected to be unmeasurable at the downstream Ruddocks Gauge monitoring location.

Comments received

[125] There were no specific comments made on the groundwater and surface water effects associated with TSF3.

Statutory instruments

[126] No specific Statutory instrument provisions were brought to our attention by commentators. We address the NPS;FM in and relevant WRC instruments in Part G of this Decision.

Panel findings

[127] Subject to the imposition of appropriate conditions of consent we find that groundwater and surface water effects associated with the TSF3 are appropriately avoided, remedied or mitigated.

Conditions

[128] Overall, the Panel considers that OGNZL's 1 September 2025 revised consent conditions appropriately manage groundwater and surface water effects relating to TSF3.

Groundwater Effects Associated with the Willows Rock Stack

[129] The Willows Rock Stack (WRS) is a temporary stockpile for waste rock that will be reused as part of the WUG rehabilitation and closure. OGNZL propose to locate the WRS within a tributary (R11) of the Mataura Stream for a period of approximately 13 years.

[130] GHD (2025d) indicated that a large component of rainfall in the catchment would report to the R11 tributary due to the steep slopes and low permeability ash soils. Contributions to surface water flows are also sourced from perched groundwater in the soil mantle and from the shallow andesite unit. Filling of the R11 tributary with waste rock is expected to result in an increase in groundwater recharge (up from 64 m^3/day to 181-271 m3/day). This increase is not expected to impact the groundwater flow regime to the Mataura River as the flows will be captured within the underfill drainage network.

[131] Seepage flows captured by the underfill drainage network will be collected and sent to the WTP for eventual discharge to the Ohinemuri River.

[132] The stream flow from R11 will be lost for the duration that the WRS will remain in place. Flow gauging reported by GHD (2025d) indicated that this tributary accounts for approximately 1-2% of the overall flow from the Mataura Stream and the loss of this, together with reduced groundwater contributions (expected to reduce from 8 to 1-2 m^3/day) is still only likely to result in a 2.5% loss in flows to the Mataura Stream. GHD (2025d) suggested that this is within the range of error of the flow measuring devices and is therefore not expected to be a measurable loss. They note further that flows will be restored on remediation of the site.

Comments received

[133] No comments were received that relate to groundwater and surface water effects associated with the WRS.

Statutory instruments

[134] No specific Statutory instrument provisions were brought to our attention by commentators. We address the NPS:FM in and relevant WRC instruments in Part G of this Decision.

Panel findings

[135] Subject to the imposition of appropriate conditions of consent we find that groundwater and surface water effects associated with the WRS are appropriately avoided, remedied or mitigated.

Conditions

[136] The Panel considers that OGNZL's 1 September 2025 revised consent conditions appropriately manage groundwater and surface water effects relating to the WRS , subject to some amendments that we have made to the monitoring to be undertaken.

E4: EFFECTS ON OHINEMURI RIVER WATER QUALITY

[137] Water quality management and treatment for OGNZL's existing activity is currently undertaken via a range of measures at source, and within a purpose-built Wastewater Treatment Plant (WTP) at OGNZL's existing Waihi facilities in Area 5.

[138] We note that in the long term discharges from tailings areas and permanent rock stacks that remain upon closure of the mine will eventually discharge directly to the Ohinemuri River, but only once the water quality of those discharges can meet the relevant receiving water quality standards. Until that time those discharges will be treated through the WTP.

[139] The WTP treats all mine water associated with OGNZL's Waihi mining operations which is not of suitable quality to be discharged directly to the environment (via silt ponds), before it is discharged to the Ohinemuri River. As part of the WNP the WTP will be upgraded to cater for the additional water treatment demands arising from the operation of the WNP. OGNZL proposes to reconsent the discharge of treated water from the WTP to the Ohinemuri River on the same terms as existing discharge consents.

[140] OGNZL acknowledges that the existing water quality standards that are implemented at the WTP are essential for maintaining water quality, and in turn the ecological health of the Ohinemuri River. For OGNZL Boffa Miskell concluded that the ecological values of the Ohinemuri River had remained stable and persistent since operations at Martha Mine commenced. There was no evidence that the OGNZL activities had caused any detrimental effects to the ecological values of the Ohinemuri River, and the ecological values had been maintained as anticipated. Accordingly, Boffa Miskell concluded that re-consenting the WTP with the same receiving water quality standards would not result in detrimental effects on the ecological values of the Ohinemuri River

[141] The Greenway report (see section E15 of this Decision) concluded that the operation of the Ohinemuri Treated Wastewater Discharge would have no to very minor effects on local recreation patterns beside the river, and on in-river recreation, particularly contact recreation and angling.

Comments Received

[142] For WRC Dr Ngaire Phillips suggested that the existing discharge limit for manganese could be lowered because the monitoring data shows that the water quality is well below that limit.[4]

[143] While not directly related to the WTP, WRC also advised that the "National Environmental Standards for Sources of Human Drinking Water (NES:DW)" was relevant due to the location of the Waihi drinking water supply which originates from the upper reaches of Ohinemuri River. There was no consent condition proposed by OGNZL to address this NES. In a similar vein HDC sought assurance that the quantity and quality of that water supply would not be adversely affected by the WNP, particularly given the ongoing growth that is anticipated in Waihi township.

[144] Fish and Game considered that trout had not been adequately considered and the use of previously consented discharges as a baseline for determining the acceptability of new or expanded discharges was contrary to best practice. Coromandel Watchdog and the Waihi Community Forum expressed general concerns about mining activity pollutants in the river.

[145] Tangata whenua described the Ohinemuri River and its tributaries as vulnerable, with the mana and mauri of the river cited as significantly diminished.[5] Concerns were expressed about effects on mahinga kai and taonga species. Ngāti Hako noted that the Ohinemuri River meets the Waihou river and flows into Tikapa Moana (Firth of Thames).

OGNZL response to comments

[146] In response to the comments of Fish and Game, Coromandel Watchdog, Waihi Community Forum and tangata whenua, for OGNZL Dr Ian Boothroyd advised 30 years of monitoring data showed no evidence of any adverse effects from the WTP discharge on the ecological values of the Ohinemuri River. That data included MCI and QMCI (macroinvertebrate communities) demonstrating that water and habitat quality remained poor to fair, both before and after the WTP discharge was established. In his opinion, as there were

---

4 A maximum recorded level of 0.073 mg/l compared to a limit of 2.0 mg/l.
5 Ngāti Porou ki Hauraki, Ngāti Tara Tokanui Trust, Ngāti Hako and Ngāti Pu.

no adverse effects resulting from the WTP discharge on the Ohinemuri River, there was no requirement for a specific mitigation response or a requirement to enhance the River values.

[147] Dr Boothroyd noted OGNZL's proposed additional monitoring in the vicinity of the WTP discharge for temperature and dissolved oxygen.[6] That was intended to assist in understanding what may be preventing improvements in the Ohinemuri River ecosystem, and also to inform the WRC freshwater planning process for the management of the river.

[148] In response to WRC's specific comment on the manganese discharge standard, OGNZL considered there was no basis for necessitating any change because the existing limit had been in place for the life of the mine, with no recorded effects on in-stream aquatic ecology.

[149] We discuss WRC's concern about whether or not total nitrogen in the discharge should be monitored in section E13 of this Decision. Suffice to say that we agree with OGNZL that in the absence of a regulatory catchment load limit for nitrogen there would be limited merit in undertaking that monitoring at this point in time.

[150] Regarding the NES and the Waihi water supply take, OGNZL proposed an additional consent condition (WRC condition G33) to require notice to be given to HDC of any system failure in Area 2 that could result in adverse effects on the quality of water at the Hauraki District Council water supply extraction points.

Statutory Instruments

[151] We were referred to the National Environmental Standards for Sources of Human Drinking Water above. Apart from that, no other provisions in the Statutory instruments were brought to our attention.

Panel Findings

[152] Given that the existing WTP discharge standards appear to have avoided the occurrence of adverse effects on the aquatic ecology of the Ohinemuri River (as demonstrated in particular by the MCI and QMCI data) we see no need to amend those standards. In particular, while querying the discharge standard for manganese, WRC did not propose an alternative standard.

---

6 B.43. Freshwater Ecological Assessment part 1, at sections 20.1.13 and 20.1.20.

[153] Regarding iwi concerns, we note OGNZL's intention (codified in conditions of consent) to resource the Iwi Advisory Group and facilitate its involvement in developing a Mātauranga Māori Monitoring Programme inclusive of cultural health indicators and associated performance metrics for waterways and wetlands, which we understand will encapsulate the Ohinemuri River.

[154] We also consider that the existing WTP discharge standards applying to the Ohinemuri River will axiomatically also avoid adverse effects of that discharge on the Waihou river and Tikapa Moana (Firth of Thames).

Conditions

[155] We have made no material amendments to OGNZL's 1 September 2025 consent conditions relating to the WTP discharge to the Ohinemuri River.

E5: BLASTING AND VIBRATION EFFECTS

[156] OGNZL addressed blasting and vibration effects in section 6.11 of the AEE and the part B.53 Heilig and Partners report.[7] The effects and proposed mitigation measures differ by area and whether the blasting is undertaken at the surface or in the underground mine and associated access tunnels.

[157] Heilig (2025) set out a range of vibration thresholds that are considered suitable to protect amenity of adjacent properties. Broadly speaking these are 5 mm/s during defined Monday to Saturday working hours (0700-1800 for surface blasting and 0700 -2000 for access tunnel blasting) and 1mm/s outside of these defined working hours.

[158] Within the Coromandel Forest Park, higher vibration thresholds are considered reasonable by OGNZL due to the distance to adjacent land holdings. In these areas the vibration threshold has been set at 15 mm/s, based on potential effects on leiopelmatid frogs.

[159] An agreed overpressure limit of 120 dBL was adopted by OGNZL at any non-OGNZL owned residence, which is consistent with the overpressure limits set out in the Hauraki District Plan.

[160] Given that the vibration thresholds adopted are to manage human health and amenity, the risk of vibration causing damage to structures above the tunnel alignments or near to surface excavation is considered to be low.

Surface Mines and Borrow Areas

[161] Blasting is required to excavate the proposed GOP as well as the proposed borrow areas that will be used to source material for the construction of TSF3.

[162] Heilig (2025) indicated that the blasting for surface excavations was expected to have a limited area where effects may be noticeable, affecting approximately 50 properties at the eastern end of Moore and Clarke Streets and Boyd Road and localised properties around the three borrow pits.

---

7 Waihi North Project, Blasting and Vibration Assessment, Heilig and Partners Pty. Ltd, February 2025.

[163] Modelling undertaken by Heilig (2025) indicated that only ten properties were expected to be exposed to vibrations of 2 mm/s, with the property at 669 Golden Valley Road expected to come closest to the threshold 5 mm/s level.

[164] OGNZL indicated that while vibrations from surface excavation may at times be perceptible to residents, they will always comply with the proposed vibration thresholds.

[165] Overpressure effects are expected to be manageable within the 120 dBL limit adopted and flyrock is expected to be managed to less than 50 metres.

Willows and Wharekirauponga Access Tunnels & Portals

[166] ONZGL indicated that the Willows access tunnel is located remote from nearby properties and that vibration is expected to be imperceptible at those properties due to the distance between the two.

[167] Blasting required to construct the WUG access tunnel and WUG portal is expected to result in vibrations that are perceptible to residents. OGNZL note that vibration will be perceptible for a short period as the tunnel excavation approaches, reducing and eventually becoming imperceptible as tunnel excavation moves away from any particular residence. OGNZL indicated that no detectable vibration would occur from the ongoing operation of the tunnels once construction was complete.

[168] Two blasts per day are expected, with an advance rate of 50 metres per week. Heilig (2025) indicated that the maximum duration of perceptible vibration may exist for around 7 weeks before and 7 weeks after the closest point of the tunnel to any property. This would be most noticeable for the few properties directly above the tunnel alignment.

[169] Modelling undertaken by Heilig (2025) indicated that the vibration for the properties closest to the tunnel alignment will be close to the 5mm/s compliance threshold and that further mitigation measures may be required to reduce vibrations.

[170] A range of mitigation measures were proposed by Heilig (2025) and these are set out in section 20 of that report. They note that *"Similar types of adjustments have been previously implemented as part of the mining process at Waihi"* and that these could be *"...implemented*

should they be necessary to reduce vibration impacts to ensure compliance with the proposed vibration criteria."

Wharekirauponga Underground Mine and Dual Tunnels

[171] The WUG and Dual tunnels will be constructed within the Forest Park and as such blasting induced vibration is expected to be sufficiently remote from persons or properties so as to be indiscernible.

[172] Key issues relating to blasting and vibration in the Coromandel Forest Park are considered to be effects on Archey's and Hochstetter's frogs, effects on Forest Park users and effects on old mine workings and structures associated with the Wharekirauponga Walking Track.

[173] Heilig (2025) considered that the proposed 15 mm/s threshold for vibration in the Forest Park would be sufficient to protect surface structures and historic mine workings.

[174] OGNZL indicated that there may be strongly perceptible vibration effects over a 40 m section of the Te Wharekirauponga Track directly above the blasting but that *"...vibration will only be slightly perceptible to trampers at all other locations along the track."*

[175] Bioresearches (2025b) indicated that vibration limits up to 2 mm/s were not expected to have a significant effect on leiopelmatid frog species, based on historical blasting data from Golden Cross Mine and from roadside vibration monitoring. They accepted that there was uncertainty for vibration effects on leiopelmatid frogs at vibration levels between 2-15 mm/s, which is expected to occur over an area of approximately 315 ha. The effects on leiopelmatid frogs and proposed mitigations are addressed further in Section E7 of this Decision.

Comments Received

[176] Blasting and Vibration Effects were addressed in the comments from HDC, DOC, Coromandel Watchdog, Waikato Conservation Board, Ngāti Hako and several lay commentators.

[177] The comments can broadly be divided into two main areas of concern.

(a) Effects of vibration on human health, amenity and surface structures in proximity to the WNP. These were the issues primarily raised by lay commentators (noting this is also mentioned by Coromandel Watchdog). And

(b) Effects of vibration on leiopelmatid frogs within the Forest Park.

[178] Comment was made on behalf of HDC by Dr Cameron McKenzie of Blastechnology, who has been involved in technical review of a number of previous vibration assessments for other aspects of OGNZL's underground and surface operations.

[179] Dr Mckenzie was largely in agreement with the assessment carried out by Heilig (2025) and, in conjunction with ecologists undertaking technical review for HDC (Baber & Kessels 2025), considered the vibration thresholds proposed were appropriate. There were some areas where he did not agree with Heilig's assessment. These can generally be described as follows:

(a) Proposed blasting times at the GOP.

(b) Overpressure monitoring.

(c) Monitoring and reporting of flyrock.

(d) Monitoring and reporting of fume.

(e) Type of structure requiring compliance assessment. And

(f) Safety aspects of the tunnel on the Wharekirauponga Track with respect to blasting vibrations and rock fall. The Panel notes that there is no closure provided by Dr McKenzie on this topic and it is unclear what HDC are seeking in this respect.

[180] Dr McKenzie considered that these areas could largely be addressed by modifications to the resource consent conditions which we discuss below.

[181] No specific blasting and vibration effects technical assessment has been carried out by other commentators. The comments and evidence provided by Mr Hamish Kendal, Dr Luke

Easton, and Professor Waldman on behalf of Coromandel Watchdog relate primarily to the uncertainty of effects on leiopelmatid frog species from vibration as opposed to uncertainty in the level of vibration that is likely to be experienced at the ground surface. The Waikato Conservation Board and DOC voiced similar concerns.

[182] Concerns around human health, amenity and effects on surface structures (risk of damage) were expressed by lay commentators. No technical evidence was provided, but there is a clear desire for effects to be managed and mitigated appropriately.

OGNZL response to comments

[183] In general, OGNZL's response to comments related to vibration effects on leiopelmatid frogs and reiterated the outcomes of the initial assessments prepared by Bioresearches (refer the Evidence of Dylan Van Winkel dated 1 September 2025). This aspect of vibration effects is addressed in Section E7 of this Decision.

[184] OGNZL's collated response to lay commentators was that:

(a) The vibration thresholds proposed are in accordance with the provisions of the Hauraki District plan.

(b) The vibration thresholds are based on amenity and human health and therefore there is little risk of property damage.

(c) Vibration monitoring will continue to be undertaken (and consent conditions allow for this).

(d) OGNZL has a 'We Break, We Pay' procedure in place to assist property owners.

(e) OGNZL propose the continuation and extension of an existing Amenity Effects Programme which:

(i) compensates owners based on the level of vibration effect (even if vibration is within compliance limits); and

(ii) offers an ex-gratia payment to properties that the WUG Access Tunnel passes directly beneath (equal to 5% of that property's market value).

[185] In response to the areas of technical disagreement identified by Dr McKenzie, OGNZL provided further comment from Dr Heilig as Appendix 1 to their response to the HDC comments. That response included:

(a) An agreement to the proposed blasting times for the GOP proposed by HDC.

(b) No agreement to modify monitoring to include permanent overpressure monitoring because:

(i) The existing vibration network was not configured to measure overpressure, requiring modification to include an external overpressure transducer mounting, which may be subject to vandalism; and

(ii) A roving monitoring station employed to measure overpressure quarterly is sufficient based on the low levels of overpressure recorded as part of the historic and current mining operations.

(c) No agreement for more robust monitoring of fume and flyrock. Dr Heilig considered that current procedures were appropriate with specific follow up reviews to be undertaken where outcomes differed from expected results.

(d) Dr Heilig suggested that for commercial premises to be included in vibration monitoring, higher vibration standards would then apply in accordance with AS2187.2 (copy of Table J4.5(A) was provided).

Statutory Instruments

[186] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[187] In making our findings the Panel has considered the assessments completed by Dr Heilig and Dr McKenzie and we acknowledge that in large part they are in agreement, with the detail of the ongoing monitoring and associated consent conditions being the remaining areas of disagreement.

[188] In particular the Panel considers that the vibration thresholds for the Coromandel Forest Park have been set at a level that both vibration experts and ecology experts for OGNZL and HDC agree are appropriate. This forms the basis for the effects on leiopelmatid frogs and associated mitigations and offsets which are described in section E7 of this decision.

[189] Overall, the Panel finds that subject to the imposition of appropriate conditions of consent, blasting and vibration effects will be appropriately avoided, remedied or mitigated.

Conditions

[190] The wording of HDC condition 26 remains in dispute. HDC would prefer wording that more closely resembles that in the District Plan (at 8.3.2.3 (3) (a)) and that it should be measured at the boundary of any allotment. OGNZL suggests that this should only relate to houses and low rise residential allotments, and that to include commercial or other allotment types would necessitate increased vibration thresholds in accordance with AS2187.2.

[191] The reason for the change to HDC condition 26 requested by HDC is primarily related to consideration of commercial premises, such as cafes and other similar privately-owned premises used for social congregation. When reviewing Table J4(A) of AS2187.2 provided by Mr Heilig, the Panel notes that "sensitive sites" are described as including *"…houses, low rise residential, theatres, schools and other similar buildings occupied by people"*. We consider that this description could equally apply to commercial premises used for social congregation, and therefore a change in threshold would not be necessary for these sites.

[192] This matter was discussed in a Panel convened conference involving Dr John Heilig (expert for OGNZL), Dr Cameron McKenzie (expert for HDC) and Cassie McArthur (OGNZL). While it was generally agreed that residential buildings would serve as 'canaries in

the mine' in terms of vibration monitoring, we nevertheless considered that for the sake of completeness the conditions should refer to the types of buildings referred to in Table J4(A) of AS2187.2. We have therefore made an amendment to HDC condition 26 to include commercial premises used for social congregation.

[193] We preferred the wording presented by OGNZL for HDC condition 28 concerning restrictions on blasting hours, as those proposed by HDC are likely to be unnecessarily restrictive and can be expected to reduce tunnel advance rates and therefore increase the time over which blasting vibrations may be experienced at any given site before construction moves beyond that site.

[194] The Panel accepts the proposed modification to blasting hours provided by OGNZL in HDC condition 29 in response to HDC's comments.

[195] The proposed addition of video footage to assess fly rock and fume suggested by Dr Mckenzie does not appear to be overly onerous. We have therefore amended the HDC conditions along the lines he recommended.

[196] As to overpressure, there was general agreement between Dr McKenzie and Dr Heilig that there is a need for additional monitoring. The concern raised around vandalism of monitoring equipment has been considered by the Panel and the experts. There was general agreement that overpressure monitoring gauges could be added to the current (and proposed) vibration monitoring stations located on private property, in addition to the roving monitors already proposed. We have amended HDC conditions 28(d) and 29(d) accordingly.

E6 GROUND SUBSIDENCE AND SETTLEMENT EFFECTS

[197] OGNZL addressed subsidence and settlement effects in section 6.5 of the AEE and the Part B.13 EGL report[8] (EGL 2025f).[9] EGL identified settlement effects within Areas 1, 2, 3 and 5 as set out in the application documents. OGNZL said (at section 6.5.5) that settlement effects are not expected in Areas 6 and 7 as there are no underground structures in those locations.

[198] There is a difference between total settlement and differential settlement.

(a) Total settlement is the predicated settlement at any given point. Reasonably large total settlements may not be damaging or discernible if the effects dissipate over a wide area.

(b) Differential settlement (also known as tilt) is typically defined as a ratio of the maximum total settlement to the horizontal distance to zero total settlement (for example 1:200 or 1v:200h). The lower the ratio, the higher the potential for damage to structures at ground surface.

[199] Assessments of settlement effects provided by EGL (2025f) rely on the dewatering information provided in GHD (2025d) and an earlier version of the reporting prepared by WWLA (2025c).

Area 1 – Wharekirauponga Underground Mine

[200] EGL indicated that large total settlements are anticipated as a result of dewatering of the WUG. These settlement effects are expected to be in the range 300 to 1000 mm.

[201] Maximum differential settlement is expected to be 1:200. While this level of differential settlement could cause damage to ground bearing structures, there are no ground bearing structures in this area.

---

8 Oceana Gold (New Zealand) Limited, Waihi North Project, Ground Settlement Report, Engineering Geology Limited, 14 February 2025.

9 Oceana Gold (New Zealand) Limited, Waihi North Project, Ground Settlement Report, Engineering Geology Limited, 14 February 2025.

[202] EGL indicated that the differential settlements of 1:200 are not expected to be significant or even discernible for stream gradients that are close to 1:30 and that no material effects are therefore expected on stream flows or the Coromandel Forest Park forest environment.

[203] Because of the limited potential for effects, EGL did not recommend settlement monitoring above the WUG beyond "base" reference points at vent shafts and drill platforms.

Areas 1 and 2 – Wharekirauponga Dual Tunnels and Willows Access Tunnel

[204] EGL indicated that both the WUG Dual Tunnels and the Willows Access Tunnel were expected to see total settlements of 10-100 mm, but this was dependent on the geological structures encountered. Where a larger number of faults and vein structures are encountered this may push settlements towards the upper end of this assessed range.

[205] Differential settlements are estimated at 1:15,000 but this is based on an assumption that the shallow groundwater system in the regolith at the Willows Access Tunnel portal will not be significantly dewatered.

[206] WWLA (2025c) observed *"The Willows Farm access tunnel decline intercepts the shallow groundwater system and, because of this, there is some potential for effects on surface waters by temporarily reducing baseflow."* On this basis, there was also an elevated risk of settlement effects over and above those calculated by EGL related to dewatering of the deeper underlying andesite rock mass.

[207] EGL noted that overlying these two tunnel elements are either pastureland or Forest Park and the effects on those areas with such small calculated total settlements and tilts were expected to be negligeable.

Areas 1 and 2 – Ventilation shafts

[208] EGL stated that local dewatering was expected around ventilation shafts for the Willows Access Tunnel (vent shaft 1) and for other vent shafts associated with the WUG. The key dewatering risk was during construction when temporary dewatering of the shallow, perched groundwater system is expected according to WWLA (2025a).

[209] WWLA stated that lining or grouting will be required to reduce inflows into these structures and if that occurs, groundwater around the vent shafts was expected to return to its previous state once construction was complete.

[210] EGL (2025f) indicated surface settlement of 50 to 300 mm (with tilts of 1:8,500 to 1:1,400) around the vent shafts based on their calculations and observations of settlement from dewatering around the Martha Pit. EGL considered that maximum settlement could be expected immediately adjacent to the vent shaft, with any depressions able to be reprofiled by minor earthworks as part of site rehabilitation.

[211] Settlement effects were expected to be negligeable within the context of construction of the vent shafts themselves.

Area 3 – Wharekirauponga Access Tunnel East of Waihi East

[212] EGL (2025f) predicted between 10-100 mm of settlement (at low differentials) above the WUG Access Tunnel to the east of Waihi. However, this assessment was based on a tunnel at depth, within the lower andesite and considered only the intersection of faults or veins in that unit. It did not consider intersection of the tunnel with the younger, overlying volcanic units.

[213] WWLA (2025c) identified that the contact between the upper, younger volcanics and the underlying andesite was not well defined within a downthrown graben expected to be present between CH1,000m and CH2,400m. More significant dewatering and associated settlement could be expected if this upper, younger volcanic unit was to be encountered during tunnelling through this zone.

[214] There was also potential that the proposed decline of the WUG access tunnel would intercept younger volcanics (ignimbrite) that have connectivity with other ignimbrites near Boyd and Barry Roads. Calculation of settlements have not been undertaken for this area by EGL as OGNZL proposed to mitigate this risk by designing to avoid the younger ignimbrites or to undertake grouting to seal the tunnel through this area.

[215] EGL noted that the lower andesites that are expected to form the geology within which the decline will be tunnelled have already been dewatered by the Favona underground to a depth approaching 70 m.

Area 5 – Gladstone Open Pit

[216] In considering settlement effects associated with the GOP, EGL adopted the dewatering assessment of GHD (2025d) which is summarised in Section E3 of this Decision. Dewatering is expected for the vein system which is expected to extend to the south of the GOP, to just south of the Ohinemuri River.

[217] EGL calculated average settlements of 36 mm, with a differential of 1:4,800 for vein dewatering. On this basis total settlements of between 10 -50 mm were estimated for land to the south of the Ohinemuri River.

[218] The younger volcanics are extensively dewatered to the north of the proposed GOP, and at least partially dewatered to the west due to the Favona and Trio underground mine dewatering. Existing settlements of 120-200 mm have been measured in this area and similar levels of settlement are expected due to dewatering of the younger volcanics to the south and east of the proposed pit.

[219] Larger settlements associated with dewatering of the younger volcanics are expected to only occur in close proximity to the pit, within OGNZL's property.

Area 5 – Gladstone Portal

[220] The assessment completed by EGL addressed a new portal alignment to replace the Favona portal which will be mined out by the Gladstone Open Pit. The new portal location is to the north of the conveyor, adjacent to the proposed WUG access tunnel portal.

[221] EGL said that *"The proposed decline will come close to younger volcanics and historic workings which are interpreted to extend back to Moore Street, Boyd Road and Barry Road area."*

[222] This presented a risk of dewatering of the younger volcanics and causing larger, more extensive settlement effects than those observed for the Favona decline (which remained in the underlying andesite and experienced 10 – 50 mm of settlement immediately above the tunnel).

[223] Mitigation measures are proposed which include positioning the portal to avoid the younger volcanics, grouting of the younger volcanics exposed in the tunnel decline and, (if necessary) reinjection of groundwater into the younger volcanics to maintain groundwater levels.

Comments Received

[224] Comments were received from HDC, TCDC, DOC, Coromandel Watchdog, NZTA and Barry and Beverley Ross who own a home above the proposed alignment of the WUG access Tunnel.

[225] Comments can broadly be categorised into two areas:

(a) the effect on frog habitat from settlement above the WUG and the need for monitoring; and

(b) potential settlement effects on surface structures and infrastructure from the WUG access tunnel.

OGNZL response to comments

[226] With respect to the WUG itself, OGNZL referred back to the original Ground Settlement Effects assessment report prepared by EGL (2025f), when considering the need for monitoring of settlement within the Coromandel Forest Park That report indicated “base” survey of ventilation shafts and drill collars could be undertaken but suggested ongoing monitoring in the Forest Park was unnecessary.

[227] OGNZL provided a response to DOC and Coromandel Watchdog relating to settlement effects on frog habitat by way of further evidence from Dr Trevor Matuschka and Dr Graham Ussher dated 1 September 2025.

[228] Dr Matuschka reiterated the widespread nature of the anticipated settlement and the fact that differential settlements (tilt of up to 1:200) are not expected to be noticeable within the steep stream channels.

[229] Dr Ussher considered that the *"...magnitude of potential subsidence in the WUG forest area would be, in my opinion, inconsequential to the integrity of frog habitats or frog populations in the WUG forest area."*

[230] With respect to the WUG access tunnel, OGNZL indicated that settlement effects on NZTA infrastructure will be mitigated by the depth of the tunnel (in the lower andesite), which has been shown to limit damage to surface infrastructure. They proposed to continue the settlement monitoring of SH25 which is already in place and which is (and will be) managed by the dewatering and settlement monitoring plan.

[231] The OGNZL response to Mr and Mrs Ross referred to the expected level of settlement (10-100 mm) set out by EGL (2025f) at low tilts, resulting in no expected damage.

[232] The response to comment from Ms Gloria Sharp around blasting and vibration remains relevant to Mr and Mrs Ross as well in that: *"...the company has a 'We Break, We Pay' procedure in place to assist owners if they believe their property may have been damaged. As part of this process, if it is determined that property damage is attributable to the applicant's activities, the company will remedy the damage at our cost. The process includes provision for a third party to investigate the complaint for both the homeowner and the company, at OGZNL's cost."*

Statutory Instruments

[233] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[234] Overall, we are satisfied that the ground settlement and subsidence effects have been appropriately addressed within the Application and its supporting documents. Subject to the imposition of appropriate conditions of consent (including those amendments set out below)

we find that ground settlement and subsidence effects will be appropriately avoided, remedied or mitigated

Conditions

[235] There remain some areas where amendments to conditions to address the concerns of NZTA and HDC do not appear to have been made. In particular, OGNZL disputed the suggestion that the dewatering and settlement monitoring plan should be applied to Area 1 (comprising the WUG and the WUG dual tunnel).

[236] The Panel has considered the view of OGNZL as well as the comments of HDC who consider that some form of surface settlement monitoring needs to be included for the WUG to address the matter of surface stability above stoping.

[237] Given that a significant part of the dewatering assessments and the subsequent ground settlement assessment are based on a conceptual ground model for the site, there are some uncertainties that remain which could alter the level of effects predicted. Accordingly, the Panel finds that there must be some form of validation of the actual dewatering and settlement performance against what has been modelled. The monitoring proposed by HDC (of vent shafts and drill collars) will assist in this regard and may also be used to assess the long-term effectiveness of stoping at mine closure.

[238] The Panel finds that the modifications to the conditions proposed by HDC present a reasonable means to validate performance and therefore these recommended changes have been adopted to Combined HDC and WRC conditions C43 and C45.

[239] We also agree with NZTA's view that the owners of assets that may be impacted by settlement effects beyond what is anticipated should be informed, and we have amended Combined HDC and WRC condition C46 accordingly.

E7: EFFECTS ON FROGS

[240] OGNZL addressed terrestrial ecology effects in section 6.6.1 of the AEE. Further details are in technical report B.37 by Boffa Miskell, for WNP areas within the Coromandel Forest Park and Willows Road Farm, report B.36 by Bioresearches, for all other WNP areas, and report B.47 by RMA Ecology for a summary of ecology effects for all areas within the WNP. Additional technical reports on native frogs include B.38 by RMA Ecology (modelled effects and compensation focus), B.39 by Bioresearches (vibration and flow depletion effects focus), reports B.41 and B.42 by Lloyds Ecological Consulting (population estimates and effects on Archey's and Hochstetter's frogs, respectively), and B.58 by Lloyds Consulting (frog monitoring plan).

[241] Relevant management plans include: Ecology and Landscape Management Plan - WUG and Ecology and Landscape Management Plan – Waihi Area by OGLNZ, which cover ecology and landscape; Coromandel Forest Park Kauri Dieback Plan and Thames Coromandel Forest Park Kauri Dieback Plan by Boffa Miskell regarding kauri dieback; and Wharekirauponga Pest Animal Management Plan by Boffa Miskell regarding a pest animal control programme.

[242] We address effects on frogs separately from broader terrestrial ecology effects (including vegetation clearance, invertebrates, lizards, birds, and bats). That is because it was clear from the Application and comments received that impacts on frogs – particularly Archey's frog – presented potentially the greatest uncertainty and geographical scale of risk of ecological effects.

General discussion

[243] Archey's frog and Hochstetter's frog both have a Department of Conservation threat status of "At Risk – Declining". Within the WNP area, both frog species have only been recorded in the Coromandel Forest Park. A single, juvenile Hochstetter's frog was detected within the Willows Road Farm area by Boffa Miskell (report B.37), but it was in a waterway unaffected by the WNP. Vibration and dewatering were the two key potential adverse effects on frogs identified in OGNZL's AEE and technical reports. Bioresearches (report B.39) assessed potential effects of vegetation clearance were low to very low, because drill sites and vent shaft sites would avoid locations where surveys had identified high frog numbers (defined

as five or more frogs per search area), and because any remaining frogs would be captured and relocated (i.e., "salvaged"). Potential impacts of noise and air discharges were considered negligible to low, due to a combination of the small and localised area affected, relatively low noise levels, and acceptable air quality in the discharges. Site selection criteria for drill and vent shafts were provided in Appendix 4 of report B.37 by Boffa Miskell, while frog salvage details were provided in Appendix 3 of the same report. Site selection criteria were revised following ecology conferencing (we discuss that further below).

[244] Bioresearches (report B.39) noted that vibrations from underground blasting could disturb frogs over an area of approximately 315 ha within the Coromandel Forest Park, assuming a vibration disturbance threshold of 2 mm/s.[10] They concluded that the vibrations were unlikely to result in measurable effects on frog populations because: the area affected is small relative to their full distribution range; vibrations will be intermittent and at levels unlikely to result in impacts on frogs and their reproduction; and because frog populations persisted in the vicinity of nearby Golden Cross mine, where similar blast vibrations would have been experienced.

[245] Bioresearches (report B.39) stated that flow reductions in streams could potentially impact frogs that live on the edges of forested streams.[11] They concluded that flow reductions were unlikely to have measurable effects on frog populations because predicted reductions in flow and wetted width were small and therefore unlikely to negatively impact semi-aquatic Hochstetter's frog habitat quantity or quality (i.e., food resources, refuges, breeding habitat) in lower stream catchments, and would not affect higher order catchments where most of the Hochstetter's frog population occurred. They further concluded that potential dewatering would have no impact on Archey's frogs as their more terrestrial habitat was not expected to be affected by potential flow reductions.

[246] To address uncertainty regarding predicted effects on frogs, OGNZL proposed a combination of pest animal control and research funding. The 632 ha Wharekirauponga Animal Pest Management Area (WAPMA) comprises the potential vibration impacted area (314 ha) and an adjacent area of high-quality frog habitat (318 ha), which is not subject to potential

---

10 For context, Section 8.3.2.1 of the Operative Hauraki District Plan notes that transient vibration levels of 0.5 to 2 mm/s would be slightly perceptible (barely noticeable) to humans, while greater vibrations would be distinctly perceptible (noticeable).

11 Report page 4.

vibration impacts.[12] The rationale for undertaking pest control as a form of mitigation or offsetting is that there are high numbers of pest animals in the area, including rodents, possums, mustelids, feral cats and pigs. Hence, OGNZL has "a high degree of confidence that undertaking intensive pest control will result in substantial and widespread benefits to flora and fauna" (report B.40 by Boffa Miskell).

Comments Received

[247] Frogs were addressed in the comments from DOC, HDC, TCDC, Waikato Conservation Board, Forest and Bird, Coromandel Watchdog and iwi.

[248] In its s 51 report DOC responded to issues related to concessions, wildlife approvals, complex freshwater fisheries activity approvals, and access arrangements. Key points in their report included: they had commented on earlier (outdated) sets of proposed conditions (dated 25-29 July 2025) and issues remained unresolved: that the proposed site selection criteria within Coromandel Forest Park did not adequately address effects on frogs and lizards; and they requested expert conferencing to discuss mitigation methods. They also raised more general concerns about the use of management plans, which we address in Section E1 of the Decision.

[249] In its s 53 report, DOC expressed concerns about the scale, feasibility and effectiveness of proposed mitigation, offsetting and compensation measures (including pest control), habitat enhancement and research funding. In particular, DOC "disputes the assumption that frog populations will triple as a result of pest control, on the grounds of limited evidence and overly optimistic modelling assumptions". DOC's key unresolved issues were "in relation to the robustness of management plans, enforceability of consent conditions, and adequacy of monitoring and adaptive management frameworks."

[250] In its covering letter, HDC stated that they supported the proposed Waihi North Biodiversity Project and the inclusion of consent conditions that linked the WNBP to the Fast-track consents. They also stated it would be important that DOC and Iwi were involved to co-design WNBP outcomes, and that pest control activities have available funds, targets, monitoring, and reporting to demonstrate effectiveness.

---

[12] Report B.40 / H.05 – Boffa Miskell 2025.

[251] Attached to the HDC report was a technical memo by Alliance Ecology that reviewed terrestrial ecology aspects.[13] They found that, "Overall, the description and assessment presented by OGNZL of terrestrial ecology values, project effects, and proposed measures to manage adverse effects are generally consistent with good practice and are likely to generate net positive outcomes for indigenous terrestrial biodiversity." They also suggested numerous changes to proposed consent conditions and their relationship to management plans, to improve certainty regarding biodiversity outcomes.

[252] In its report, TCDC noted that they do not have inhouse experts in ecology and that they would prefer not to have the burden of certifying ecology-related management plans, if the costs of external experts could not be passed on. Numerous amendments to the consent conditions were also suggested.

[253] The Waikato Conservation Board concluded 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 [Conservation Management Strategy 2014-2024]." Furthermore, they stated that, "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". Regarding vibration impacts on frogs, they concluded that, "It needs to be established whether this level of impact from a commercial activity is appropriate in land specifically designated as a conservation park."

[254] Forest and Bird stated that frog population estimates provided by OGLNZ were not robust and over-estimated frog numbers, leading to a false conclusion that the magnitude of effects was small relative to the population size. They also raised concerns about the size and uncertainty of effects relating to vibration, ventilation shaft discharges, noise, dewatering, survival post-translocation, vegetation clearance and drilling, effectiveness of the pest management strategy, and cumulative effects. They considered that potential effects were "very high". Forest and Bird commented that the potential risks to frogs could not be remedied by consent conditions. Forest and Bird provided some preliminary feedback on consent

[13] OGNZL – Terrestrial ecology review, Waihi North Project FTA application, Alliance Ecology, 21 August 2025.

conditions and further requested the opportunity to comment on conditions in more detail if the Panel chose to approve the Fast-track application.

[255] Coromandel Watchdog included in their comments frog evidence from the following: Hamish Kendel (Natural Solutions NZ); Nic Conland (Taiao – Natural Resource Management Ltd); Dr Luke Easton (DOC); Professor Bruce Waldman (Oklahoma State University and ex University of Canterbury); and Sara Smerdon (Mahakirau Forest Trust). Principal concerns mirrored those of other commenters, including: frog population estimates in the application being unreliable and overstated; uncertain vibration impacts; dewatering impacts; and inadequacy of proposed pest control.

[256] Ngāti Porou ki Hauraki commented that frogs were taonga species and they raised concerns regarding effects of noise, vibration, and vegetation clearance on frogs.

[257] Ngāti Pū commented that frogs may be affected by construction activities in the Willows Area and construction of the Gladstone Open Pit. Ngāti Pū also raised concerns about effects of disturbing and relocating frogs and other taonga species, and impacts of waterway reclamation and diversion on frogs and other taonga species.

OGNZL response to comments

[258] In their response to comments, OGNZL included a report by RMA Ecology on frog population modelling, and statements of evidence from Mr Dylan van Winkel (Bioresearches), Mr Brian Lloyd (Lloyds Ecological Consulting), Dr Graham Ussher (RMA Ecology), Ms Katherine Muchna (Boffa Miskell), Dr Helen Blackie (Alliance Ecology), Ms Kate Feickert (Bioresearches), and Ms Cassandra McArthur (OGNZL). Their response also included numerous amendments to their original proposed set of conditions.

[259] The thrust of evidence from both Mr van Winkel and Dr Ussher in response to comments was that there was sufficient evidence to conclude that effects from vibration or dewatering will be small. Neither expert introduced new technical evidence, but referred to technical reports attached to the Application, and the new modelling report by RMA Ecology. Regarding comments on conditions, Mr van Winkel agreed with HDC proposed condition C176(b)(i), to include monitoring of vibration effects on Hochstetter's frogs and condition C176(c), requiring two years of baseline monitoring for frogs.

[260] Dr Ussher agreed with numerous suggested changes to conditions by Alliance Ecology for HDC. However, he disagreed with their proposed new additions to HDC condition C171(k), which would set population increase targets of 2.3 and 4 times existing population estimates for Archey's and Hochstetter's frogs, respectively, within 5 years of implementing the pest animal control programme. Rather, he suggested an alternative target of 3 times current population size for both frog species, after 15 years of pest control, which he considered more realistic.

[261] Ms Muchna responded to numerous comments from DOC and others, some of which resulted in changes to OGNZL's proposed conditions. Ms Muchna acknowledged iwi concerns that protocols for frog translocation had not been adequately informed by tikanga and Mātauranga Māori, and stated that she "would welcome an opportunity to discuss these matters in detail."

[262] Dr Blackie addressed DOC concerns regarding pest animal control. He disagreed with DOC that the proposed area of pest animal control was too small, citing 10% annual increases in Archey's frog abundances in a study of Whareorino Conservation Area, which had a similarly sized pest-control area. Regarding the spatial scale of proposed control of ungulates (hoofed animals, such as pigs, goats, and deer), Dr Blackie stated that DOC's concerns could be addressed by an increase in the buffer zone of the WAPMA from 1 to 2 km from the core area, to further reduce reinvasion risk, particularly for pigs. Regarding DOC concerns about the frequency of application of ground-based use of toxins to control pests, Dr Blackie suggested toxin baiting could increase from once to twice a year, to increase efficacy. Regarding mice control, Dr Blackie disagreed with DOC's suggestion that bait stations should be placed at a maximum 25 m apart, as it would result in an impractically large density of traps, and introduce a substantial toxic load to the environment. Dr Blackie also disagreed with DOC's suggestion for a pig-proof fence around the entire WAPMA. This was on the basis that such a fence would be very expensive, difficult to maintain, and the associated soil disturbance might spread the risk of kauri dieback. She did, however, note that a pig-proof fence was proposed for the Native Fauna Release Area.

[263] Ms McArthur addressed DOC's concern that the applicant proposed a 3 m buffer distance from native frogs, which is less than the 6 m buffer in the current access arrangement. Ms McArthur stated that the reason for reducing the buffer distance was essentially because

the existing conditions were impractical. She gave the example that, of 102 sites surveyed under the existing access arrangement, only 10 sites met the requirements of that arrangement (ie, four or less frogs within a 20 x 20 m survey area, a 6 m buffer from any frog and infrastructure, and at least 25% connectivity to surrounding habitat). Ms McArthur opined that if the buffer distance was reduced, it would result in less frog disturbance and handling, due to fewer sites being rejected.

[264] Ms McArthur also addressed DOC's concern about removing the requirement for three nights of frog survey ahead of vegetation clearance, which is in the current access arrangement. The alternative proposed by OGNZL is to instead rate site suitability based on a multi-criteria assessment, which includes information on frog habitat. Ms McArthur noted that frog salvage and relocation will still occur for frogs at drill sites where there are low densities (four or less frogs), and that sites will be avoided if there are higher frog densities (five or more frogs).

Ecology Conference Outcomes

[265] An expert ecology conference convened by the Panel was held in Auckland on 13 October 2025, and it was attended by representatives from OGNZL, DOC, HDC, and the Panel. The focus of the conference was on terrestrial ecology matters within the Coromandel Forest Park. Following the conference, OGNZL provided additional information showing the impact of reducing frog buffer distances from 6 to 3 m for drill site selection. In summary, they found that an additional 10 of the 102 sites surveyed would have been deemed suitable, if a 3 m buffer was applied rather than a 6 m buffer, resulting in a total of 20 out of 102 sites surveyed being suitable.

[266] Following discussion from all parties present, the following clarifications and amendments to conditions were provided by OGNZL: conditions to require the cessation of vegetation clearance at drill sites if evidence of frog brooding is found; no felling of trees at drill sites with a 50 cm or greater diameter at breast height; improved clarity as to how the site selection criteria is applied; improved clarity regarding protection of connectivity of frog buffer habitat to areas adjacent to work areas; ecology survey area sizes for site selection; vegetation clearance areas; an increase in the buffer zone of the WAPMA from 1 to 2 km from the core area, with aerial application of 1080 within the 1-2 km buffer zone to reduce reinvasion risk

from pigs; and greater setbacks from any active bird nests detected during pre-vegetation clearance tree surveys.

Statutory Instruments

[267] We discuss the relevant Statutory instruments in Parts G, H and I including specific sections of the statutory documents prepared under the Conservation Act that are referenced in the s 51 and s 53 comments of the Department of Conservation.

Panel Findings

[268] Core issues are the rarity and uniqueness of the frog species affected, and uncertainty, both in terms of the degree to which frogs will be affected by the WNP and the ability to mitigate, offset, or compensate for effects, should they occur. At its highest level, this issue is well summarised in the Waikato Conservation Board conclusion that, "... whether this level of impact from a commercial activity is appropriate in land specifically designated as a conservation park."

[269] For Archey's frogs, potential vibration effects received considerable attention. We observe hat evidence for negative effects of vibration on Archey's frog is anecdotal and based on data from other species. Applicant experts suggest that this potential risk is small and that uncertainty regarding effects can be readily offset or compensated for by the proposed Pest Animal Management Plan. The counter view from commenters such as Forest and Bird, and Coromandel Watchdog, is that the risk and uncertainty is too large.

[270] We agree with some commenters that the benefit of the proposed animal pest control programme to frogs may be smaller than stated, due to limited supporting data from elsewhere. Hence, we placed little weight on the Applicant's frog modelling results, given the model's sensitivity to input assumptions, particularly the likely compensation benefit of pest control. However, there is little doubt that the proposed pest control will benefit frogs and other native plants and animals, even if the magnitude of positive effects is uncertain.

[271] Having considered all the information before us, we agree with the Applicant's conclusion that the overall vibration risk to frogs is small and can be addressed by the combination of consent conditions and associated management plans.

[272] We also agree with the Applicant that the risk of dewatering effects on Hochstetter's frogs is small and can be addressed through consent conditions. That is principally because OGNZL has presented compelling groundwater and surface water evidence indicating that the scale of the potential dewatering effect on stream hydrology is small, if uncertain.

Conditions

[273] In response to comments received and ecology conferencing OGNZL made extensive amendments to ecology-related conditions . We find that the amendments improve clarity and provide greater certainty regarding effects, reporting requirements, management plan certification, and management actions.

E8: EFFECTS ON OTHER TERRESTRIAL ECOLOGY

[274] Vegetation clearance and associated impacts on native fauna and their habitats in Coromandel Forest Park were identified as key potential effects in the AEE. It stated that noise from helicopters and drilling, plus air discharges from Vent Shafts and lighting, may all have localised impacts on native animals in the Coromandel Forest Park. However, the AEE concluded that potential effects of noise, air discharges, and lighting on fauna will be small and localised. We agree with that assessment. Spread of kauri dieback into the Coromandel Forest Park was also raised as a potential issue in the AEE, but it was concluded that the spread can be adequately managed by following biosecurity protocols, similar to those already used as part of OGNZL's access arrangement with DOC. We also agree with that assessment.

[275] Clearance of vegetation and associated habitat within the Coromandel Forest Park and the Willows Road Farm was assessed in report B.37 by Boffa Miskell and elsewhere in the WNP area in report B.36 by Bioresearches. A total area of 26.61 ha of vegetation clearance is proposed, including:

(a) 0.66 ha within Coromandel Forest Park (Area 1);

(b) 0.25 ha within Willow Road Farm (Area 2);

(c) 6.5 ha within the footprint of Gladstone Open Pit (Area 5);

(d) 9.1 ha within the footprint of the Northern Rock Stack (Area 6); ND

(e) 10.1 ha within the footprint of TSF3 (Area 7) – including 8.3 ha within SNA 166

[276] Report B.37 by Boffa Miskell considered the effects of vegetation clearance of 0.66 ha within the Coromandel Forest Park will be minimised by use of site selection criteria to avoid valued flora and fauna together with the salvage and relocation of lizards, frogs, and Threatened or At Risk native invertebrates to a 5 ha Native Fauna Release Area. They concluded that the effects of vegetation loss would be offset by replanting and enhancing natural regeneration of an approximately 27 ha area on the northeast ridge and the entire forest boundary at Willows Road Farm. For Willows Road Farm, report B.37 by Boffa Miskell stated that the design and

layout of surface structure was developed to avoid native vegetation as much as possible. They assessed the 0.25 ha of mixed native and exotic vegetation to be cleared to be of low ecological value, and they considered that the effect of the vegetation loss would be adequately offset by revegetation of approximately 0.55 ha of riparian areas in the vicinity.

[277] Report B.36 by Bioresearches considered that the main terrestrial ecology effects for Areas 5, 6, and 7 were associated with removal of "low to moderate value" vegetation and habitats, which were predominately comprised of pine plantation and native plantings. They also considered that vegetation removal would result in the loss of "common native flora and fauna, increased edge effects, and reduced connectivity between these planted or regenerating habitats", and also that, "Threatened and 'At Risk' species expected to be affected by the proposal include kauri trees (*Agathis australis*), 'At Risk' copper skinks are expected to be affected where they occur, including within largely planted habitats at the proposed Gladstone Open Pit (GOP)". Bioresearches concluded that effects could be managed and mitigated by: precautionary pre-clearance bat surveys; vegetation removal outside the bird breeding season; lizard capture, relocation, and habitat enhancement; and offset mitigation in the form of planting and restoration for the loss of vegetation and lizard habitat. They concluded that the WNP would have an overall positive effect on terrestrial ecology, following mitigation and biodiversity offsetting.

[278] The combined package of biodiversity offsetting for the terrestrial ecology effects described above is summarised in the AEE as follows:

(a) Coromandel Forest Park: 0.66 ha of vegetation loss offset by vegetating 21 ha on the north-east ridge of Area 2 and replanting approximately 5.5 ha along the boundary with Willows Road Farm;

(b) Willows Road Farm: 0.25 ha of vegetation loss offset by 0.55 ha of riparian planting nearby; and

(c) Gladstone Open Pit, Northern Rock Stack, and TSF3: 25.7 ha of vegetation loss offset by 20 ha of restoration plantings site-wide and 17.5 ha of restoration plantings to offset 8.3 ha of SNA 166 (i.e., a total of 37.5 ha of offset plantings).

[279] In addition to the biodiversity offsetting summarised above, OGNZL proposes to fund the Waihi North Biodiversity Project within an area of up to 18,870 ha of the Coromandel Forest Park for a minimum 10 year term. The objectives of the WNBP are to provide long term ecological benefits, over and above the management of mining effects, and to assist tangata whenua in their exercise of kaitiakitanga. This includes an initial payment of $2.4m and annual payments of $0.6m thereafter, the formation of a WNBP oversight group, development of a project plan, and effectiveness reporting.

Comments received

[280] Effects on terrestrial ecology were addressed in the comments from DOC, HDC, TCDC, Waikato Conservation Board, Forest and Bird, Coromandel Watchdog of Hauraki, Ngāti Porou ki Hauraki, Ngāti Tara Tokanui, and Ngāti Pū. We do not repeat the comments from HDC, TCDC, or the Waikato Conservation Board here, as they are already summarised above in section E7 of this Decision.

[281] In its s 51 report, DOC noted that it was "generally happy" with the Willows Area Concession proposal. For the Northern Area Concession (in Coromandel Forest Park), aside from concerns regarding frogs and management plans in general, they expressed concern that the proposed conditions did not include a provision for DOC to request an amendment to the Kauri Dieback Management Plans, if the plan's objectives were not being met. DOC's s 53 report was largely focussed on effects on frogs, but also raised concerns about a lack of clarity on how ecological gains will be secured.

[282] Forest and Bird expressed concern about effects associated with vegetation clearance, habitat loss and impacts on lizards. They noted that the Coromandel Forest Park "includes rare coastal forests and is valued for its diverse native flora and fauna and ecosystem services." They stated that the Applicant seeks to downplay ecological effects in the Forest Park, and that "where ecological features are very rare, an impact on those features over even a very small area will be a very significant impact". They considered that offset mitigation was inappropriate, and that greater emphasis should be given to avoiding effects.

[283] Terrestrial ecology-related comments from Coromandel Watchdog focused on frog impacts, although some of their experts did discuss broader terrestrial ecology effects. This included evidence from Sara Smerdon (Mahakirau Forest Trust), who considered that the

Application had information gaps regarding site selection criteria, ecological monitoring and metrics, and protection of "receiving sites" (presumably referring to the Native Fauna Release Area).

[284] Ngāti Porou ki Hauraki raised concerns regarding: effects of vegetation clearance, noise, and general mining activity on birds; ecological values within areas of vegetation clearance described as being lower value; and effects on taonga species, including regenerating native vegetation, lizards, frogs (addressed in section E7 of this Decision), birds, and wetlands (addressed in section E10 that follows).

[285] Ngāti Tara Tokanui requested that any approvals have conditions that include restoration of traditional food sources and ecosystems affected by mining activities, and protection and management of rare and endangered species, such as Te Pua o Marama (*Dactylanthus taylorii*), from habitat loss and introduced predators.

[286] Ngāti Pū commented that: vegetation clearance in the Willows Road Farm area would interfere with Ngāti Pū's ecological restoration efforts in that area; management plans lacked clarity on how Ngāti Pū values, tikanga, and mātauranga Māori will be incorporated into site design and environmental safeguards; construction of the Gladstone Open Pit could impact on mahinga kai and taonga species (including birds, fish, frogs, and lizards); and more general concerns about impacts of disturbance and relocation on native fauna, including frogs, lizards, and birds.

OGNZL response to comments

[287] In their response to comments on terrestrial ecology, OGNZL included statements of evidence from Mr Christopher Wedding (Bioresearches); Ms Katherine Muchna (Boffa Miskell); Ms Cassandra McArthur (OGNZL); and Dr Helen Blackie (Alliance Ecology). Their response also included numerous amendments to their original proposed set of consent conditions. Dr Blackie's evidence focussed on pest animal management, which is summarised in section E7 above and is not repeated here.

[288] Mr Wedding responded to Forest and Bird's concerns regarding loss of lizard habitat. He noted that the lizard comments largely related to effects of the Gladstone Open Pit on copper skink, where residual effects were anticipated from the loss of "6.5 ha of predominantly planted

habitat, after mitigation measures such as capture and relocation to protected, pest-controlled habitats. In response, a compensation package is proposed, comprising 11.2 ha of restoration planting contiguous with known, retained copper skink habitat, together with 4.45 ha of their existing habitat." Mr Wedding considered that the combination of salvage and offsetting and compensation will adequately compensate for the permanent loss of lizard habitat, and result in an overall net gain in suitable habitat for the species. He further stated that he had a high degree of confidence in the compensation model, because copper skink readily colonise rough grass habitats and restoration plantings.

[289] Mr Wedding also responded to Forest and Bird's concerns relating to avoidance vs offsetting of ecological effects. He considered that OGNZL had applied a suitably precautionary approach to effects management, including the following examples: lizard salvage; bat tree-felling protocols; kauri dieback protocols; providing a 10-year time limit for reaching copper skink compensation goals; and offset planting. Mr Wedding also noted that the proposal avoided key elements of SNA 166, including a kauri stand and identified moko skink habitat.

[290] Mr Wedding refuted Forest and Bird's assertion that the principles of biodiversity offsetting had not been adhered to. That is because he considered that "…the biodiversity values in question comprise relatively young, planted, exotic, or regenerating vegetation and ecosystems. These are entirely suitable for offsetting because, as early successional vegetation, they are structurally simple and consist of regenerating habitats that can be readily recreated and enhanced." He further noted that, "The results show low species richness, and in some cases, planted compositions that are inappropriate for their environment (such as kauri and rimu within the Favona Wetland area). The findings of the extensive investigations further confirm that these sites do not represent irreplaceable ecological values." Mr Wedding concluded by stating, "The biodiversity values are well understood and have been robustly assessed to inform both the effects assessment and the design of management and offsetting measures. They have been described, measured and quantified, and the proposed offset actions are well-established restoration techniques that provide a high degree of certainty regarding predicted outcomes. In this context, it is clear that the principles of biodiversity offsetting are adhered to and that the proposal will achieve appropriate, reliable, and positive ecological outcomes."

[291] Ms Muchna disagreed with Forest and Bird's comment that the AEE downplayed the impacts of vegetation clearance and habitat loss within Coromandel Forest Park. That is because she considered those effects were highly localised and temporary. She stated that vegetation and habitats would regenerate to be "virtually indistinguishable from the surrounding forest in time." She further noted that, "In my experience undertaking fauna salvage at several drill sites in Wharekirauponga, vegetation communities are common assemblages of regenerating forest."

[292] Regarding Forest and Bird's comments on lizards, Ms Muchna stated that within the Coromandel Forest Park only two lizard species have been recorded, in very low numbers. She further stated that it was incorrect to say that a range of lizard species were affected by the WNP, as other species such as Northern striped gecko have not been detected in the area. Ms Muchna also addressed iwi concerns about impacts on lizards, noting that lizards are not abundant in the Coromandel Forest Park, that any lizards found will be translocated to the Native Fauna Release Area, and that the release area will have intensive pest control to maximise the likelihood of frogs surviving and breeding.

[293] Ms Muchna responded to Ngāti Tara Tokanui concerns about effects of air discharges on Te Pua o te Rēinga / Te Pua o Marama (wood rose, *Dactylanthus taylorii*). She stated that there were no records of *D. taylorii* in Coromandel Forest Park, and even if they were present, the magnitude of air quality impacts on *D. taylorii* would be low.

[294] Responding to Ngāti Porou ki Hauraki concerns regarding effects of vegetation clearance and mining on birds, Ms Muchna stated that vegetation clearance within the Coromandel Forest Park was small scale and unlikely to impact food, shelter, or nesting resources in the wider forest. Regarding noise impacts on birds from drilling and helicopter activities, she stated that any effects would be localised and temporary.

[295] Ms McArthur addressed DOC concerns that the multi-criteria analysis for site selection did not include exclusion criteria. She stated that exclusion criteria were included in proposed conditions for the Wharekirauponga Access Arrangement and the Northern Area Concession. Those criteria included minimum setbacks from streams, wetlands, and public walking tracks. The criteria also included excluding a proposed drill site if a certain number of At Risk or

Threatened species were found. Ms McArthur noted that what was proposed followed a similar approach to that used in the current access agreement.

Statutory instruments

[296] We discuss the relevant Statutory instruments in Parts G, H and I of this Decision, including specific sections of the statutory documents prepared under the Conservation Act that are referenced in the s 51 and s 53 comments of the Department of Conservation.

Panel findings

[297] Key issues with respect to vegetation clearance effects include the total area and significance of the vegetation, habitats, and fauna affected, and the ability to avoid, remedy, mitigate, and offset effects. As outlined above, a total area of 26.61 ha of vegetation clearance is proposed, which is not insignificant. Of that total area, 0.66 ha is within the Coromandel Forest Park, and it is of high ecological value, while 8.3 ha is within SNA 166, which is highly modified, despite its SNA status. The proposed mitigation measures are extensive and build on practices undertaken by OGNZL under their existing mining authorisations for the area. A total area of 64.55 ha of native planting across the WNP is proposed, including 26.5 ha to offset losses in the Coromandel Forest Park and 17.5 ha to offset losses in SNA 166. Proposed pest animal control activities cover a core area of 632 ha within the Coromandel Forest Park, with ungulate control extending to a 2 km buffer beyond that (except where the buffer intercepts land outside the Forest Park).

[298] In summary, OGNZL and some commenters considered that the scale of effect had been adequately avoided, remedied, mitigated, or offset, while others disagreed.

[299] Having considered all the information before us, we find that terrestrial ecology effects can be adequately avoided, remedied, mitigated, or offset. We have reached that conclusion because of the relatively small area of high ecological value affected within the Coromandel Forest Park, the extensive mitigation measures proposed to avoid and minimise effects, and the large offsetting package proposed. We consider that the offsetting package of planting, habitat enhancement, and pest animal control will have positive ecological effects that outweigh negative effects associated with the WNP.

Conditions

[300] In response to comments and ecology conferencing OGNZL made extensive amendments to ecology-related conditions. We find that the amendments improve clarity and provide greater certainty regarding effects, reporting requirements, management plan certification, and management actions.

E9: EFFECTS ON AQUATIC ECOLOGY

[301] OGNZL addressed aquatic ecology effects in section 6.6.2 of the AEE. Further details are in technical report B.43 by Boffa Miskell, which covers aquatic ecology effects, and report B.47 by RMA Ecology, which summarises ecology effects for all areas within the WNP. Additional detailed technical reports include B.48 by NIWA for modelled effects of stream depletion on aquatic habitat in Wharekirauponga Stream catchment, and report B.44 by Boffa Miskell, which assessed stream depletion effects on ecology. We addressed impacts of the proposed discharge from the WTP on water quality separately in section E4 of this Decision.

[302] Within the Coromandel Forest Park, the AEE concluded that construction effects on aquatic ecology could be avoided, and we agree. Report B.44 by Boffa Miskell assessed mine dewatering effects on aquatic ecology values of the Wharekirauponga Stream and its tributaries using a combination of modelled stream flows and instream habitat modelling from NIWA (report B.48). Boffa Miskell concluded that based on the modelled small changes to low flows, mine dewatering was unlikely to result in "the loss of populations or communities of instream indigenous biota, or cause pathways for invasive species." They further stated that "effects on ecosystem function are likely to be minimal and largely undetectable compared to existing low flow circumstances." Boffa Miskell recommended a stream ecology monitoring programme to confirm that there would be no effects on the natural state of the waterways and their ecological values.

[303] Boffa Miskell (report B43) stated that groundwater models predict that mine dewatering in the Coromandel Forest Park will result in the permanent loss of a warm water spring. They assessed the warm spring as having low ecological value due to its weak geothermal signature and lack of any unique ecological community typically associated with geothermal springs that are hotter or have more extreme chemistry. Boffa Miskell concluded that the loss of the warm spring represented a very low magnitude of effect. To offset the loss of the spring, they recommended offsetting in the form of fencing and native planting along Trib3 of the Mataura Stream.

[304] Outside of the Coromandel Forest Park, the key aquatic ecology impact of the WNP results from waterway reclamations and diversions. A total 4.1 km of permanent and intermittent waterways will be reclaimed (i.e., filled-in), with 3.5 km of new waterway length

being created. The total length of waterways affected and the associated proposed offset are summarised as:

(a) Willows Rock Stack: temporary loss of 558 m of Trib2 of the Matuara Stream. This will eventually be reinstated and enhanced when the WNP site is rehabilitated.

(b) Gladstone Open Pit: permanent loss of 47 m of an intermittent gully.

(c) TSF3: diversion of approximately 2.1 km of waterway, along with the creation of a new stream diversion of 2.5 km length.

(d) Northern Rock Stack: diversion of approximately 1.4 km of waterway, along with the creation of a new 0.7 km long diversion.

[305] The effects of these activities were considered overall positive. The reason for that was the permanent loss of 0.6 km of waterway would be offset by 10.3 km of waterway enhancement, principally in the form of riparian planting and fencing.

Comments received

[306] In its s 51 Access Agreement report, in relation to the Coromandel Forest Park, DOC stated that the loss of the warm spring was a "…significant impact given the spring would cease to exist. However, the impact on freshwater biodiversity is likely to be low due to the composition of the spring and the lack of representative freshwater invertebrate species present." They concluded that although there were uncertain effects from pump water takes, "All other conditions relating to the management of freshwater effects are appropriate." In its s 53 report, DOC expressed concern regarding: the impacts of waterway reclamation on habitat quality and aquatic biodiversity; the relative quality of diverted waterways; and uncertainty about the scale of proposed offsetting.

[307] Attached to the WRC comments was an advice letter by Dr Ngaire Phillips of Streamlined Environmental[14] that reviewed freshwater ecology aspects. In reviewing

[14] Letter from Dr Ngaire Phillips of Streamlined Environmental to Sheryl Road at Waikato Regional Council, dated 19 August 2025.

OGNZL's assessment of dewatering effects in the Coromandel Forest Park, Dr Phillips noted the uncertainty in modelled effects on surface flows and expressed concern about the speed with which mitigation measures would be implemented if stream depletion effects were detected. She posed numerous questions about OGNZL's proposed consent conditions. However, Dr Phillips concluded that, "… any unexpected effects are likely to be appropriately addressed through the proposed baseline and ongoing monitoring, and the proposed adaptive management approach."

[308] Key concerns raised by Fish and Game were the impacts of stream habitat loss through reclamation and the adequacy of the associated compensation, and impacts of the Willows Collection Pond discharge on trout spawning habitat in Mataura Stream.

[309] Ngāti Pū raised concerns about the impacts of mine construction and operation on water quality, impacts of waterway reclamation on taonga species and mahinga kai such as tuna (eel). They requested that site rehabilitation plans include planting of indigenous species including harakeke/flax (*Phormium tenax*), raupō (*Typha orientalis*), pukio (*Carex secta*), purei (*Carex virgata*). Ngāti Pū requested involvement in all "site selection, design, and monitoring of all damming and diversion activities".

[310] Ngāti Porou ki Hauraki expressed concern that "dewatering or contamination, especially in tributaries of Ohinemuri River which commences from puna on NPkH whenua and is joined by other tributaries into the Karangahake catchment, have not been adequately assessed." They also raised concerns about the impacts of the salvage and relocation of taonga species during construction, and the impacts of waterway reclamation.

[311] Ngāti Tara Tokanui requested that any approvals have conditions that include adaptive management measures to address potential dewatering impacts, and mapping and protection of warm springs.

[312] Forest and Bird expressed concern about the impacts of dewatering on springs and streams in the Coromandel Forest Park. They also pointed out that, although monitoring was proposed in relation to potential dewatering effects in the Wharekirauponga Stream catchment, no monitoring was proposed in relation to dewatering effects of the dual tunnel on the Waiharakeke Stream. Forest and Bird stated that the lack of monitoring was "… is

unacceptable and does not account for effects that may have low probability but high potential impact, including dewatering of wetlands and other waterbodies." They also considered there were significant effects from the proposed waterway reclamation outside of the Coromandel Forest Park, and that the proposed offsetting was inadequate.

[313] Coromandel Watchdog submitted statements of evidence in relation to aquatic ecology effects from Dr Mike Joy and Dr Russel Death, both from Victoria University of Wellington. Dr Joy raised concerns regarding the loss of a warm spring in the Coromandel Forest Park, waterway relocations, the ability to offset the effects of waterway reclamations, and potential impacts of selenium in discharge water. Dr Death questioned the scientific robustness of OGNZL's ecological assessment, and stated that effects on unique or threatened species and habitats were inadequately assessed. Dr Death was also sceptical about the ability to offset impacts of waterway reclamation by creating new watercourses and enhancing existing waterways, stating, "I think there is an extremely high probability that moving and/or recreating a stream ecosystem will not work."

OGNZL response to comments

[314] In their response to comments on aquatic ecology, OGNZL included two statements of evidence from Dr Ian Boothroyd (Boffa Miskell), one dated 1 September 2025 and the other dated 10 September 2025. Dr Boothroyd responded to comments on concerning the effects of waterway reclamation and diversion. He confirmed that realigned waterways would be designed to be ecologically functional. Regarding comments about offsetting, Dr Boothroyd stated, "In my experience, the ability to restore and/or re-create waterways to a similar or better condition and function can be fully achieved." he also listed examples where waterway diversions had been successfully achieved with ecological design principles applied.

[315] Turning to effects in the Coromandel Forest Park, Dr Boothroyd reiterated the conclusion of Boffa Miskell (report B.43), that the warm spring had low ecological value and its loss did not represent a high impact on freshwater values. Regarding potential impacts of reduced flows in Wharekirauponga Stream, Dr Boothroyd referred to the Boffa Miskell report, stating that impacts on stream habitat would be no more than a 5% change; an effect that would be largely undetectable during low flow conditions.

Statutory instruments

[316] The primary Statutory instruments are the NSP:FM and the Waikato Regional Plan. We discuss those instruments in Part G of this decision.

Panel findings

[317] Regarding potential dewatering impacts within the Coromandel Forest Park, we appreciate the considerable concerns raised by commentors, particularly regarding OGNZL's ability to monitor and quickly respond to and remedy and adverse effects that arise. However, having considered the proposed resource consent conditions, we consider that these effects can be adequately avoided, mitigated, or offset. For effects of waterway reclamation and diversion, we find that the combination of proposed waterway diversions and enhancements adequately offset the likely adverse effects of those activities.

Conditions

[318] The suite of monitoring conditions proposed by OGNZL include numerous requirements for monitoring, ecological enhancements, and ecological design for realigned waterways, which we consider appropriate for addressing the range of potential adverse effects on aquatic ecology.

E10 EFFECTS ON WETLANDS

[319] The Favona wetland is a feature in the vicinity of the proposed Services Trench, which has already been consented and does not form part of this FTAA application, so is not considered further here.

[320] Key potential effects on wetlands related to the impacts of mine and tunnel dewatering activities on groundwater levels and subsequent impacts on wetland hydrology and ecology. Groundwater effects in the Coromandel Forest Park were addressed in report B.27 by Williamson Water & Land Advisory (WWLA), in relation to the proposed underground mine, and in report B.30 by WWLA, for the tunnel components. Outside of the Coromandel Forest Park, groundwater effects on wetland hydrology were assessed in report B.26 by GHD. Wetland hydrology impacts were assessed in report B.45 by WWLA within the Coromandel Forest Park. Impacts on wetland ecology within the Coromandel Forest Park were assessed in report B.46 by Bioresearches and elsewhere within the WNP in report B.43 by Boffa Miskell.

[321] Within the Coromandel Forest Park, OGNZL considered that potential effects of the mine footprint would be avoided by locating infrastructure away from wetlands. Mine dewatering and associated impacts on wetland hydrology were identified as the key issue potentially affecting wetlands within the Coromandel Forest Park. Report B.46 by Bioresearches identified a total of 0.5 ha of wetlands that were susceptible to effects of dewatering within the Wharekirauponga Stream catchment, above the proposed underground mine. However, they concluded that no adverse effects were expected, as the wetlands are fed by rainfall and surface water inflows and so they are not dependent on groundwater inflows to sustain them. OGNZL propose to monitor wetland hydrology and ecology to address uncertainty regarding potential effects.

[322] Within the Willows Road Farm area, the 0.28 ha Mataura Wetland was identified near proposed mine activities by Boffa Miskell (report B.43). The authors noted the presence of two mature swamp maire (*Syzygium maire*) within the wetland, which have the conservation status of Threatened – Nationally Critical. They further noted that, "…many [swamp maire] populations now qualify as "Living Dead" as they persist as remnants within partially drained farmland, such as at Waihi North". The authors concluded that the specimens may recover over time if the wetland is fenced.

[323] Any potential impacts of the mine's footprint on the Mataura Wetland will be avoided by locating WNP infrastructure away from the wetland. GHD (report B.26) estimated that up to 17% of the catchment area of the wetland could be removed by WNP infrastructure, principally the collection pond, the haul road leading to the Willows Rock Stack and the magazine storage area. They noted that the reduced area available for groundwater recharge to the wetland may result in drier conditions within the wetland during dry summers. However, they concluded that effects were, "unlikely to be discernible from natural variability between summer conditions."

[324] To address uncertainty about potential effects on the Matuara Wetland, GHD recommended monitoring water levels in the wetland and suggested that provision of an alternate water source could be undertaken to mitigate wetland drying if considered necessary. In addition, Boffa Miskell stated that the wetland "…will be enhanced through additional planting, managed natural regrowth from existing seed banks, and weed and pest management. This area will be fenced for stock exclusion and subject to pest and weed management", and that "Swamp maire will be planted and encouraged if the seed source does not deliver the natural rehabilitation."

[325] Boffa Miskell identified the 1.0 ha Gladstone Wetland downstream of the proposed Gladstone Open Pit. They stated that while the wetland is not within the footprint of proposed mine infrastructure, the WNP will result in the loss of approximately 0.14 ha of the wetland's upper headwater gully. GHD (report B.26) stated that excavation of the Gladstone Open Pit was predicted to reduce groundwater levels by approximately 0.5 m at the Gladstone Wetland, with an associated 30% reduction in groundwater recharge to the wetland. GHD concluded that hydrological effects on the wetland would be "small but measurable" and that "stream augmentation or stormwater diversion can be used to mitigate the adverse effects." Boffa Miskell did not anticipate impacts on wetland ecology, because any potential impacts on wetland hydrology would be small compared with natural variability within the wetland. In addition, they noted that, "…the level control at the outlet of the wetland provides for water saturation in the wetland and buffers the wetland against more frequent periods of drying."

[326] The WRC suite of conditions includes requirements to monitor vegetation and hydrological conditions within both Mataura Wetland and Gladstone Wetland. That includes a requirement to remediate any observed impacts of the WNP on those wetlands.

Comments received

[327] Effects on wetlands were addressed in comments from DOC, HDC, WRC, Ngāti Pū, Ngāti Porou ki Hauraki, Ngāti Tara Tokanui, Forest and Bird, and Coromandel Watchdog.

[328] In its s 53 report, DOC considered that effects on the Mataura and Gladstone wetlands might be greater than stated in OGNZL's assessments. DOC also considered there was insufficient information about the proposed planting and enhancement of the Mataura Wetland. Numerous changes to wetland-related conditions were recommended.

[329] WRC included a letter from Karen Denyer of Paparewa Geological Consulting[15] that reviewed wetland aspects. Ms Denyer noted that, "the Mataura, Gladstone and Favona wetlands meet the definition of Natural Inland Wetlands (NIW) in the National Policy Statement-Freshwater Management 2020 (NPS:FM) and the criteria for significance in the Waikato Regional Policy Statement. None of these wetlands will be directly adversely affected by the proposal but may be affected by reduced water inflow and increased sediment input." Ms Denyer recommended the addition of various new conditions, including: wetland monitoring in relation to potential effects of altered hydrology or dewatering; clarification that Mataura Wetland would be protected by fencing and will be restored; and preparation of a restoration plan to offset the loss of approximately 0.6 ha of wetlands in TB1.

[330] Ngāti Pū expressed concern about the effects of mining on wetlands in general, while Ngāti Porou ki Hauraki raised concerns regarding dewatering effects on wetlands. Ngāti Tara Tokanui requested that any approvals contain conditions that include adaptive management measures to address potential dewatering impacts, and restoration of wetlands, traditional food sources, and ecosystems affected by mining activities.

[331] Forest and Bird raised concerns about effects of dewatering on the Mataura and Gladstone wetlands, as well as effects on streams and wetlands within the Coromandel Forest Park. They also expressed concern about the adequacy of proposed monitoring conditions and the ability to respond to any detected adverse effects.

---

[15] Letter from Karen Denyer of Papawera Geological Consulting to Sheryl Roa at Waikato Regional Council, dated 22 August 2025.

[332] In a statement of evidence for Coromandel Watchdog, Hamish Kendell from Natural Solutions raised numerous concerns about effects on wetlands. His concerns echoed those of other commenters regarding the ecological significance of wetlands, uncertainty about the impacts of mine dewatering, and the ability to mitigate effects on wetlands.

OGNZL response to comments

[333] In their response to comments on wetlands, OGNZL included statements of evidence from Dr Ian Boothroyd (Boffa Miskell) and Ms Kate Feickert (Bioresearches).

[334] Concerning potential hydrological impacts on the Gladstone Wetland, Dr Boothroyd referred to the assessment in report B. 43 by Boffa Miskell, reiterating that a level control at the outlet of the wetland provided for water saturation in the wetland and buffered the wetland against more frequent periods of drying. In relation to Matuara Wetland, Dr Boothroyd confirmed the proposal for fencing and planting of the wetland, and for a buffer of at least 10 m around the wetland.

[335] In the long term, the Gladstone Wetland will receive some runoff from southern outlet of the backfilled and capped GOP. This will remedy any loss of flow into the wetland that occurred during mining as a result of the decrease in groundwater levels and the truncation of the wetland's headwater gully. Additionally, post-closure groundwater levels are predicted to increase in the vicinity of the wetland.

[336] Responding to various concerns about impacts on wetlands, Ms Feickert considered that OGNZL's application documents adequately assessed the significance of wetlands and potential impacts of the WNP on wetlands. She concluded that uncertainty regarding the effectiveness of mitigation measures could be addressed by wetland monitoring, which would identify if further mitigation measures were required.

Statutory instruments

[337] We discuss the relevant Statutory instruments in Parts G, H and I, including specific sections of the statutory documents prepared under the Conservation Act that are referenced in the s 51 and s 53 comments of the Department of Conservation

Panel findings

[338] Having considered the full range information before us, we find that potential effects on wetlands will either be avoided or will be no more than minor. Any residual uncertainty regarding potential effects on wetlands will be adequately addressed by monitoring and the OGNZL's proposed mitigation and offsetting.

Conditions

[339] A range of monitoring, mitigation, and offsetting conditions were proposed by OGNZL. We consider those conditions adequately address both the likely scale of effects on wetlands and any residual uncertainty about those effects. Consequently, we have only made a small number of minor clarifying amendments to those conditions.

E11: LANDSCAPE, VISUAL AMENITY AND NATURAL CHARACTER EFFECTS

[340] OGNZL addressed landscape, natural character and visual effects in section 6.7 of the AEE and the Part B.50 Boffa Miskell report.[16] That report concluded that based on the underground nature of the WUG, landscape, natural character and visual effects within the Coromandel Forest Park would be largely avoided. The distinctive peaks, ridges and valleys would remain intact alongside the existing broader native forest cover. No physical modification to existing streams or rivers was anticipated other than the loss of a single warm spring.

[341] Beyond the Coromandel Forest Park, Boffa Miskell concluded the majority of the WNP would remain visually well contained and be primarily located in proximity to established mining activity, resulting in no significant increase in adverse landscape or visual effects.[17]

[342] However, we note that substantial surface infrastructure and earthworks are required within the Willows Road site on rural land adjoining the Coromandel Forest Park, including a further shaft raise and a portal to the underground mine with associated surface infrastructure and rock storage pad from which material from the underground mine will be deposited and later removed. The GOP and subsequent tailings storage facility will substantially modify an existing working rural area and part of the sequence of rounded elevated landforms which extend to the east of Waihi. This will gradually extend mining activity adjacent to the existing Processing Plant, while remaining relatively well contained beyond Union and Winner Hills. The proposed NRS will modify a rural area within the existing Martha Mineral Zone, however it will be screened from its closest public view by a grass-planted bund along the Golden Valley Road boundary.

[343] Boffa Miskell considered that beyond the Coromandel Forest Park, these surface elements of the WNP had been contained within working rural environments largely adjoining areas with existing mining activity. To mitigate visual amenity effects intervening topography

---

16 Waihi North Project, Landscape, Natural Character and Visual Effects Assessment, Prepared for OceanaGold New Zealand Limited, 10 February 2025.

17 *Gladstone Open Pit and Tailings Storage Facility, Upgrades of the Processing and Water Treatment Plants, Tailings Storage Facility 3*

and landcover had been retained. During operation, views of any expanded mining activity would be limited.

Comments received

[344] For HDC, peer reviewer Dave Mansergh considered the Boffa Miskell assessment was consistent with the methodological frameworks and recommendations contained in Te Tangi a te Manu- Aotearoa New Zealand Landscape Assessment Guidelines.[18] Mr Mansergh considered the WNP's surface infrastructure, landform modification, and vegetation clearance would result in noticeable and often prolonged changes to the existing landscape. He recommended that the WNP's mitigation framework be strengthened by rationalising the proposed conditions, consolidating all mitigation requirements into revised versions of the WUG-ELMP and WA-ELMP, and performance standards should be introduced to guide mitigation implementation and support effective monitoring.

[345] Mr Mansergh noted there was limited assessment of private views, particularly dwellings along Willows Road, Golden Valley Road and Trig Road. He was critical of the assessment of cumulative effects. He also considered the proposed post rehabilitation and closure concept was designed to restore the landscape to a mix of ecological, amenity (visual and recreational) and rural land uses. That was consistent with current best practice in mine facility closure and landscape restoration, focusing on long-term integration of modified landforms and land uses with the surrounding environment.

[346] Nevertheless, subject to OGNZL addressing his concerns regarding conditions, Mr Mansergh concluded that the effects of the WNP on landscape, natural character, and visual amenity could be avoided or appropriately mitigated. Remediation measures will ensure the WNP remains visually contained within the established mining context, with no significant increase in adverse landscape or visual effects.

[347] HDC's planning assessment concluded that while HDC was critical of the manner in which the assessment has been undertaken, impacts on landscape, natural character and visual matters are acceptable and appropriate.

---

[18] Mansergh Graham Landscape Architects

[348] HDC's planning assessment recommended that the WUG-ELMP and the WA-ELMP should be amended and resubmitted to the Panel for certification.

[349] Comments from TCDC were related to certification of the WUG-ELMP. WRC did not specifically address landscape matters. DOC considered that the landscape values of the Wharekiraupoinga were not expected to be adversely impacted, although noticeable to users in close proximity. Coromandel Watchdog stressed the importance of the Outstanding Natural Areas and high value conservation landscape and expressed concerns about impacts on the area's natural beauty. Ngāti Pu expressed concerned about permanent alterations to topography and visual character of the landscape. Several layperson commentators expressed concern about the sensitivity of the landscape and visual impacts that would be evident from their property.[19]

OGNZL's response to comments

[350] In response to HDC's peer review, OGNZL's expert Rhys Garvin agreed that landscape objectives should be made more explicit in each ELMP and the plans should include a specific landscape and visual mitigation plan addressing objectives for landscape, natural character and visual amenity effects. He also agreed that each ELMP should include checklists summarising mitigation recommendations for each WNP Area along with performance measures for each discrete plan within the ELMPs, with the performance standards clarifying how specific mitigation recommendations were to be applied to achieve the wider integrated management of effects.[20]

[351] On visual effects, Mr Girvan advised he had considered views from several adjacent dwellings to ensure the effects of the WNP were clearly understood, including the preparation of accurate visual simulations from private property that were shared with landowners. He noted an assessment of cumulative landscape and cumulative visual effects was set out section 12 of the B.50 Boffa Miskell assessment. He suggested that once mitigations to be implemented concurrently with mining operations became established, identified cumulative adverse effects would reduce.

---

19 Including Waihi Community Forum, John Perrins, Chris Batten, Brigid and Steve Cameron and Rodney Malone.

20 For example, the WUG-ELMP contains 'sub plans' for Terrestrial Ecology, Vegetation Remediation, Aquatic Faina Salvage and Relocation, and Kauri Dieback.

[352] For the visual effect of a potential 175m high water vapour plume which might occur in association with the WUG and associated vent raise within the Coromandel Forest Park, Mr Girvan advised that based on the very limited views of that plume that would be observed in the context of the broader vivid and striking backdrop of the Coromandel Range, the overall visual effect was assessed as very low.

[353] Importantly, Mr Girvan considered that in the absence of further ability to modify then certify ELMPs through the FTAA process (given OGNZL wished to have those documents approved by the Panel), any gaps identified by Mr Mansergh should be subject to consent conditions and Council certification.

Statutory instruments

[354] Coromandel Forest Park is the only mapped ONL in the HDP within the WNP area. There are no mapped Amenity Landscapes within the WNP area. No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[355] We find that OGNZL has adequately identified and assessed potential adverse effects of the WUG aspect of the WNP on landscape, natural character and visual amenity. We accept HDC's peer review conclusion that, subject to the imposition of appropriate conditions of consent, adverse effects will be avoided or appropriately mitigated. We acknowledge that the views from some private properties will alter as the WNP progresses, but for the large part (apart from the Willows Area) that alteration will sit within the context of established mining activity.

[356] We are satisfied that OGNZL has retained existing topography and landcover as far as practicable such that during the WNP's operation, views of any expanded mining activity will be limited. Mitigation and rehabilitation measures (as specified in HDC condition 55 and the ELMPs) will ameliorate adverse visual amenity effects to the extent practicable.

[357] As outlined above, HDC's planning assessment recommended that the WUG-ELMP and the WA-ELMP should be amended and resubmitted to the Panel for certification. However, that is unnecessary because as set out in section E1 of this Decision, we have decided that all

of the management plans should be submitted to the respective councils for certification as opposed to being certified by the Panel.

Conditions

[358] We have not made any amendments to OGNZL's 1 September 2025 Landscape Mitigation Condition 55 in the HDC land use consent.

[359] However, as outlined in section E1 of this Decision, we have amended Conditions C4 to C5 of the Combined HDC and WRC consent to require the WUG-ELMP and WA-ELMP to be provided to the councils for certification.

[360] We have amended Combined HDC and WRC consent conditions C47A and C47B to include requirements relating to mitigation works and monitoring, reporting and review procedures.[21] We have also amended conditions C47A(vii) and C47B(xii) to refer to visual amenity. We find those amendments to be appropriate to guide the councils' certification process. We note that in their response to comments OGNZL had accepted Mr Marsergh's suggested amendments to conditions C49, C60 and C61.

[361] We find the council certification process will enable any necessary refinements to the ELMP's to be addressed, including those identified in HDC's peer review.

[21] As was recommended by Mr Mansregh.

E12: GEOTECHNICAL EFFECTS

[362] OGNZL addressed geotechnical effects in section 6.8 of the AEE. The potential geotechnical effects we address here relate primarily to stability and safety of surface slopes (GOP, NRS, WRS), tailings facilities (TSF3 and GOP TSF) and underground elements of the WNP (WUG, ventilation shafts, WUG Access Tunnel, Willows Access Tunnel, Willows Portal, and Wharekirauponga Access Tunnel).

[363] Geotechnical effects have been separated from ground settlement and subsidence effects, for consistency and ease of comparison with the Application documents, despite a significant relationship between the two. When considering tunnels and underground mining, geotechnical effects have been considered on the basis of the adverse or unanticipated performance of the tunnels or underground mine. Ground settlement and subsidence effects, by contrast are based on the expected performance of the tunnels or underground mine and these are addressed in section E6 of this Decision.

[364] The geotechnical effects each element of the proposed WNP are largely separated from the others. Consequently, we address each in turn in the following sections.

Tunnels and Underground Mining

[365] Geotechnical Effects for tunnelling and mining were set out in the AEE at section 6.8.1 which summarised the outcomes of an assessment completed by WSP (2025a). That assessment indicated that the tunnels and underground mine will be supported by rock bolts and shotcrete, with narrower bolt spacings and shotcrete and mesh applied in zones of poorer quality rock.

[366] Control of groundwater inflows was expected to require sump pumping to surface, or grouting and lining the tunnels where high groundwater inflows are encountered.

[367] Additional boreholes are proposed along the WUG Dual Tunnel alignment to support detailed design. This will include rock strength data, discontinuity orientation, spacing and condition data and characterisation of groundwater conditions. Additional design verification will be provided by drilling ahead of tunnel construction.

[368] Long term stabilization is to be provided by "stoping" which fundamentally backfills the mining voids, supporting the roof of underground mines.

[369] Long term rehabilitation of tunnels and the underground mine was described in section 6.20 of the application. This generally includes backfilling of the first 100 m of the access tunnels and backfilling of other areas of the tunnels and the mine itself "…*where geotechnical conditions require it to ensure long term stability.*"

Comments Received

[370] Geotechnical effects related to tunnel and underground mining were addressed in the comments from HDC, DOC, Ngāti Pū and one lay commentator (Ross).

[371] Ngāti Pū were concerned about a higher level of risk due to increased consequence of failure or adverse performance where tunnels pass beneath waterways due to a lack of information available and recommended that... "*Comprehensive risk assessments, site management standards, and emergency protocols must be prepared and adhered to for any works underneath a waterway. These must be peer reviewed by mana whenua and be regularly monitored by an independent technical expert*."

[372] HDC's reviewer Dr Peter Fuller identified that "*Given the preliminary level of the current assessment, it is my view that some mining related consent conditions are required to ensure that any surface disruption due to mining is measured and that mining stopes without backfill is to be avoided in future mine planning*." Additional conditions were recommended to address this issue.

[373] DOC's comments in regard to subsidence and slumping and effects on Archey's frogs are addressed specifically in paragraph 39 of DOC's s 53 report. We note that the performance of the crown pillar formed between the uppermost stopes and the surface in the mining area will also be relevant to the overall level of final subsidence (i.e. total subsidence will be the sum of crown pillar deformation and settlement due to groundwater drawdown). Dr Fuller's expert comments on behalf of HDC are equally relevant to DOC's overall comments relating to subsidence.

[374] Comments from Mr and Mrs Ross related to the depth of the Wharekirauponga Access Tunnel in relation to a dwelling owned by them at 123 Barry Road and associated settlement effects. The tunnel depth at their home would be in the order of 120 m.

OGNZL response to comments

[375] OGNZL addressed the comments provided by HDC (and by extension DOC) by accepting the additional condition proposed by HDC relating to backfilling of stopes at the WUG and monitoring of ground surface levels in the Coromandel Forest Park above the WUG.

[376] OGNZL addressed the comments of Mr and Mrs Ross, with respect to dewatering related settlement effects. They did not however address mechanical settlement effects relating to performance of the crown of the Wharekirauponga Access Tunnel in the long term post closure.

[377] OGNZL did not specifically addressed the comments provided in the CIA prepared by Ngāti Pū and instead pointed to the various evidence provided by experts.

Statutory Instruments

[378] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[379] There are clearly some areas of cross over between geotechnical effects and subsidence effects relating to the tunnel and underground mine workings. When considering geotechnical effects that are discernible at the ground surface and that relate to the adverse or unanticipated performance of the tunnels or underground mine, it is the Panel's view that these risks are negligeable when considered in the context of the offered and agreed conditions described below.

Conditions

[380] In its response to comments received OGNZL accepted HDC's proposal to include additional condition 51A in the HDC Condition Set. This relates to backfilling requirements, grouting of exploration drillholes at the WUG and associated monitoring.

[381] Overall, we find that the revised conditions appropriately manage geotechnical effects relating to performance of the WUG, WUG Dual Tunnels, Willows Access Tunnel and Wharekirauponga Access Tunnel.

[382] Consideration of the recommendations from Ngāti Pū for consent conditions are more closely aligned to dewatering and subsidence effects and are therefore addressed in section E3 of this Decision.

Willows Waste Rock Stack

[383] Geotechnical Effects for the Willows Waste Rock Stack (WRS) were set out in the AEE at section 6.8.2 which summarised the outcomes of an assessment completed by EGL (2025g).

[384] The assessment by EGL indicated that acceptable levels of stability can be maintained for the WRS over the duration of the WNP. The design allows for a degree of conservatism to accommodate a longer design life in the event that future mining extensions are sought and successfully consented.

[385] Detailed design of the WRS remains to be completed, and EGL noted that a building consent is not required, meaning construction could commence immediately upon receiving the required resource consents. EGL indicated that the detailed design should be subject to a technical peer review and that the result of that peer review should be submitted to WRC and HDC prior to construction.

[386] EGL also provided an indicative list of the type of post construction monitoring that is proposed "…provide for the detection and mitigation of potential deficiencies or undesirable trends". Monitoring results are proposed to be collated and submitted to the existing Waihi Independent Peer Review Panel, WRC and HDC on an annual basis.

[387] EGL proposed a Willows Rock Stack Management Plan to collate and manage the design, construction, operation, maintenance, monitoring and review, required.

Comments Received

[388] Geotechnical effects were addressed in the comments from WRC and Coromandel Watchdog (evidence of Mr Tegg).

[389] WRC comments were based on technical review carried out by Tonkin & Taylor (T+T). T+T indicated that the design was generally appropriate and consistent with expectations for a substantive FTAA resource consent application. T+T made a number of technical comments (including the recommended incorporation of the updated NSHM (2022) for seismic loads) but noted that these can all be addressed in future detailed design. They stated that the likely consenting requirements and summary of potential risks and mitigation measures all appeared appropriate.

[390] Mr Tegg of behalf of Coromandel Watchdog, commented that accurate monitoring of existing waste rock piles was needed.

OGNZL response to comments

[391] OGNZL acknowledged the comments from WRC's technical reviewer and noted that many of the items raised will be addressed in detailed design or as conditions of consent. The revised WRC condition set incorporated these suggested changes.

[392] OGNZL provided a response to Mr Tegg's evidence that the existing waste rock piles are routinely monitored, including extensive instrumentation, and referenced the evidence of Dr Matuschka dated 1 September 2025. That evidence did not include information on instrumentation of Waste Rock Stacks and that information was also not provided in the EGL response to RFI1 dated 16 October 2025.

Statutory Instruments

[393] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[394] While OGNZL have not provided information relating to monitoring instrumentation of the existing waste rock stacks, the performance of those existing waste rock stacks (polishing pond stockpile and northern stockpile) has been acceptable, and there is sufficient free draining waste rock to manage internal pore pressures within the waste rock stacks.

[395] Subject to the imposition of appropriate conditions of consent we find that geotechnical effects associated with the Willows Waste Rock Stockpile are appropriately avoided, remedied or mitigated.

Conditions

[396] We find that the revised conditions sought by WRC will appropriately manage geotechnical effects relating to performance of the Willows WRS. These have been agreed to by OGNZL.

Gladstone Open Pit, Gladstone Open Pit Tailings Storage Facility and Gladstone Portal

[397] Geotechnical Effects for the GOP are set out in the AEE at section 6.8.3.1 which summarised the outcomes of an assessment completed by PSM (2025a). Geotechnical Effects for the GOP TSF are set out in the AEE at section 6.8.3.3 which summarised the outcomes of an assessment completed by GHD (2025a). A peer review was also undertaken by Engineering Geology Limited (EGL 2025b).

[398] The Gladstone Portal is described in the AEE at section 6.8.3.4 and in PSM (2025a).

[399] PSM are of the opinion that the GOP and Gladstone Portal can be constructed within commonly accepted stability thresholds. They consider that a key design element to achieve stability of the pit walls is groundwater depressurisation during excavation.

[400] A ground control management plan (GCMP) was proposed by PSM (2025a) to address groundwater depressurisation along with other geological uncertainties. The AEE states that this would not form part of the suite of conditions, but rather, would be an internal OGNZL document (AEE section 6.8.3.1).

[401] GHD indicated that there were no credible breach mechanisms for the proposed GOP TSF, due to the tailings being placed within the excavated void of the GOP. They also stated that there was limited risk of landslide or rockslide failure of the pit wall into the detained reservoir due to the relatively gently sloped pit walls and that minimum freeboard requirements include an allowance for Probable Maximum Precipitation (PMP) as well as landslide-generated wave scenarios, reducing risk of uncontrolled overtopping events.

Comments Received

[402] Geotechnical effects were addressed in the comments from HDC, WRC, Ngāti Tara Tokanui Ngāti Koi (NTTNK) and one lay commentator (Perrin).

[403] NTTNK expressed concern with the proximity of the GOP being 50 m from Motukehu, and the potential for instability (due to weak rock and faulting) to affect Motukehu. They also raised concerns about reactivation of two landslides identified in the area of the GOP.

[404] HDC identified no issues of concern relating to the GOP, provided that the consent conditions were revised to include additional conditions recommended by their independent expert Peter Fuller .

[405] WRC, supported by its technical Reviewer Tim Coote, suggested that the PSM 2025a report was appropriately detailed for the FTAA consenting process and did not disagree with the outcomes. However, they noted the uncertainty around groundwater depressurisation and that the application documentation provided for a piezometer network system around the GOP. While this network was recommended within PSM 2025a at Section 12.3.5, WRC were unable to ascertain where in the proposed conditions this programme of works was located, as it was not contained within the Groundwater Management Plan.

[406] WRC also raised the issue of seismic design and the need to consider the seismic loads incorporated in the National Seismic Hazard Model (NSHM 2022) in detailed design. Other commentators also raised this issue, specifically as it related to other elements of the WNP (Coromandel Watchdog), but those comments are equally relevant to all design elements of the WNP.

[407] WRC and their technical reviewers identified elements of the design that will need to be fleshed out in detailed design and that as the eventual GOPTSF "…*does not meet the definition of a dam, a building consent is not expected to be required. It is therefore important that resource consent conditions lock in the measures proposed in this design report to ensure the GOP TSF is built and maintained in accordance with design assumptions*."

[408] The WRC also advised that "…*these matters are relevant to the final design of the Gladstone Pit which is provided for via the various certification processes and management plans associated with the Gladstone Pit*."

[409] Mr Perrin has indicated concerns for the "stability of the area".

OGNZL response to comments

[410] OGNZL directed the Panel to the evidence of Dr Matushka in response to the comments made by NTTNK regarding the stability of the GOP, but that evidence does not address stability of the GOP. Nevertheless, the Panel are of the view that the general nature of the comments by NTTNK are already adequately addressed by the technical information provided in PSM (2025a) and OGNZL's response to HDC and WRC reviewer's comments.

[411] OGNZL did not specifically respond to the comments made by HDC regarding the stability of the GOP. However, HDC recommendations largely relate to additional consent conditions which are addressed below.

[412] OGNZL's response to WRC comments relating to the GOP, GOP TSF and GP indicate that they acknowledge the comments and that they will be addressed either by a combination of revised conditions, detailed design and associated certification and management plans.

[413] OGNZL stated that the evidence of Dr Matushka addressed the issues raised by lay commentators with respect to GOP wall stability. However, that evidence does not specifically address GOP wall stability. Nevertheless, we are satisfied that the design prepared by PSM 2025a and the subsequent reviews on behalf of HDC and WRC provide sufficient evidence that acceptable levels of pit wall stability can be achieved.

Statutory Instruments

[414] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[415] Subject to the imposition of appropriate conditions of consent we find that geotechnical effects associated with the GOP, GOP TSF and GP are appropriately avoided, remedied or mitigated.

Conditions

[416] In its response to comments OGNZL accepted HDC's proposal to include the Ground Control Management Plan (GCMP) as a condition of consent (additional condition 51B in HDC Condition Set). We note that given the GCMP is where the proposed piezometer network is to be detailed, then this additional condition is expected to also satisfy WRC's concern around this aspect of pit wall stability.

[417] Issues raised by WRC relating to detailed design are largely addressed by conditions C50 to C58 in the Combined HDC and WDC conditions (provision of a peer review panel), and WRC conditions SC5.G.12 and SC5.G.30 (relating to submission of detailed design and technical review). A specific WRC condition (SC2.F.13.A) has also been included to address the need for seismic design to take account of the NSHM 2022.

[418] From the perspective of geotechnical effects, the Panel consider that the revised Combined HDC and WRC and separate HDC and WRC conditions adequately provide for the additional certainty that NTTNK sought[22].

[419] Overall, we find that the revised conditions appropriately manage geotechnical effects relating to performance of the GOP, GOP TSF and GP.

---

[22] Paragraph 68 of their comments.

Northern Rock Stack

[420] Geotechnical Effects for the Northern Rock Stack (NRS) were set out in the AEE at section 6.8.4 which summarises the outcomes of assessments completed by EGL (2025d). The NRS differs from the Willows WRS in that it will eventually permanently store surplus overburden earth and rock from open pit and underground mining that is not used for Tailings Storage Facility (TSF) construction.

[421] The EGL geotechnical assessment indicated that the NRS can achieve acceptable levels of stability for the duration of the proposed WNP. However, the slope stability results were contingent on the management of materials of different strengths within the stockpile and the inclusion of a shear key cut into the underlying rock.

[422] Detailed design of the NRS remains to be completed, and EGL noted that a building consent will be required for the NRS collection pond which is expected to be classified as a large dam under the Building Act 2004, with the expectation that the Potential Impact Classification (PIC) is likely to be low.

[423] EGL indicated that the detailed design of the NRS and the NRS collection pond should be subject to a technical peer review. EGL also indicated that an Operation Management Plan (OMP) would be developed that will outline operational, maintenance and surveillance items for the NRS. An indicative list of instrumentation and monitoring was provided.

Comments Received

[424] Geotechnical effects were addressed in the comments received from WRC and Coromandel Watchdog (evidence of Mr Tegg).

[425] WRC comments were based on technical review carried out by Mr Coote (T+T), who identified some similar technical matters to those set out for the Willows WRS that will need to be addressed in future detailed design.

[426] Mr Tegg's comments relating to monitoring of existing waste rock stockpiles is equally relevant to the NRS.

OGNZL response to comments

[427] OGNZL acknowledged the comments from WRC's technical reviewer and advised that many the items raised will be addressed in detailed design or as conditions of consent. The revised WRC condition set incorporates these suggested changes.

[428] OGNZL provided a response to Mr Tegg's evidence that the existing waste rock piles are routinely monitored including extensive instrumentation. No further information was been provided that demonstrates the existing instrumentation of waste rock stacks, but the proposed monitoring appears appropriate.

Statutory Instruments

[429] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[430] Subject to the imposition of appropriate conditions of consent we find that geotechnical effects associated with the Northern Rock Stack are appropriately avoided, remedied or mitigated.

Conditions

[431] In general, the revised conditions provided by WRC are considered to appropriately manage geotechnical effects relating to the performance of the NRS. They have been broadly agreed to by OGNZL.

Tailings Storage Facility 3

[432] Geotechnical Effects for TSF3 were set out in the AEE at section 6.8.5 which summarised the outcomes of assessments completed by EGL (2025a, 2025c & 2025e).

[433] EGL provided preliminary design information for TSF3 which included geotechnical investigation, ground and groundwater models and stability analyses. They noted that TSF3 will be designed, constructed and operated within the requirements of the New Zealand Dam

Safety Guidelines (NZDSG 2024), the Building Act 2024 and the within the requirements of Building Act 2004 and the Building (Dam Safety) Regulations 2022 (for operations).

[434] Overall EGL were of the view that TSF3 can be designed, constructed and operated to achieve the stability requirements of the guidelines, legislation and regulations.

[435] EGL (2025c) identified a range of potential design, construction and operational risks and incorporated a range of measures to mitigate these risks such that the residual risk of failure of TSF3 was considered to be very low.

[436] A key risk mitigation measure is the engagement of a Peer Reviewer due to the High Potential Impact Classification (PIC) for TSF3. An additional, second level of review is provided by the proposed independent Peer Review Panel.

[437] While the proposed membrane liner only extends to RL135 m, the dam itself will extend to RL 155 m with the potential for a future lift to RL 177 m (recognising that the application only covers filling to RL 155 m). In EGL's response (dated 16 October 2025) to RFI1, they outlined that the membrane liner was only required for the very early stages of tailings filling where low permeability tailings fines have not developed in sufficient thickness to inhibit seepage flows into the foundation. They confirmed acceptable design life of the membrane and that the membrane is no longer necessary after the first few years of filling are completed.

[438] The outer face of TSF1A is to be stripped and the internal zoned fill for the inside face of the TSF3 embankment is to be extended onto the outer face of TSF1A, resulting in a central embankment with tailings impounded on both sides[23].

[439] Additional information relating to internal groundwater pore pressures allowed for in preliminary design has been provided by EGL in response to RFI1. The basis for these groundwater pore pressures is accepted, recognising that final detailed design is yet to be completed.

[23] EGL's response to RFI 1 dated 16 October 2025

[440] The EGL 2025a report states that there are large volumes of overburden materials available and that either complete dry capping or partial dry/wet capping are feasible as a final closure solution.

Comments Received

[441] The TSF3 design reports were reviewed by T+T on behalf of WRC, who have been involved with reviews of earlier drafts of the reports during the earlier resource consent process. T+T were generally satisfied with the level of design and considered it appropriate to support consenting. Compliance with the NZDSG on completion (operations), need for peer review and the adoption of the National Seismic Hazard Model (2022) were all recommended.

[442] Concerns were raised by Coromandel Watchdog regarding the risk of failure of TSF3 and whether the assessments presented by OGNZL's consultants identified and had regard for all relevant factors. In summary these include:

(a) Whether a permanent water cover on TSF3 presents a higher risk of long term instability of TSF3 and an opinion that the collapse of TSF3 is inevitable (evidence of Dr Emerman).

(b) Stability of the TSF3 foundation, uncertainty in seismic design and loadings, design cases and allowance for concurrent low likelihood events and the need for independent peer review (evidence of Mr Tegg).

[443] Ngāti Hako supported Coromandel Watchdog's position on "..Environment and Socio - Economic Impacts of Tailings Dams". On this basis we concluded that Ngāti Hako have an interest in the design, construction, geotechnical performance and operation of TSF3.

OGNZL response to comments

[444] OGNZL acknowledged the comments from WRC's technical reviewer and noted that the items raised will be addressed in detailed design and as conditions of consent. The revised WRC condition set incorporates suggested changes.

[445] OGNZL's expert Dr Matushka provided a response to the evidence of Dr Emerman and Mr Tegg as follows:

(a) detailed design of TSF3 will be in accordance with the NZDSG;

(b) the NZDSG "…require the design to consider the latest seismic hazard information, which will include the extensive national update to the New Zealand Seismic Hazard Model in 2022.";

(c) the foundation conditions for the TSF3 site are significantly different from the Golden Cross tailings dam which was built on a historic landslide, something that was not recognised in initial site selection;

(d) as a high PIC dam, an independent technical peer review is a requirement of the NZDSG;

(e) after closure, monitoring and maintenance of TSF3 has been allowed for "in the form of a trust… for the existing TSFs at Waihi and will be extended to include TSF3"; and

(f) disagreement with the premise of Dr Emerman that the failure of the tailings facility are inevitable.

[446] Dr Matushka concluded that "TSF3 will be designed, constructed and closed in accordance with the New Zealand Dam Safety Guidelines. TSF3 will be designed for extreme earthquake and flood conditions, including in closure. It will form a safe and stable landform in closure with minimal maintenance and surveillance requirements".

Statutory Instruments

[447] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[448] Dr Matushka considered that TSF3 can be built in accordance with the current New Zealand Dam Safety Guidelines and that this provided an acceptable very low level of long term failure risk, whereas Dr Emerman appeared to suggest that a much longer "operation & post closure" timeframe needs to be considered, over which time he contends that failure is statistically inevitable.

[449] We prefer the opinion of Dr Matushka, namely that the current NZDSG is an appropriate design document to follow for the design, construction and monitoring of TSF3. In that regard we note that the technical review prepared by T+T on behalf of WRC agreed with OGNZL's general design approach and preliminary design outcomes, pending detailed design.

[450] Dr Emerman's view that likelihood of failure is not relevant, making the consequence of failure the key driver of risk, may have some statistical relevance from a more holistic view, but it is out of step with the design requirements and design life for other significant pieces of infrastructure in the New Zealand context, such as multi-storey buildings, landfills, or road bridges. Further, it is predicted on the following outcomes:

(a) the initial state of the deposited tailings remains into the future, ignoring any strength gain in tailings over time due to dewatering and consolidation; and

(b) monitoring, inspection, maintenance and review of TSF3 will not be undertaken post-closure, when on closure it is proposed to transfer TSF3 to the Martha Trust for management and monitoring in perpetuity.

[451] On the available evidence we do not see those outcomes as realistic.

[452] The issue of the final capping of TSF3 remains relevant, and we have considered both the view of Dr Emerman that wet capped tailings are inherently higher risk, due to permanently holding a reservoir, as well as longer term considerations around the negative effects that a detained reservoir may have on tailings consolidation and associated long term strength gains. We also note the view of OGNZL's designers EGL that either a dry cap or a wet cap are feasible final rehabilitation options.

[453] Overall, the Panel is satisfied that the design, construction, maintenance and long term monitoring of TSF3 can avoid, remedy or mitigate geotechnical effects. Subject to the imposition of appropriate conditions of consent.

Conditions

[454] In general, the revised conditions provided by WRC are considered to appropriately manage geotechnical effects relating to the performance of TSF3. They have been broadly agreed to by OGNZL.

[455] However, the Panel consider that a dry cap may be a more appropriate long term closure and rehabilitation measure and we have imposed an additional condition of consent that requires this closure rehabilitation method to be evaluated as part of the detailed design process. We have accordingly inserted an additional condition SC7.H.17.B into the WRC consent (RMA S14 to RMA S15) that authorises TSF3.

E13: GEOCHEMISTRY AND ACID AND METALLIFEROUS DRAINAGE EFFECTS

[456] OGNZL addressed geochemistry and acid and metalliferous drainage effects in section 6.9 of the AEE, the Part B.14 AECOM report,[24] and Part B.15 GHD report.[25]

[457] Overall, these reports identified that Acid and Metalliferous Drainage (AMD) is expected to be a risk for the WNP and though this process is a natural one, it can be accelerated or exacerbated by the reduction in particle size and increase in rock surface area that occurs during mining. Adverse environmental effects from AMD occur due to low pH and/or elevated trace metal concentrations.

[458] The exact composition of trace elements varies across the WNP due to the expected changes in geology between the current Waihi mining areas and the WUG mine. OGNZL, AECOM and GHD maintain that the limited site specific testing undertaken along with the experience gained from managing AMD for the current mine means that potential AMD effects are sufficiently well characterised for the consenting stage of the WNP.

Underground infrastructure

[459] The underground aspects of the WNP include the WUG itself, the WUG access tunnel, the Dual Tunnels and the Willows access tunnel. While the trace metal types vary across the underground infrastructure the broad process to treat mine water is similar across the underground parts of the proposal.

(a) limit inflows into the underground parts of the mine by sealing off areas of high groundwater inflow with grout;

(b) all mine water not re-used for drilling to be conveyed to the upgraded Water Treatment Plant at the current surface facilities area for treatment prior to eventual disposal; and

---

24 Geochemical Assessment Wharekirauponga Underground Mine (WAI-985-000-REP-LC-0013), GHD, 05 February 2025.

25 Waihi North Project Geochemical Assessment Geochemistry of Tailings and Overburden, Treatment and Mitigation, AECOM, 19 February 2025.

(c) long term the underground parts of the mine are flooded, limiting oxidation and potential for discharge to ground surface.

Waste rock stacks

[460] Waste rock stacks included in the WNP include the WRS, and the NRS. AECOM and GHD have identified the potential for AMD effects associated with each of these pieces of surface infrastructure.

[461] OGNZL indicated that the expected AMD effects can be mitigated by construction of a low permeability foundation layer, provision of subsurface drainage to collect and divert seepage for treatment, addition of crushed limestones to PAF rock to increase its acid neutralising capacity, compaction of rock material to reduce rate of infiltration and encapsulation of PAF material with NAF material.

[462] The WRS is temporary, with the stored waste rock to be removed and used for final stoping as part of the mine rehabilitation on closure; so no long term AMD effects are anticipated relating to the WRS.

[463] The NRS is expected to be a permanent landform. AECOM draw a comparison with the monitored performance of existing tailings embankments which are expected to have the same level of encapsulated PAF material. AECOM indicated that:

(a) Sub soil drains, leachate drains and toe drains will continue to report to the WTP for treatment until such time as water quality improves sufficiently to allow for direct discharge.

(b) Once capped and residual oxygen is removed, water quality from these areas typically improves. This effect is already observed in collection ponds for TSF1a, where water quality has improved sufficiently to allow direct discharge.

(c) While passive treatment systems are not currently proposed they may be considered in the future where flows and quality are suitable for this type of treatment.

Tailings areas

[464] Proposed tailings areas include the GOP TSF and TSF3. While there are some subtle differences in the two tailings areas, fundamentally the mitigation measures proposed for both are the same, namely:

(a) limiting the exposure time of PAF rock;

(b) treating PAF rock with limestone to delay acid generation;

(c) covering PAF rock with NAF material to seal intermediate layers or as final cover to limit oxidation of sulphides in the PAF material;

(d) compaction of surface material to reduce permeability and ingress of oxygen and water; and

(e) collection of runoff and seepage from the tailings areas for treatment at the WTP until these flows are of sufficient quality for direct discharge to the environment.

Comments received

[465] Geochemical effects were raised in the comments of WRC, Coromandel Watchdog, Ngāti Hako, Ngāti Pū, Ngāti Porou Ki Hauraki, Ngāti Tara Tokanui Ngāti Koi and one lay commentator.

[466] WRC comments on the geochemical effects were supported by technical review undertaken by Dr Paul Weber of Mine Waste Management (dated 21 August 2025).

[467] WRC advised that Dr Weber has been involved in technical review of this subject matter through the previous resource consent application process and over the course of that previous process most matters of technical disagreement had been resolved.

[468] Dr Weber's remaining issues may be generally summarised as:

(a) definitions of AMD materials.

(b) validation, classification and sampling requirements for PAF materials.

(c) monitoring of oxygen in waste rock stacks; and

(d) a number of proposed modifications to conditions.

[469] Coromandel Watchdog make comment with respect to:

(a) potential underestimation of antimony, arsenic and mercury in porewater and the perception that OGNZL have considered mercury as immobile in groundwater (evidence of Dr Emermann); and

(b) levels of selenium in treated water discharged from the WTP into the Ohinemuri river (evidence of Dr Joy.).

[470] Ngāti Hako do not make specific comment on AMD and geochemistry effects but comment in a more general sense that they wish to ensure that "…contaminants do not enter streams and enter the Ohinemuri river that meets the Waihou river and flows into Tikapa Moana".

[471] Ngāti Pū shared concerns related to contamination of surface water, specifically in relation to the Gladstone Tailings facility, WTP upgrade and renewal of discharge consents.

[472] Ngāti Porou Ki Hauraki commented that contamination effects on tributaries to the Ohinemuri River had not been adequately assessed.

[473] Ngāti Tara Tokanui, Ngāti Koi commented on the potential for leachate and acid mine drainage to contaminate groundwater and surface water and the potential for harmful metals to enter waterways.

[474] Lay comments from Gloria Sharp related to general concerns around potential for AMD and arsenic, cyanide and mercury pollution.

OGNZL response to comments

[475] OGNZL provided a specific response to each of the areas of comment made by Dr Weber on behalf of WRC. These responses were generally addressed in edits to OGNZL's conditions of consent which are addressed further below.

[476] OGNZL responded to comments by Coromandel Watchdog through evidence (dated 1 September 2025) from Ian Jenkins and Ian Boothroyd.

[477] Mr Jenkins responded to the evidence presented by Dr Emermann and disagreed with his views, noting specifically that "The assessment of the decant and tailings porewater from the proposed WNP uses monitoring data from the existing tailings storage facilities (TSF1a and TSF2) as outlined in section 7.3 of Geochemical Assessment report. This data for the existing operation reflects the use of cyanide extraction."

[478] Dr Boothroyd referred to 30 years of monitoring of the Ohinemuri River from which "…there is no evidence that the treated water discharge (in meeting the requirements of the resource consent) from the operations is causing adverse effects (including from selenium) on the biological communities of the Ohinemuri River."

[479] With respect to Iwi comments, OGNZL referred to the additional statements of evidence appended to their response to comments.

[480] Ms Sharp's comments were addressed by reference back to application document B.14 and the evidence provided by Ian Jenkins (1 September). OGNZL reiterated that "…spoil material in the areas of the proposed works will behave in a manner that is geochemically similar to spoil associated with existing operations" and that "…acid generation can be minimised and appropriately managed".

Statutory instruments

[481] No specific statutory instrument provisions were brought to our attention by commentators.

Panel findings

[482] The Panel is mindful that there is a long operational history (through OGNZL and its predecessor Newmont) of managing geochemical effects associated with tailings disposal and leaching of rock stacks that are very similar to those effects that are to be monitored and managed through the current consents under consideration.

[483] Considering this context, the information provided by the OGNZL, the comments received and OGNZL's responses to those comments, we find that there are no outstanding geochemistry effects that will not be appropriately avoided, remedied or mitigated, subject to the imposition of appropriate conditions of consent.

Conditions

[484] Conditions of consent related to geochemistry effects have been substantially developed by ONZL and WRC in the previous resource consenting process.

[485] There are some remaining matters that are outstanding:

(a) oxygen monitoring of rock stacks requested by WRC;

(b) additional certainty around the waste (rock) certification protocol and the detailed design of rock stacks and tailings areas; and

(c) the need or otherwise to monitoring for nitrogen at the discharge from the WTP.

[486] OGNZL considers that the management of oxygen levels will be included in management plans. However, the Panel notes that the requirement for oxygen monitoring has not been specified as a required matter for those management plans. We have therefore included a requirement in the WRC conditions (SC2.F.25, SC6.G.29) that requires the management plans to include this.

[487] With respect to the additional certainty requested around the waste rock certification protocol and detailed design we note that for waste rock stacks and tailings areas:

(a) WRC conditions (SC2.F.25, SC5.G.27, SC6.G.29, SC7.H.32) currently require the waste rock classification protocols to be included in the management plans for rock stacks and tailings areas. These management plans require certification by WRC (conditions SC2.F.26, SC6.G.30, C5). And

(b) WRC conditions (SC2.F.30, SC5.G.30, SC6.G.34, SC7.H.35) currently require independent technical review of the detailed design of rock stacks and tailings areas, with reporting to WRC and final overview by the Peer Review Panel.

[488] The Panel considers that the additional certainty sought by WRC with respect to waste rock classification and technical certification is appropriately addressed in the conditions as proposed.

[489] WRC have requested monitoring of nitrogen at the discharge for the WTP with an annual limit set at 13 tonnes per year (which they attribute as the current annual load from the WTP based on a 2016 WRC report). The applicant considers that the annual load is out of date, that no compliance limits have been provided and that there is already a consented ammonia limit in place.

[490] The Panel considers that insufficient information has been provided by WRC with respect to proposed nitrogen monitoring from WTP discharges. We have therefore declined to make this addition to the consent conditions.

E14: NOISE EFFECTS

[491] We address noise effects on fauna in sections E7and E8 and noise associated with blasting in section E5 of this Decision.

[492] OGNZL addressed construction noise and operational noise in section 6.10 of the AEE and technical report B.56authored by Marshall Day.[26]

General discussion

[493] Marshall Day considered that construction noise can be managed by complying with the construction noise limits set out in New Zealand Standard 6803:1999 Acoustics – Construction Noise ("NZS6803:1999"), which is consistent with the HDP noise limits. NZS6803:1999 allows higher noise levels during normal working hours for construction in residential areas. Noise modelling demonstrated construction noise levels will remain compliant with NZS6803:1999 in almost all circumstances. Any localised exceedances will be managed through mitigation measures and Noise Management Plans, as provided for in the proposed conditions.

[494] Marshall Day proposed operational noise standards that are protective of the amenity of the surrounding environment and community:

0700 – 2200, Monday to Saturday	50 dB LAeq
2200 – 0700 (the following day)	70 dB LAFmax
All other times	40 dB LAeq

[495] Modelling demonstrated there were some receivers where the operational noise levels without mitigation might be slightly above 50 dB LAeq. However, operational noise from the GOP, NRS and TSF3 would not exceed the standards. Increased processing plant noise is unlikely to be discernible for much of the time, but it is possible that without mitigation noise levels at night may just exceed the night-time noise limit of 40 dB by a small margin

[26] Oceana Gold New Zealand – Waihi North Project Assessment Of Noise Effects, February 2025.

[496] Proposed conditions require that a Noise Management Plan (NMP) be prepared for each WNP Area outlining the mitigations used to ensure noise levels do not exceed 50 dB or 40 dB respectively at any residence not owned by OGNZL or subject to an agreement with OGNZL.[27] The NMPs will prescribe a noise mitigation development process that will occur prior to operations commencing, including the options considered, and provide certification that noise levels comply with the above standards at the residences with which OGNZL does not have an agreement.

[497] Marshall Day concluded that the proposed noise limits (as set out in the conditions) could be complied with using appropriate mitigation. Consequently, noise effects resulting from WNP were considered acceptable.

[498] Helicopter noise is a key source of noise in and around the Coromandel Forest Park, the Willows SFA and the Waihi SFA during both the construction and operation of the WNP. Individual helicopter operations will be clearly audible for some receivers in proximity to the helicopter bases and the overflying tracks and will be noticeable above existing ambient noise.

Comments Received

[499] Comments were received from HDC expressing concern about the cumulative noise effects of the WNP in combination with the noise effects of OGNZL's other existing consented activities. However, HDC considered the noise standards proposed by OGNZL were appropriate.

[500] HDC suggested amendments to the NMP**.** They also considered that helicopter approach and departure tracks should be clearly labelled with conditions requiring the specified approach and departure tracks to be followed, along with new conditions to manage the use of helicopters for the construction and operation of the WNP activities in Area 1.

[501] The Waihi Community Forum was concerned about residential amenity, particularly in relation to helicopter noise and the noise from the GOP. A number of lay commentators were

---

[27] Prepared in accordance with NZS6802:2008. There will be construction Noise Management Plans and Operational Nosie Management Plans.

concerned about noise, including the effect of noise on horses and cattle.[28] Ngāti Porou ki Hauraki were concerned that adverse effects from both existing mining activities and the WNP are and would continue to be experienced at Mataora. A particular concern was the potential impact on a developing papakainga at Mataora, with NPKH emphasising that noise pollution would undermine the wellbeing and harmony of that community. Ngāti Pu and Ngāti Tara Tokanui Trust expressed general concerns about noise.

OGNZL response to comments

[502] In response to HDC's comments OGNZL provided a memorandum from Marshall Day.[29]

[503] On cumulative effects, OGNZL's response advised that document B.56 had considered the effects of noise generated by existing consented activities holistically and provided additional calculations combining WNP noise levels with a notional level of activity occurring within Martha Pit and associated infrastructure. OGNZL considered that although any cumulative exceedance of the above noise standards was unlikely, should this occur then the potential cumulative noise level from both WNP and existing OGNZL activities would be no more than 1-2 dB above those standards. Therefore, the potential cumulative effects would be appropriately managed by the proposed consent conditions. Nevertheless, OGNZL accepted HDC's recommended amendment of HDC Condition 16 to require operational noise to be assessed cumulatively.

[504] The potential adverse effects of WNP noise on horses and cattle was addressed for OGNZL by Andrew McLean. He focussed in particular on the property of John Perrins who runs an Arabian horse stud and equine training facility at 35 Heath Road Waihi. Mr Mclean considered that property was subject to various existing environmental features that produced noise and vibration effects that were likely to be far more significant than those expected to be produced by the WNP. In his opinion Mr Perrins' horses would have learnt to habituate to these existing features, as horses are typically adept to do. Mr Mclean noted that the predicted levels of noise and vibrations were at or below background levels currently experienced at the Perrins' property.

---

28 Including Chris Batten, Brigid and Steve Cameron, Bryce Ede, John Perrins, Andrew and Rachel Wharry and Rodney Malone.

29 Authored by Gary Welton and Laurel Smith.

[505] In terms of concerns expressed by other property owners, OGNZL advised that with proposed mitigation measures in place, noise levels at sensitive receivers would comply with the standards set out above, including receivers affected by the GOP.

[506] Addressing Ngāti Porou ki Hauraki's concerns, Kyle Welten advised that all previously completed technical assessments into the effects of noise from OGNZL's operations had consistently demonstrated that it was extremely unlikely that any noise generated by OGNZL's activities was, or would be, experienced at adverse levels at the Mataora block. Marshall Day's modelled noise contours illustrated the predicted noise effects of the WNP and did not indicate any significant noise levels at Mataora; if any at all.

[507] Concerning helicopter flights, OGNZL conceded individual helicopter operations would be clearly audible for some receivers situated in proximity to the helicopter bases and the overflying tracks. OGNZL agreed with HDC's recommendation to apply the noise limits from "NZS 6807:1994 Noise management and land use planning for helicopter landing areas" to the WNP to helicopter movements. The NZS 6807 noise limits will control the frequency of helicopter movements allowed over a 7-day period and on any single day. OGNZL also agreed to produce a Helicopter Noise Management Plan which would include details of flight paths and movement numbers. Additional advice notes were recommended to clarify the noise limits applying to helicopters.

[508] With those additional measures in place, and in light of the large periods of respite between flights and the existing ambient noise environment in the vicinity of nearby receivers, as well as the other noise sources present, helicopter noise effects on people as a result of the WNP were considered to be reasonable.

Statutory Instruments

[509] The Marshall Day report set out the relevant HDP noise limits (Rule 8.3.1.3) for the relevant zones[30]. HDP rule 8.3.1.3(3) sets limits for construction noise and requires management, measurement and assessment in accordance with New Zealand Standard NZS

[30] Residential Zone, Martha Mineral Zone (MMZ), Rural Zone, Reserve Zones (both Active and Passive), and Conservation (Indigenous Forest) Zone. No noise limits are provided for the MMZ. Instead, Rule 5.17.4.1 P1 and P2 allow that any activity is permitted if conducted in accordance with the relevant terms and conditions of, and within the area covered by, the Mining Licence and LUC 97/98-105 respectively. While these documents have both now expired, their provisions are adopted by the District Plan.

6803:1999 “Acoustics - Construction Noise. We note that to be a approach routinely adopted for infrastructure projects.

Panel Findings

[510] We are satisfied that OGNZL has adequately assessed the construction and operational noise likely to emanate from the WNP. Commentators concerned about noise levels did not provide expert acoustic evidence the contested the conclusions of the noise experts engaged by OGNZL (Marshall Day) and HDC (Styles Group).

[511] We find that adherence to NZS 6803:1999 for construction noise and the HDP noise standards for operational noise is appropriate and doing so will ensure the effects of that noise will be no more than minor, including on horses and cattle.

[512] We observe that any minor exceedances of the noise standards by 1 to 3 dBA, should they occur, will be barely discernible and comprise a less than minor adverse effect.

[513] We are satisfied that noise from the WNP activities will not result in adverse effects at Mataora.

[514] We also observe that helicopter noise is an unavoidable aspect of the WNP and we acknowledge it was understandably a matter of concern to commentators. However, we find that OGNZL’s response to apply NZS 6807:1994 to the helicopter movements, together with the preparation of a Helicopter Noise Management Plan to be certified by HDC, is the best practicable means of managing helicopter noise.

Conditions

[515] We have largely accepted OGNZL’s proposed 1 September 2025 consent conditions for the HDC consent, including the amendments agreed to by OGNZL in response to the HDC comments.

[516] However, we have inserted amendments into Conditions 16B an 23A relating to 111 and 112 Willows Road that apply until those properties are purchased by OGNZL. We have

also amended Condition 25 to require the specification of methods and procedures to ensure that the road traffic noise limit set out in condition 16B is complied with.

[517] Given the level of commentator concern about helicopter noise, we have also imposed Condition 20 as suggested by HDC in order to provide additional certainty on the allowable number of helicopter movements from the Willows Road, Baxter Road and Golden Cross helipads.

E15: EFFECTS ON RECREATION AND TOURISM

[518] OGNZL addressed effects on recreation and tourism in section 6.12 of the AEE and technical report B.55.[31]. The Greenway report concluded that increased exploration in the Coromandel Forest Park had the potential to affect users of the Wharekirauponga Track as a result of the noise generated by drilling and helicopter movements.

General discussion

[519] The drill sites will be out of sight of all sections of formal walking tracks and visitors will need to walk off-track to access them. Time restrictions on these activities would significantly limit the potential scale of effect, which would also benefit other users of the Coromandel Forest Park.

[520] Since 2018 access to the Wharekirauponga to Golden Cross Track in the Coromandel Forest Park has been temporarily closed for kauri-die back management, and the majority of the Wharekirauponga Track has been closed since September 2024 beyond its first 700m.

[521] Within the Coromandel Forest Park the proposed four vent raises will avoid tramping tracks and historic tramlines. Consequently, adverse effects (including noise) would be limited to those few trampers traversing the Coromandel Range on the Wharekirauponga to Golden Cross Track who are aware of the evasé raises.[32] However, that effect would be minor given the focus of the recreational activities undertaken (pig hunting and crossing the Range). Vibration from underground detonations will be barely perceptible except for a 40 m section of the Te Wharekirauponga Track directly above the blasting.

[522] Development and operation of the GOP, TSF3 and NOR would displace some recreational use of private OGNZL land. The GOP will displace mountain biking from Winner Hill and affect access to the Black Hill Motor Cross Track. The NRS will affect a small section of the Full and Half Nugget annual multisport events. OGNZL is looking to support alternative

---

31 OceanaGold NZ Ltd, Waihi North Project Recreation and Tourism Assessment, Rob Greenaway & Associates, February 2025. Greenaway advised 'recreation' and 'tourism' have similar meanings in terms of potential effects as the two activities differ only by tourists having spent at least one night away from home.

32 Noise emissions from the ventilation evasés will generally be only above ambient noise levels (of around 40 – 45 dB LAeq) within 100 – 200 m of the ventilation evasés and are unlikely to be heard at the Te Wharekirauponga Track.

development opportunities, including the potential for a new access route across OGNZL land to the Ngāti Koi Domain for the existing Black Hill motocross track.

[523] The WTP discharge to the Ohinemuri River is addressed in E4.

Comments Received

[524] DOC was concerned that without proper site selection protocols for drilling activities, there could be adverse effects on recreation. The Waikato Conservation Board supported the recommended conditions outlined in Greenaway report. Lay person commentator Gloria Sharp was concerned that the closure of public roads would restrict public access to the Coromandel Forest Park.

OGNZL response to comments

[525] OGNZL advised that the conditions recommended in the Greenaway report were already included in the draft Wharekirauponga Access Arrangement and were in line with the current approach to management effects on recreation and heritage features.

[526] In terms of DOC's concern, OGNZL advised that the proposed Wharekirauponga AA and Northern Concession conditions require minimum set back distances from the public walking track, a cessation of drilling activity within 400m of the public walking track during the busiest period of the year (1 December to 28 February inclusive), and signage and demarcation to make the public aware of the drilling activity. Those measures were consistent with conditions of OGNZL's current Access Arrangement with DOC and were adequately protective.

[527] OGNZL are not proposing to close any public roads.

Statutory Instruments

[528] No Statutory instruments were brought to our attention.

Panel Findings

[529] Subject to the imposition of conditions on the Wharekirauponga Access Arrangement and Northern Concession, and compliance with conditions of consent relating to noise and helicopter movements, we are satisfied that adverse effects on recreation and tourism will be no more than minor.

Conditions

[530] We have not amended OGNZL's 1 September 2025 conditions.

E16: AIR QUALITY EFFECTS

[531] OGNZL addressed air quality effects in section 6.13 of the AEE, two BECA technical reports B21[33] and B22[34] and a peer review undertaken by Tonkin and Taylor.[35] OGNZL considered that the discharges to air associated with the WNP were permitted activities under the Regional Plan, subject to conditions. However, for certainty and completeness, OGNZL sought for an air discharge consent for the WNP activities.

[532] That being the case, we have not assessed air quality effects in great detail, but observe:

(a) Discharges to air from WUG and its associated infrastructure (Areas 1 – 4), the GOP, the Processing Plant and WTP upgrades, the NRS, and TSF3 will be of a similar nature to those from the existing Martha Open Pit, underground mines, associated infrastructure and Processing Plant but on a smaller scale, in different locations and across shorter timeframes.

(b) All underground emissions will be discharged to air via either portals or the ventilation shafts.

(c) The concentrations of PM_{10}, respirable crystalline silica (RCS), nitrogen oxides (NO_2 and NO) and carbon monoxide (CO) were assessed as remaining within the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NES Air) guideline values and current consent limits.

(d) Potential dust nuisance on private property will be low following the completion of construction works and the grassing of exposed areas. As dust emissions from the WNP are not expected to result in any significant increase in dust concentrations, adverse effects on vegetation are not expected to occur. OGNZL will continue to use dust mitigation measures that have been successfully employed at the Waihi mine sites through the implementation of an Air Quality Management Plan for each Area.

---

33 Waihi North Project – Waihi Facilities - Air Discharge, Assessment for Fast–Track Approval Application, February 2025

34 Waihi North Project – Wharekirauponga Underground Mine - Air Discharge Assessment – for Fast track Approval Application, February 2025, February 2025.

35 B23 Waihi North Project - Fast-track Approval Application, Technical Review of Air Quality Assessments

(e) A monitoring station is installed near 132 Willows Road (an OGNZL owned dwelling) to provide measurements of meteorological and dust data. For sensitive receptors located within 100 m of the proposed surface-based mining activities in Areas 5 – 7, continuous instrumental monitoring of TSP concentrations, wind speed and wind direction will be undertaken at the boundary of the site when activities with potential to discharge dust occur. And

(f) Emissions of mercury from the Processing Plant are expected to increase when the GOP and the WUG ore is being processed. However, OGNZL will install a retort oven at the Processing Plant to reduce the mercury emissions. The results of dispersion modelling show mercury emissions from the Processing Plant are not predicted to exceed the MfE, USEPA, or OEHHA annual average guideline limits.

Comments Received

[533] WRC provided comments on air quality matters, including a peer review undertaken by Dr Jonathan Cauldwell.[36] He concluded that Beca had identified all potential sources of contaminants to air from the WNP and associated potential effects on the Waihi airshed and surrounding area outside the airshed. He considered there were sufficient methods and measures being proposed to reduce the risk for these potential effects and the proposed monitoring was sufficient for providing early identification of any potential effects. Taking into account the Tonkin and Taylor technical peer review, Dr Cauldwell was confident that OGNZL's proposed management and mitigation measures were sufficient for ensuring a low level of effects on the environment and people. He suggested some refinements of consent conditions.[37].

[534] Lay commentators[38] were concerned about dust, whereas the Waihi Community Forum supported the measures proposed in the consent conditions for reducing the effects of dust. The four iwi authorities expressed general concerns about dust, vegetation clearance and vehicle emissions.

---

36 Senior Scientist (Environmental Chemist), SPI.
37 ALL.A.3, ALL.A.4, ALL.A.22, ALL.A.24
38 Including John Perrins, Chris Battens, Brigid and Steve Cameron, Gloria Sharp and Rodney Malone.

OGNZL's response to comments

[535] OGNZL accepted Dr Cauldwell's recommended amendments to the conditions. In response to the concerns of the iwi authorities Kyle Welton advised that the Waihi mining operation had been effectively monitoring and managing inhalable gasses and particulates to meet strict air quality consent limits in the vicinity of the Waihi operations since 1982. Should the WNP proceed, then OGNZL would monitor and manage air quality in accordance with the Air Quality Management Plan, as currently occurs for the existing mining operations.

Statutory Instruments

[536] In Part G we concur with OGNZL's assessment of the relevant Statutory instruments, including the Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (NES Air).[39]

[537] Apart from HDC District Plan and WRC Regional Plan permitted activity standards and the NES Air guideline values which we addressed above, no other Statutory instrument provisions were brought to our attention.

Panel Findings

[538] Based on the high level of agreement between the OGNZL and WRC air quality experts we are satisfied that air quality effects have been adequately addressed, and subject to the imposition of appropriate conditions of consent, those effects will be no more than minor. We observe none of the commentors who expressed concerns about air quality provided expert air quality evidence.

Conditions

[539] We have not made any amendments to OGNZL's 1 September 2025 air quality conditions.

---

[39] Application document A.11, sections 8.7.3.3.

E17: LIGHTING EFFECTS

[540] OGNZL addressed lighting effects in section 6.14 of the AEE and the Part B.52 Pedersen Read report.[40] Lighting effects (light spill, glare and sky glow) were assessed against the HDP for "Glare and Lighting", and Australian and New Zealand Standard AS/NZS 4282: 2023 "Control of the obtrusive effects of outdoor lighting".[41] Pedersen Read concluded that direct spill light should be comply with the HDP permitted activity standard of 8.0 lux "at any point on or directly above the boundary of any adjacent site or road", other than for mobile lighting, lighting at the Willows SFA entry gate and in the Coromandel Forest Park. [42]

[541] Lighting in the Park will be designed and installed using the best practice principles in the National Light Pollution Guidelines for Wildlife. Glare and sky glow at the Willows SFA will be mitigated through a careful selection of both the location and direction of lighting with any works in potentially sensitive locations timed to occur during daylight hours. Permanent lighting is likely to be of a similar form to that presently installed throughout the existing operation. Overall, adverse effects were expected to be minor to acceptable given the proximity to existing mining operations.

Comments Received

[542] Lighting effects were addressed in the comments from HDC and DOC.[43] Several lay commentators also mentioned them.

[543] HDC technical expert Russ Kern concluded that if installed as described by Pederson Read, the lighting would mitigate obtrusive effects at residential boundaries to acceptable limits. He suggested that the placement and direction of lights at the Willows SFA should avoid high points which were visible outside of the Willows Road site.

[544] Mr Kern considered OGNZL's proposed HDC conditions 52, 53 and 54 were appropriate, but he recommended a substantial new condition requiring a Lighting Management Plan to be submitted to the HDC for certification.

---

40 Waihi North Project, Assessment of Environmental Effects: Lighting, Pedersen Read, 25 February 2025.

41 The latest revision of this Standard now includes reference to the "National Light Pollution Guidelines for Wildlife" published by the Australian Government's Department of Climate Change, Energy, the Environment and Water.

42 Section 8.2.5.3 (2)

43 Section 51 Access Arrangement and Section 51 Concession report

[545] HDC's planning assessment concluded that the proposed conditions of consent were suitable and sufficient to control and manage the lighting impacts of the WNP, subject to the Lighting Management Plan being certified.

[546] DOC was concerned about lighting effects on frogs and bats, but they did not propose any additional conditions for the HDC land use consents. We discuss DOC's suggested amendments to the Access Arrangements and Concession conditions elsewhere in this Decision.

OGNZL response to comments

[547] OGNZL agreed to a new condition requiring a Lighting Management Plan. They advised that the placement and direction of lights at high points which are visible outside the Willows Road site would be adhered to as far as was operationally practicable, but avoiding all such high points within the Willows SFA was not practicable from a health and safety perspective.

Statutory Instruments

[548] Apart from the HDP lighting standards, no specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[549] Subject to the imposition of appropriate conditions of consent we find transportation effects will be appropriately avoided, remedied or mitigated.

Conditions

[550] We are satisfied OGNZL's proposed lighting conditions are appropriate, including condition 54A addressing the Lighting Management Plan.

E18: ARCHAEOLOGICAL AND HISTORIC HERITAGE EFFECTS

[551] OGNZL addressed archaeological and historic heritage effects in section 6.15 of the AEE and the Part B.49 Clough and Associates Ltd report.[44] The Clough report addressed the Wharekirauponga Valley and the WUG resource, Willows Farm SFA, GOP, WUG Portal and Processing Plant areas, TSF3, NRS and Māori cultural values. It concluded that the WNP would not affect any scheduled item in the Hauraki District Plan. However, it recommended that any consents granted should include accidental discovery protocols.

[552] The AEE advised that OGNZL would implement accidental discovery protocols across all of the WNP work sites. Should accidental discovery of archaeological remains occur, work would cease in the immediate vicinity, HDC and HNZPT would be informed, and if the site appeared to be of Māori origin OGNZL would notify appropriate iwi representatives of the discovery and ensure site access for them to enable appropriate cultural procedures and tikanga to be undertaken.

[553] Regarding the Heritage New Zealand Pouhere Toanga Act 2014, the Clough report concluded that the WNP would potentially affect a number of recorded archaeological sites and consequently OGNZL had applied for a general Archaeological Authority for work to be carried out that might affect those sites.[45] Additionally, other, so far unidentified, subsurface or near surface features relating to mining activities and the early history of Waihi township could also be exposed, and so OGNZL had included all WNP works in the Authority application.

[554] We observe that a substantial part of the Gladstone Hill gold mining complex (T13/821), part of the Winner Hill gold mining complex (T13/820), and part of the Lower-Level Water Race (T13/817) will be affected by the proposed GOP. OGNZL suggested that any areas impacted could be effectively mitigated through archaeological recording and

---

44 Waihi North Project - Fast Track Approval: Assessment of Historic Heritage and Archaeological Effects, Prepared For Oceana Gold (New Zealand) Ltd, Document Number: April 2025.

45 Including part of sites T13/961 Mataura Water Race, T13/962 Willows Timber Tramway and T13/963 High-Level Walmsley Timber Tramway. The Gladstone Open Pit will impact on a substantial part of the Gladstone gold mining complex (T13/821), part of the Winner Hill gold mining complex (T13/820); and two sections of the Lower-Level Water Race (T13/817). Other sections of T13/817 may be impacted upon by the harvesting of pine trees around the southern extent of Winner Hill. The NRS will impact on the Queen of Waihi Shaft (T13/971).

investigation, and the dissemination of new information on early mining activities, interpretation, education and outreach.

[555] Importantly, there are no known pre-European Māori sites within the footprint of any of the proposed WNP works. Nevertheless, OGNZL consulted with iwi and four chose to provide CIAs, of whom three decided to keep those documents confidential between themselves and OGNZL.[46]

[556] The AEE stated that while no specific archaeological features or features of particular significance to iwi were identified within the WNP area, iwi were intimately connected to land and waters within the WNP area via whakapapa, with strong linkages maintained through waka traditions, mythology, and place names which demonstrated the value of the area as a source of food and resources.

[557] OGNZL has prepared an Archaeological Management Plan to accompany the Authority application.[47] That Plan provides general protocols for the exposure of archaeological remains, including remains of Māori origin, koiwi tangata (human remains) or taonga (Māori artefacts).

Comments Received

[558] Comments on archaeological and historic heritage were received from HDC, the Ministry for Culture and Heritage, Heritage New Zealand Pouhere Taonga (HNZPT), Ngāti Pu (in their publicly available CIA), Waikato Conservation Board and the Department of Conservation.

[559] For HDC Dr Neville Ritchie advised that Clough Associates had undertaken comprehensive historical research and archaeological survey work and had assessed other pertinent information. Dr Ritchie concluded that Clough Associates had produced an accurate, fair and reasonable assessment of the overall impact of the WNP on archaeological resources and had clearly identified the more significant impacts. He also found the Archaeological Authority application to be comprehensive, and when implemented, he considered it would

---

46 Ngaati Whanaunga, Ngāti Tamaterā, and Ngāti Tara Tokanui / Ngāti Koi.

47 Archaeological Management Plan Waihi North Project prepared for Oceana Gold(NZ) Ltd by K Tatton and R Clough (Clough Associates) in February 2023. This was contained in Part H of the application documents.

ensure the maximum amount of learning from the historic places which would be modified by the WNP.

[560] The Ministry for Culture and Heritage deferred to HNZPT's statutory role and its expertise and did not expect to be consulted separately on the Archaeological Authority. HNZPT stated they had assessed the OGNZL application, with input from specialist regional heritage staff, including those with Māori heritage, planning and archaeological expertise. Overall, based on the information provided, HNZPT had no objection to the approval of the WNP resource consent applications. They supported HDC condition 89, TCDC condition 44 (mistakenly referred to in the comments as Condition 47) and the Combined HDC/WRC condition C29.

[561] Regarding the Archaeological Authority, HNZPT provided a report under s.51(2) of the FTAA. HNZPT reviewed the proposed mitigation measures included in the Archaeological Management Plan and agreed they would mitigate adverse effects on the archaeological values of potential unrecorded sites within the WNP. HNZPT recommended that the Archaeological Authority be granted, subject to conditions that they set out in their s.51 report. They also recommended that the Panel approve the application for Kim Tatton as the approved person to carry out archaeological work under the Authority.

[562] Ngāti Pu noted that heritage sites within the area may be physically damaged or destroyed, threatening iwi identity and cultural continuity. Ngāti Pū wished to be involved in monitoring, with the authority to halt works if wāhi tapu or other significant sites were at risk.

[563] The Waikato Conservation Board sought conditions that would preclude locating the ventilation shaft raises on any tramway formations in the Coromandel Forest Park.

[564] In their s.54 report DOC expressed concern that no conditions required any additional effects assessment on heritage features beyond the Multi-Criteria Analysis (MCA) site selection protocol for investigative drill sites and ventilation shaft sites. They considered that created an unacceptable and unmitigated risk that heritage features would be impacted by exploration or mining activities and associated operations.

OGNZL response to comments

[565] OGNZL provided a response from Cassandra McArthur.[48] Regarding the DOC concerns, she advised that the Site Selection Protocol required OGNZL to engage a suitably qualified and experienced archaeologist to assess if there were any known archaeological or other historic heritage features, or a likelihood of unidentified archaeological or other historic heritage features, within 500m of the shortlisted investigative drill sites and ventilation shaft sites. If heritage features were found, or were likely to be found, in the vicinity of a proposed work site, the site would be given a 'red' score according to the MCA. If, for operational reasons, OGNZL still needed to use the site an archaeological authority would be required, and effects on heritage features would be assessed at that stage. DOC, as a requirement of the archaeological authority application process, would be consulted as part of that process.

[566] Regarding the Waikato Conservation Board, OGNZL noted that the draft Wharekirauponga Access Arrangement included conditions requiring the avoidance of tramway formations in the Coromandel Forest Park, in line with the current approach to management effects on heritage features.

Statutory Instruments

[567] HNZPT's s 51 report addressed s 59(1)(a) of the HNZPTA and the Statement of General Policy titled *The Administration of the Archaeological Provisions under the Heritage New Zealand Pouhere Taonga Act 2014*, dated 29 October 2015. HNZPT advised that granting the Archaeological Authority sought by OGNZL, with appropriate conditions, would be consistent with the matters set out in s 59(1)(a) of the HNZPTA and the objectives and policies set out in that Statement of General Policy.

Panel Findings

[568] We find that OGNZL has adequately assessed potential adverse effects on archaeological and historic heritage resources. Subject to the imposition of the conditions of consent that were supported by HNZPT and the granting of the Archaeological Authority inclusive of the conditions sought by HNZPT, we are satisfied that any such potential adverse effects will be suitable avoided or mitigated.

---

48 OGNZL Superintendent – Environment for the WNP.

Conditions

[569] We found the 1 September 2025 version of the heritage conditions offered by OGNZL to be generally appropriate. That included TCDC condition 44 and Combined HDC and WRC condition C29 setting out Accidental Discovery Protocols. We added Ngāti Porou ki Hauraki to the tangata whenua entities referred to in those conditions. We also inserted new HDC condition 89A requiring the certified Archaeological Management Plan to be implemented, with any amendments to it having to follow the process set out in Conditions C8 – C8D of the combined HDC and WRC conditions

[570] As to Ngāti Pū's comment, we note the Accidental Discovery Protocols in the resource consent conditions effectively achieve the outcomes they sought.

[571] We did not amend the Archaeological Authority conditions offered by OGNZL, noting them to be entirely consistent with those sought by HNZPT.

E19: EFFECTS RELATING TO THE STORAGE AND HANDLING OF HAZARDOUS SUBSTANCES

[572] OGNZL addressed effects relating to the storage and handling of hazardous substances in section 6.16 of the AEE and in three Part B reports authored by Tonkin and Taylor:

(a) B.18;[49]

(b) B.19;[50] and

(c) B20.[51]

[573] The WNP involves the storage and use explosives, oxidising and toxic substances, workshop gases, fuels, maintenance oils and greases.

[574] The Coromandel Forest Park is sensitive to the effects of a spill of diesel or packaged goods. Associated risks will be managed through site and equipment design. Best practice management controls will be set out in a Hazardous Substances Management Plan ("HSMP") to be certified by HDC which OGNZL will prepare for Area 1.

[575] At the WUG and the Willows SFA risks relate to fuel spillages and the potential for a fire or detonation at the explosives magazines, oxidiser storage area and gas or diesel tanks. These risks will be managed through site and equipment design (including as double skinned tanks, sealed refuelling areas, bunded fuel storage areas, separation distances to offsite locations and other explosives stores, the provision of fire protection systems, and certification of the explosives storage magazines) and management controls in the HSMP

[576] At the Processing Plant and WTP risks relate to fires in the diesel, oxygen or hydrogen peroxide storage tank areas, and ecotoxic or human health effects from a spill of corrosives, oxidizers, diesel, mercury or cyanide. These risks will be managed through site design (including secondary containment, automation including interlock systems, segregation of

---

49 Hazardous Substances Technical Assessment, Waihi Processing Plant, Water Treatment Plant and Waste Disposal Area - Waihi North Project, February 2025

50 Technical Assessment of Hazardous Substances, Willows Road site and the Wharekirauponga Underground Mine - Waihi North Project, February 2025

51 Waihi North Project - Waihi North Project – Exploratory works within the Coromandel Forest Park, February 2025

incompatible substances, certification of storage systems tanks), and operational procedures in the HSMP.

[577] OGNZL intends to relocate the Waste Disposal Area (including two 20,000 L diesel tanks), and two 40,000 L LPG tanks in Area 6. OGNZL will also construct the Waste Disposal Area Magazine, a new Class 1 explosives storage to service ongoing mining operations in Waihi, which includes the storage of mass explosion detonators and mass explosion blasting explosives, up to 6,400 kg, within approved magazines. The risks at this site relate to ecotoxic or human health effects from a spill of corrosives, oxidizers, or diesel, or an unplanned detonation at the proposed Waste Disposal Area Magazine. The risks of fuel spills will be managed the same way as at the other sites.

[578] The neighbouring rural properties surrounding the Waste Disposal Area are sensitive to the effects of an unintended detonation at the Waste Disposal Area Magazine. That risk will be managed by securing the facility from unauthorised access, segregation of incompatible materials, provision of fire-fighting facilities and emergency management procedures, and separation from sensitive locations. OGNZL must notify WorkSafe and obtain certification for the explosives magazine from an accredited independent compliance certifier for both the facility itself and its Class 1 substance handler.

[579] Tonkin + Taylor concluded that with the above risks management measures in place, the storage and use of hazardous substances associated with the WNP would be appropriately managed such that any risk of adverse effects on people, property and the surrounding environment would be less than minor.

Comments Received

[580] For HDC OGNZL's approach was peer-reviewed by technical expert Norbert Schaffoener. He identified errors and inconsistencies in the Tonkin and Taylor reports and considered then to be more descriptions than risk assessments. Nevertheless, Mr Schaffoener concluded that the proposed management of the effects of hazardous substances was appropriate provided some of OGNZL's proposed conditions were amended. In reaching that conclusion he noted the relative remoteness of the WNP hazardous facilities was advantageous in relation to public health and safety risks.

[581] Mr Schaffoener observed that the effective management of hazardous substances was reliant on good HSMP(s). Given that details of exact locations and storage/management methods, including site plans, had not been finalised the HDC's certification of the HSMP(s) was crucial and would provide the opportunity for relevant requirements to be addressed.

[582] HDC's planning assessment concluded that the management of the effects of hazardous substances was appropriate with regard to the Applicant's proposed conditions subject to the amendments recommended by Mr Schaffoener.

[583] Coromandel Watchdog (Dr Emerman) and lay commentator Gloria Sharp were both concerned about cyanide management at the Processing Plant and the unplanned release of mine tailings. Brigid and Steve Cameron were concerned about proximity to the explosives magazine and the transportation of explosives. The four iwi authorities expressed general concerns about contamination and pollutants.

OGNZL response to comments

[584] OGNZL's response was provided by Robert de Munckhof from Tonkin and Taylor. He supported Mr Schaffoener's amendments to the conditions. Regarding the concerns of Dr Emerman, Mr de Munckhof noted that solid sodium cyanide and liquid cyanide was currently stored and used at the processing plant in Waihi and OGNZL had an existing Waihi Cyanide Management Plan.[52] That Plan identifies potential overflow locations to provide secondary containment, and the processing site has tertiary containment ponds to contain any unplanned releases. There are substances stored on site that can be used to dose and detoxify the containment areas following a spill as part of the emergency response. Mr de Munckhof also advised that the Waihi Emergency Management Plan set out the site-specific cyanide emergency procedures for a range of emergency release, fire and staff exposure scenarios.[53]

[585] With respect to the concerns of the lay commentators, OGNZL advised that the explosive magazine buffer zones did not enter the Camerons' property. Any transport of hazardous substances by road would be undertaken in accordance with the Land Transport Rule: Dangerous Goods 2005 and, when on site, all transport of explosives would be carried

---

52 WAI-451-PLN-002, which was referred to and described in Section 4.11.1 of B18.
53 WAI-250-PCP-001 (October 2023).

out under the supervision of a Certified Handler. Any transport of hazardous substances in helicopters will adhere to the Civil Aviation Rule Part 92 – Carriage of Dangerous Goods.

Statutory Instruments

[586] No provisions of Statutory instruments were brought to our attention other than those just mentioned.

Panel Findings

[587] We find that the effects relating to the storage and handling of hazardous substances have been adequately addressed by the Tonkin and Taylor reports, the HDC peer review and the responses of Mr de Munckhof to the matters raised by commentators. Subject to the adherence to conditions of consent and the implementation of certified HSMP(s) (together with the ongoing adherence to the Waihi Cyanide Management Plan), we find those potential effects to be no more than minor.

Conditions

[588] We have not made any amendments to OGNZL's 1 September 2025 conditions for the HDC land use consents dealing with 'Hazardous Substances' (HDC Conditions 58 to 64), noting the HSMP will be provided to HDC for certification (Combined HDC and WRC Conditions C4B and C5(m)).

E20: CONTAMINATED LAND MANAGEMENT

[589] OGNZL addressed Contaminated Land Management in section 6.17 of the AEE and the Part B.17 WWLA report (2024).[54] Potential ground contamination associated with future construction and operation of TSF3 was addressed in section E13 geochemistry.

[590] The Preliminary Site Investigation (PSI) completed by WWLA found that there was potential for contamination to be encountered within the existing operational facilities and other currently undeveloped WNP areas.

[591] Contamination sources in the current mining areas included bulk storage and use of cyanide, acids and solvents, and potential for localised contamination around mechanical workshops, fuel storage, transformers, and explosives storage.

[592] Within undeveloped WNP areas, potential contamination sources included use of drenches, market garden chemicals and minor fuel storage associated with farming activities as well as potential for asbestos use within dwellings and sheds.

[593] Potential contamination sources were predominantly 'point sources' and expected to be confined to surface soils in the immediate vicinity of the activity.

[594] WWLA indicated that the "…scale of the earthworks proposed will dwarf the volumes of contaminated soil that may be present". They recommended:

(a) soil sampling in targeted areas as informed by the HAIL assessment prior to the commencement of earthworks associated with the WNP; and

(b) preparation of a Site Management Plan ("SMP") for each area, setting out the measures to be implemented to manage the risks of contaminated soil disturbance on workers and the environment.

---

[54] Waihi North Project, Preliminary Site Investigation (Ground Contamination) Williamson Water and Land Advisory 17 December 2024.

Comments Received

[595] Ground contamination management was addressed in the comments from HDC who indicated that "…the conditions proposed by the applicant relative to the preliminary site investigation that has been undertaken, are appropriate, relative to the requirement for the consent holder to instigate a Site Management Plan - Contaminated Land for certification."

[596] They also stated "There are no significant residual contamination impacts that require a proportionality assessment".

OGNZL response to comments

[597] OGNZL noted the comments but made no specific response.

Statutory Instruments

[598] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[599] Subject to the imposition of appropriate conditions of consent we find that ground contamination management effects will be appropriately avoided, remedied or mitigated.

Conditions

[600] The revised conditions provided by HDC and TCDC and the Combined HDC and WRC conditions are considered to appropriately manage ground contamination effects. These have been agreed to by OGNZL.

E21: TRANSPORTATION EFFECTS

[601] OGNZL addressed transportation effects in section 6.18 of the AEE and the Part B.50 Stantec report.[55] Traffic movements generated by the WNP and effects on the local roads and their points of access to the state highway network were assessed based on a proposed work and labour schedule for an 18-year work programme through to approximately 2042. Stantec recommended:

(a) upgrading sections of Willows Road (including at curves, culverts, and its intersection with SH25) and secondary accesses on Golden Valley Road;

(b) ensuring the construction workers day shift time was well dispersed at the Baxter Road access, and monitoring workforce travel patterns and adapting management of that traffic if required;

(c) providing adequate parking within the site(s); and

(d) preparing and implementing a Construction Traffic Management Plan.

Comments Received

[602] Transportation matters were addressed in the comments from HDC, NZTA and several lay commentators.

[603] For HDC technical expert John Kazon considered that the recommendations outlined in the Stantec report were sufficient and no further information was required.[56] His overall opinion was that any potential transportation effects, both during construction and in the long term, would be effectively avoided, remedied or mitigated to the point they were acceptable. Mr Kazon concluded that proposed conditions for the HDC Land Use Consents (Transport, Conditions 70–86) were satisfactory.

[604] NZTA's comments focused on the State Highway 25 and Willows Road intersection (Area 1) and the Wharekirauponga Access Tunnel (Area 3) where it passed beneath State

---

55 Waihi North Project, Transportation Assessment Report, Stantec New Zealand, 19 February 2025.
56 Technical Director, Pinnacles Civil.

Highways 2 and 25. Amendments were sought to OGNZL's proposed conditions and advice notes to ensure that NZTA was informed of transport and geotechnical matters and NZTA assets were protected.[57]

OGNZL response to comments

[605] OGNZL recommended amendments to conditions and advice notes in response to the NZTA comments. Regarding the Access Tunnel, OGNZL advised that it passes at depth beneath SH25 in andesite rock and mining in andesite rock had been undertaken successfully at similar depths beneath Waihi East since the mid 2000's without damage to buildings or roading infrastructure. Nevertheless, surface settlement monitoring would be in place along SH25 and would be reviewed as part of the Dewatering and Settlement Monitoring Plan.

Statutory Instruments

[606] No specific Statutory instrument provisions were brought to our attention by commentators. We are satisfied that the transportation aspects of the WNP have suitably taken into account Objectives 1 and 2 of Section 7.9 of the HDP to provide and maintain a safe and efficient transport network.

Panel Findings

[607] Subject to the imposition of appropriate conditions of consent we find transportation effects will be appropriately avoided, remedied or mitigated.

Conditions

[608] In its response to comments OGNZL accepted NZTA's requested amendments to HDC conditions 72 and 73 and inserted new condition 73B requiring a TTMP to be submitted to HDC for certification. We find the TTMP should also be certified by NZTA. OGNZL generalised NZTA's suggestions for condition 73 by referring to detailed design plans which we find to be appropriate. Regarding the access tunnel, OGNZL did not recommend the amendment sought by NZTA to condition 46, but we find that amendment to be appropriate and so we have made it.

---

[57] Conditions 46, 72 and 73 along with a new condition regarding a Temporary Traffic Management Plan (TTMP) for the State Highway 25 and Willows Road intersection.

E22: SOCIAL IMPACTS

[609] OGNZL addressed social impacts in section 6.19 of the AEE and the Part B.57 WSP report.

[610] The WSP report analysed the likely social impacts of implementing the WNP. It identified well-being effects of externalities of the WNP (for instance traffic movements, noise, blasting and vibration, air quality, lighting and visual amenity) along with anxiety about, or discomfort with, associated changes. Other potential impacts discussed by WSP involved community services. The report indicated that community health, educational and other facilities have the capacity to deal with the pressure likely to result from increased mining employment.

[611] The most significant impacts WSP identified were, on the positive side, social uplifts for Waihi and the surrounding district associated with increased employment and business activity and on the negative, a likely shortage of accommodation as employment associated with the WNP ramps up and the possibility of community disruption when mining stops.

Prior social impact analyses and the current Social Impact Management Plan

[612] Social impact analyses were prepared for consent applications in 2014 and 2019 and, pursuant to a condition imposed in 2019, a Social Impact Management Plan (current SIMP) was developed.

Waihi and the local area

[613] The social impact material focuses primarily on Waihi and the area within a 30 km radius of the town centre. This is referred to as "the local area" and includes Paeroa, Whangamata, Te Aroha, Waihi Beach and Katikati.

[614] Key industries in and around Waihi include farming, tourism and mining. Light engineering firms support farming and transport. Attractions that draw tourists to the area include, amongst other things, historical and current gold mining operations. Prominent within Waihi is the Martha Open Pit, and there are current mining operations under the town.

[615] As recorded in the 2023 Census data, the populations of Waihi and the local area are 5,610 and 37,528, respectively. Median ages are 50.8 years in Waihi and 52.1 years in the local area. These are substantially higher than the median age in the Waikato Region.

[616] The New Zealand Deprivation Index (NZDI) is an area-based measure of socio-economic deprivation. It uses a scale of 1 (least deprived) to 10 (most deprived) to denote levels of deprivation. To generate scores, it combines census data relating to communications, income, employment, qualifications home ownership, support, living space, and living conditions. On the 2023 NZDI, Waihi town scored 8.4, which is significantly higher than the local area (6.8), Waikato (6.4) and New Zealand (5.6).

[617] On data collected in 2018, Waihi town and the Hauraki District had a higher youth (15 to 24 years) Not in Employment, Education, or Training ("NEET") rate, 16.9%, compared with the regional and national rates. The New Zealand NEET rate was 12.4%.

[618] Levels of education and qualifications in Waihi and the local area are low compared to the regional and national averages. As examples only, the 2023 Census indicated percentages of those with no qualifications at 25.4% in Waihi, 22.5% in the local area, 17.2% in Waikato and 15.1% in New Zealand; and with postgraduate qualifications at 4.4% in Waihi, 5.5% in the local area, 8.7% in Waikato and 11.1% in New Zealand.

[619] Unemployment rates in Waihi tend to be higher, and those in the local district lower, than in Waikato and New Zealand as a whole.

OGNZL's current schemes for addressing effects on property and property values

[620] OGNZL runs a number of schemes which address the effects of mining on properties near its mining activities. They are:

(a) A Top Up scheme under which OCNZL pays the difference between what a purchaser is prepared to pay for a property and its assessed market value if not affected by the OGNZL's mining activities. Only one Top Up is available per property. To be eligible for Top Up, a property must:

(i) be within one of the defined areas above where the property value assessment has identified a potential effect on property values as a result of proximity to mining activities;

(ii) be marketed by a licensed registered real estate agent; and

(iii) have been on the market for a period of at least four months following the announcement of the WNP.

(b) An ex gratia payment of 5% of the value of properties under which the OGNZL is mining.

(c) An Amenity Effect Programme under which those who experience amenity detriment as a result of vibration receive payments.

(d) A "We break, We Pay" scheme under which there is a special procedure for compensation for any damage caused by mining activities. And

(e) A complaints registration and feedback system in relation to vibration.

[621] As well, OGNZL supports a "Streets Ahead" scheme operated by the Waihi Community Forum.

Employment impacts in and around Waihi of current mining

[622] OGNZL's workforce records indicate that 23.84% of the total workforce (contractors and employees) in its current mining operations in Waihi attended Waihi High School, and that a majority of the workforce live in the local area. OGNZL's total expenditure in relation to its Waihi operation in 2022 was $121 million. Local supplier sales totalled $15.3 million. 37 local suppliers provided goods and services worth $60,000 or more to OGNZL.

[623] These figures are evidence of substantial economic activity associated with mining in and around Waihi. However high scores on the 2023 NZDI index for Waihi and the local area, along with the other unfavourable social indicators, show that despite the significant activity

they generate, current mining activities have not had a markedly favourable effect on unemployment and poverty in Waihi and the local district.

[624] This is not surprising. Economic growth, on its own, will not resolve poverty. The WSP report noted:

> … unemployment in Waihi is associated with the long-term unemployed. The group aged 18-30 years old are mostly affected and this would be a useful pool of labour. This group can be difficult to motivate; they have challenges passing alcohol and drug tests and have no drivers' licences. Life coaching and support are needed to secure and maintain employment.

[625] Mr Eaqub, in his response to the s 53 comments, observed:

> ... Decades of research on economic inequality has shown that economic growth alone is not enough to reduce poverty. There may be many reasons why there are pockets of deprivation alongside strong economic activity such as mining. Poverty is often accompanied by other factors, such as health issues, addiction, and low education attainment. The underlying causes of poverty and income disparity cannot be solved by local employment opportunities alone and are often difficult to solve. Social policies through central government are the main poverty alleviation channel in New Zealand.
>
> ... A relevant reason for deprivation persisting alongside the strong economic activity of mining could be a mismatch between local labour force skills and the needs of the mine, perhaps due to a lack of education, skills or other barriers. In this scenario, growth in mining activity would draw in suitable labour from outside the region. This increases the population and economic activity of the region but does not necessarily improve the outcome for the locally unemployed or underemployed. However, there may be some spillover benefits if the increase in economic activity leads to secondary jobs in other sectors, for example retail, which may draw from the local labour force.

[626] The purpose of the Waihi Skills Development and Training Action Plan (which is provided for in the conditions proposed by OGNZL) is to boost local employment. We will come to this shortly.

Pressure on housing

[627] The likelihood that increased employment will create pressure on housing in Waihi and the local area is discussed extensively in the material before us.

[628] The housing market can be expected to respond to this pressure (in the form of the provision of additional accommodation) and there do not appear to be any restrictions (in relation to land capable of development) which would preclude this response. However, the

absence of careful planning, there are likely to be some disruptions associated with all of this in the short to medium term following increases in employment.

[629] The purpose of the Workforce Accommodation Assessment (also provided for in the conditions proposed by OGNZL) is to ensure that relevant information is collected to enable steps to be taken to reduce the extent to which implementation of the WNP contributes to local accommodation shortages.

Management of the consequences of eventual closure of the mine

[630] Assuming implementation of the WNP, the number of people employed in the mine in Year 17 is expected to be 564. This will drop in Year 18 to 285 and to nothing in the following year. Many of those who work in the mine will leave Waihi and the local area. This is likely to change the demographic profile in Waihi and the local area with likely impacts on community facilities and services and business activity.

[631] The social consequences for Waihi and the local area are likely to be broadly the same irrespective of whether mining ceases in 2032 or (assuming the WNP is implemented) in or after 2040.

Conditions proposed by OGNZL

[632] OGNZL has proposed conditions to enhance the employment impacts in and around Waihi and mitigate the effects of increased demand for accommodation and disruption associated with the closure of the mine and address other social impacts. These involve:

(a) a Waihi Skills Development and Training Action Plan;

(b) a Workforce Accommodation Assessment;

(c) a general Social Impact Management Plan (SIMP) that sits over the first two documents and also addresses some other well-being impacts;

(d) a Socio-Economic Impact Assessment of Closure;

(e) C27 and C28 of the HDC and WRC conditions and Condition 48 of the HDC conditions which provide for a complaints registration and response procedure;

(f) the Amenity Effect Programme which is provided for in Conditions 34- 41, the We Break It, We Pay scheme in conditions 50 and 51 and the ex-gratia payment scheme in Conditions 65 and 66 of the HDC conditions; and

(g) the Top Up scheme which is referred to in the SIMP conditions but only in relation to reporting (see Condition 107(xii) of the HDC conditions).

Comments Received

[633] Comments on social impacts were received from HDC, Coromandel Watchdog, the Waihi Community Forum, the four iwi authorities and several lay commentors. For example, Ngāti Porou ki Hauraki highlighted Waihī's socio-economic disparities and poverty and potential impacts of the WNP on local employment and housing. Conversely. Ngāti Pū (which is staunchly opposed to the WNP) acknowledged that the construction and operation of mining activities in the Wharekirauponga area may bring direct and indirect economic benefits to the wider region, noting, however, it could create tension within their own community, especially where whānau strongly opposed mining in their rohe.

[634] Mr Quigley's comments (on behalf of the HDC) proposed amendments which if accepted would provide for more detailed versions of the Waihi Skills Development and Training Action Plan, the Workforce Accommodation Assessment and the SIMP.

[635] Other comments addressed the impacts on people of blasting, vibration, noise, dust and vehicle movements which we address elsewhere.

[636] A lack of focus in the Social Impact Analysis on the community at Whangamata was raised by Coromandel Watchdog.

[637] The Waihi Community Forum addressed OGNZL's Property Purchase, Top Up, Amenity Effect and Streets Ahead programmes.

[638] Lay commenters expressed concerns about impacts on property values.

OGNZL's responses to comments

[639] OGNZL's response was provided by Hilary Konigkramer from WSP. She considered that Mr Quigley's proposed amendments to HDC conditions on the Waihi Skills Development and Training Action Plan detracted from the intended outcomes that the Plan sought to achieve. In particular, Ms Konigkramer considered that Mr Quigley's proposed "Waihi Skills Development and Training Action Group" was not appropriate as OGNZL needed to retain responsibility for the consent conditions and lead the development of the Plan. This is because it understood the specific skills and competencies required to create an employable workforce.

[640] In terms of road safety and traffic accidents, which Mr Quigley sought to have addressed in the Workforce Accommodation Assessment, Ms Konigkramer considered that those considerations were covered by other legislation and company and contractor health and safety policies and procedures. She also considered that consolidated monitoring and reporting on OGNZL's initiatives by way of the SIMP was preferable to the multiple references to reporting, review, evaluation and certification sought by Mr Quigley.

[641] As to Coromandel Watchdog's reference to an absence of focus on the Whangamata community, Ms Konigkramer noted that Whangamata is within the local area and was thus addressed in her Social Impact Analysis.

Statutory Instruments

[642] We have considered the provisions of the Hauraki District Plan when determining what if any changes should be made to the conditions of consent proposed by OGNZL.

Panel Findings

[643] In overall terms we find that OGNZL has adequately addressed the potential social impacts of the WNP. We consider the initiatives that it proposes to undertake (as outlined above) are comprehensive and, because many of them are in existence already in relation to existing mining activity, have a proven track record.

[644] We do not consider it is appropriate to require assessments and reporting on matters relating to general social support for members of the community, or temporary and emergency housing (as proposed by Mr Quigley). In part, this is because those matters fall within the role

of other agencies. Nor do we find it appropriate to require the Workforce Accommodation Assessment to address commuter road safety matters (as was also recommended by Mr Quigley). This is the role of the road controlling authorities (NZTA and HDC). We are also conscious of s 108AA of the RMA which imposes restrictions on the subject matter of resource consent conditions. In the respects just mentioned, the conditions proposed by Mr Quigley appear to lie outside of what is contemplated by s 108AA(2) and go beyond what OGNZL agrees to (see s 108AA(1)).

[645] We agree with Ms Konigkramer that it would not be appropriate to require OGNZL to establish and administer a "Waihi Skills Development and Training Action Group", as suggested by Mr Quigley. Instead, in terms of compliance and enforcement certainty, we prefer the status quo whereby OGNZL is clearly responsible for implementing the 'social impact' suite of consent conditions and for monitoring and reporting on the outcomes of any associated actions by way of the SIMP. However, we consider that the HDC should be a party that it collaborates with in terms of the Waihi Skills Development and Training Action Plan. Once again, s 108AA of the RMA is relevant.

[646] We agree with OGNZL that there is no need to consider housing options in an expanded 60-minute commute area (which was also suggested by Mr Quigley), but are of the view that that the "local area" focus should be clarified.

[647] We acknowledge the concerns of lay person commenters about potential effects on property values. However, it is well established that an impact on property values is not an effect that should be considered under the RMA. Rather, the focus should be directly on the adverse effects on amenity values which are said to influence property values. We have considered effects on amenity values (including those that might arise from vibration, noise, dust and visual changes to the landscape) elsewhere in this Decision. In any event, OGNZL's Top Up scheme is in place and there is no reason to think that it will be discontinued.

Conditions

[648] We have carefully considered the amendments to conditions sought by commenters, in particular those sought by Mr Quigley on behalf of the HDC. Subject to our findings as set out above, we have amended the conditions to improve their clarity and certainty. The improvements include a focus on NEET individuals, reference to "Fly In – Fly Out" workers,

clarifying the extent of other townships included within the "local area", and requiring reporting on the numbers of individuals (and their demographic profile) who have received skills enhancement assistance under the Waihi Skills Development and Training Action Plan.

[649] We have not attempted to expand the consent conditions beyond those proffered by OGNZL to address various other impacts. The We Break We Pay, the Amenity Effect and ex gratia payment schemes are directly provided for in the conditions proposed by OGNZL and the Top Up Policy is referred to in the SIMP in terms that presuppose its continuation. These are conditions to which OGNZL has agreed to for the purposes of s 108AA(1)(a). A condition that imposed financial obligations that go beyond what OGNZL has agreed to (for instance in relation to the Streets Ahead scheme) would be a "condition requiring a financial contribution" within the meaning of s 108(9) of the RMA in circumstances that lie outside of what is permitted under s 108(10). This is because such a condition would lie outside the scope of the financial contributions provisions of the Hauraki District Plan.

E23: MONITORING AND REVIEW

[650] The monitoring and review obligations imposed by the proposed conditions attached to the various approvals required for the WNP are comprehensive and robust. Monitoring will be undertaken for noise, air quality, water quality and quantity in surface and groundwater (including shallow groundwater, springs and wetlands, the Ruahorehore Stream and the Ohinemuri River). vibration, earthworks, ground subsidence or settlement, effects on native frogs, These obligations include the development of a Mātauranga Māori Monitoring Programme to be led by the Iwi Advisory Group.

[651] Monitoring will occur prior to mining activities in order to determine baseline conditions against which the effects of mining activities will be assessed on an ongoing basis once mining activities commence. In some cases, trigger levels will be set to implement mitigation or contingency measures should they be required. The monitoring obligations are captured in both consent conditions and associated management plans.[58]

[652] Some of the monitoring proposed is a continuation or expansion of that already undertaken for the Martha mining activities. New monitoring programmes are proposed for mining activities in the Coromandel Forest Park along with the monitoring of mitigation measures such as pest control and fauna salvage and relocation.

Comments Received

[653] Comments on OGNZL's proposed monitoring activities were provided by HDC, TCDC, WRC, DOC, Fish and Game, NZTA, PCE, Coromandel Watchdog, John Perrins, Brigid and Steve Cameron, Bryce Ede and Gloria Sharp. Many of the comments focussed on the adequacy of the proposed monitoring, both in terms of its nature and scale.

OGNZL response to comments

[654] OGNZL responded to the comments on monitoring in the various briefs of evidence provided by a range of technical subject experts. In some cases the response was to highlight

---

[58] Including the WUG Water Management Plan, Dewatering and Settlement Monitoring and Management Plan, GOPTSF Monitoring and Management Plan, Area 5 Rock Storage Monitoring and Management Plan; NRS Monitoring and Management Plan; Area 6 Stockpile Monitoring and Management Plan; TSF3 Monitoring and Management Plan; Native Frog Monitoring Plan;

existing or proposed monitoring that responded to the expressed concerns, while in other cases amendments were proposed to the monitoring programmes and their associated resource consent monitoring conditions.

Statutory Instruments

[655] No specific Statutory instrument provisions were brought to our attention by commentators.

Panel Findings

[656] The Panel has carefully reviewed the extensive range of monitoring proposed to be undertaken in light of the comments received and the OGNZL response to those comments. Our assessment of those matters is primarily set out in the preceding Part E subsections of this Decision and we do not repeat that detail here. Suffice to say that we find that the proposed monitoring and reporting programmes and associated consent conditions, as amended by us in some cases, are comprehensive and robust.

[657] DOC sought a number of amendments to the consent conditions relating to monitoring, particularly relating to the WRC conditions. We did not find it necessary to amend the majority of conditions as we found those conditions to be sufficiently clear and certain. In many cases DOC sought the imposition of limits or standards that we consider would be difficult to define, or consent holder obligations that were unduly onerous relative to the likely scale of adverse effects.

[658] However, we did amend some WRC conditions in response to DOC's concerns, where those amendments provided additional clarity and certainty. We also added a s 128 review condition to the TCDC consent, as was sought by DOC.

Conditions

[659] By and large we were satisfied with the various monitoring conditions although we have made some amendments to improve their clarity and certainty.

E24: CLOSURE AND AFTERCARE

What is proposed in general terms

[660] OGNZL has existing rehabilitation and closure obligations which apply to it in relation to its current mining activities at Waihi and its proposal in respect of rehabilitation and closure of the WNP build on those obligations currently in place.

[661] OGNZL are required (under Combined HDC and WRC condition C60) to prepare a rehabilitation and closure plan for certification by HDC and WRC. That plan will provide the detail of the rehabilitation of the WNP areas.

[662] The objectives of the closure plan are set out in condition C61 of the Combined HDC and WRC conditions. In summary proposed work areas are to be left in a stable and self-sustaining state, soils are to be left such that it is highly unlikely that there will be a risk to human health, groundwater and surface water quality is to be good enough to not adversely affect aquatic life or other users, and the plan should integrate with the two Ecology and Landscape Management Plans.

[663] There are a range of specific rehabilitation requirements for each area described in the AEE and these are specified in Combined HDC and WRC conditions C64 to C69 as well as HDC condition 51A. These specific requirements are not repeated here, but in a general sense these include:

(a) backfilling of all stope voids in the WUG mine;

(b) backfilling of all tunnel entrances from the portal for a distance of 100 metres and recontouring of portals to ensure long term stability;

(c) backfilling of any void where geotechnical conditions require it to ensure long term stability;

(d) removal of surface infrastructure (including ventilation evasés) and rehabilitation of those areas (the exception being the WTP which may remain

on site if needed for ongoing treatment of water or if it can be utilised for other purposes);

(e) all necessary works to ensure that on completion the mine will not have adverse effects on the water quality of Natural State Water Bodies or the water levels of natural inland wetlands;

(f) management of weeds and pests within disturbed surface areas above the mine for two years;

(g) rehabilitation of drill platforms and grouting of drill holes;

(h) removal of waste rock associated with the WRS and rehabilitation and reinstatement of the impacted tributary;

(i) restoration and recontouring of disturbed landforms to appear similar to the existing landforms;

(j) restoration and riparian and wetland edge planting.

(k) suitable capping of tailings storage facilities and the remnant NRS to limit water and oxygen ingress so that the finished surface will protect water quality and avoid soil erosion; and

(l) conversion of Collection Ponds to wetlands.

Conditions

[664] As will be apparent, the rehabilitation and closure obligations of OGNZL are spelt out in the Combined HDC and WRC conditions C60 – C69. The Panel is satisfied that the conditions provide an appropriate level of certainty that the WNP will be satisfactorily rehabilitated on closure.

For the future

[665] At closure the Willows SFA will be dis-established and the area made suitable for alternative land use (such as reversion to farming).

[666] The Martha Trust was originally established in 2000 to give effect to the conditions attached to the 1999 consents. It will take ownership of the GOP, the NRS, and the TSF3 areas and manage them in perpetuity along with the existing TSFs and the WTP.

[667] Funding for the Martha Trust and provision for rehabilitation and closure if OGNZL defaults are discussed in section E25 of this Decision.

E25: BONDS

Overview

[668] This section of our Decision deals with a rehabilitation bond in favour of the HDC and WRC and DOC and a capitalisation bond in favour of the Martha Trust.

[669] The purpose of the rehabilitation bond in favour of HDC and WRC is to provide them with the funds to close and rehabilitate the mine site in accordance with the consent conditions should OGNZL not do so. The rehabilitation bond in favour of DOC has a similar purpose but in relation to OGNZL's obligations under the Access Arrangement.

[670] The purpose of the capitalisation bond is to ensure funding of post-closure site management costs for land and structures that will pass into the ownership or management of the Martha Trust in perpetuity and will be its responsibility to maintain.

[671] OGNZL proposed HDC and WRC conditions that apply to all areas affected by the WNP other than the Coromandel Forest Park that largely replicate the existing 1999 consent conditions.

[672] The Wharekirauponga and Favona Access Arrangements contain bond conditions that have been specified by the Minister under s 78 and clauses 4(2) and 10 of the FTAA. As we must impose them, they do not warrant further discussion save to record that DOC and OGNZL have agreed to some additional provisions that provide a context for their operation.

The background to the bonds and Martha Trust conditions

The 1999 conditions

[673] As noted, the conditions proposed by the applicant are based substantially on conditions that form part of the 1999 consent for the Martha Open Pit. These conditions drew on a 1997 Report of the Parliamentary Commissioner for the Environment.[59] The 1999 conditions involved:

---

[59] *Long term management of-the environmental effect of tailings dams*, 1997, Parliamentary Commissioner for the Environment.

(a) a rehabilitation bond; and

(b) the establishment of the Martha Trust to maintain land and structures associated with the mine and its capitalisation to enable it to do so.

Rehabilitation bond conditions in the 1999 consent

[674] The rehabilitation bond condition in the 1999 consent requires OGNZL to provide and maintain in favour of the HDC and WRC a bond for rehabilitation purposes, including funding to enable the HDC and WRC to purchase Industrial and Special Risk Insurance in the sum of $12 million dollars and Public Liability in the sum of $5 million. The insured sum figures are followed by "(1998 dollars)" indicating that they are to be inflation-adjusted.

[675] The terms of the bond are to be:

> ... in a form approved by the Councils and shall, subject to these conditions, be on the terms and conditions required by the Councils.

[676] The amount of the bond was to be fixed at the start and since then has been reviewed by the HDC and WRC. Under the conditions, this has been on the basis that the amount should include:

> (i) the estimated costs (including any contingencies necessary) of rehabilitation and closure in accordance with the conditions of this consent, on completion of the mining operations proposed for the next year and described in the Rehabilitation Plan;
>
> (ii) any further sum which the Councils consider necessary to allow for remedying any adverse effect on the environment that may arise from the exercise of this consent;
>
> (iii) the estimated costs of monitoring, in accordance with the monitoring conditions of this consent, until this consent expires; and
>
> (iv) any further sum which the Councils consider necessary for monitoring any adverse effect on the environment that may arise from the exercise of this consent including monitoring anything which is done to avoid, remedy, or mitigate an adverse effect.

[677] If OGNZL does not agree with the amount of the bond fixed by the HDC and WRC, the amount is to be fixed by arbitration under the Arbitration Act 1996.

[678] These conditions have been replicated in consent conditions for each subsequent mining development.

[679] The bond is to be released by the HDC and WRC on completion of closure of the site which is defined as meaning:

> when the elements of the entire project have been demonstrated by the consent holder to the satisfaction of the Councils to have reached a stable, self-sustaining, rehabilitated state as defined by the approved Rehabilitation Plan.

The Martha Trust and the capitalisation bond required by the 1999 consent conditions

[680] The 1999 conditions required OGNZL to establish what became the Martha Trust to take over three areas of land associated with the then proposed mining activities and to maintain them in a "stable, self-sustaining and rehabilitated state" and to have a similar role in relation to the lake pit. It was to take out insurance against "unexpected risks" and reimburse the Council for their monitoring and maintenance expenses.

[681] To ensure the funding for the Martha Trust, the conditions required the consent holder to establish a capitalisation bond:

> to secure the settlement on the Trust of the required capital sum to fund the Trust to carry out its obligations.

[682] The details were fleshed out in the conditions in ways corresponding to the rehabilitation bond conditions. The capitalisation bond was to be in a form approved, and its amount is to be set annually, by the HDC and WRC.

[683] As to quantification, the relevant condition proposed by OGNZL provides:

> The amount of the capitalisation bond shall be fixed annually by the Councils and shall cover:
>
> - the estimated costs of dealing with any adverse effect on the environment which may become apparent after the surrender or expiry of this consent. This sum may include (without limitation) provision to deal with structural instability or failure, land and/or water contamination, and failure of rehabilitation. Such estimated costs shall include the costs of investigation, prevention, and remediation of any adverse effect. the estimated costs of monitoring for and of any adverse effect and of measures taken to avoid, remedy, or mitigate any adverse effect.
>
> - provision for contingencies.

- the estimated costs of long-term monitoring and maintenance of the area to be owned or managed by the Trust, following completion of closure of the site,

- provision for the reasonable remuneration of the trustees having regard to their duties and responsibilities as trustees

> and be based on the residual risk assessment dated 20 July 1998 prepared by the consent holder and provided to the Councils. Such residual risk assessment shall be updated annually.

[684] OGNZL may challenge the amount of the bond fixed by the HDC and WRC, in which case, the amount is to be determined by arbitration.

Operation of the 1999 consent bond conditions

[685] We were told by OGNZL that the amounts of the bonds are reviewed and adjusted annually by an independent expert engaged by OGNZL, whose assessments can be independently peer-reviewed prior to approval by HDC and WRC. The review encompasses changes in the mining work programme (which determine the level of disturbance that would require rehabilitation what would be required by way of rehabilitation) and inflation.

[686] In its response to comments received under s 53, OGNZL explained how the current system works:

> In practice the bond quantum is reviewed and adjusted annually by an independent expert engaged by [OGNZL] and is independently peer reviewed and approved by [HDC and WRC] prior to bank bonds being issued. That review encompasses both changes in the mining work programme (which determine the level of disturbance that would require rehabilitation, and the manner of that rehabilitation, at any given time) and inflationary effects on costings.

And, as to calculation of the amount:

> The bond quantum calculation is done by an independent expert and uses a conservative estimating method. There are two components of each bond, a base cost and a risk cost. The base cost provides for physical rehabilitation or ongoing site maintenance work, its project management and for the Rehabilitation Bond a period of ongoing environmental monitoring and site maintenance and management throughout the closure period. It adopts reasonable to conservative estimates of quantities and unit rates. The risk cost provides a contingent liability fund against the occurrence of something unexpected and unwanted occurring during the closure period. It assumes the occurrence of the quantified risk events at the earliest possible time and uses the conservative Threshold Method for setting the risk cost, which is the commonly used approach for bonding in New Zealand. As discussed, reviewed in detail and approved by both the HDC and WRC the bond calculations are arrived at via the Monte Carlo method using a

> statistically derived value referred to as the P80 which provides a suitably conservative contingency on the best estimate (the P50) without being punitive.

[687] What this means is that the bond amounts are calculated using Monte Carlo simulation to model various rehabilitation cost scenarios. The P80 figure represents an amount which has an 80% probability of not being exceeded.

[688] There has never been resort to arbitration to settle the bond amounts.

[689] OGNZL obtains bank guarantees for the bond amounts. These are in standard "on-demand" terms. This means that the HDC and WRC can assess the bond money from the banks direct.

[690] The rehabilitation and capitalisation bonds are currently $75.4 and $10.4 million. respectively.

Comments received

[691] The covering letter from the Chief Executive of HDC which accompanied HDC's s 53 comments suggested a "first principles review" of the rehabilitation bond and capitalisation bonds to be undertaken by OGNZL as "part of the process for setting the bond quantum (sic)" should the WNP be approved. The letter then noted:

> The assumptions upon which the setting of the bonds are based are an essential element of the reviews that HDC is suggesting be undertaken. In this regard, one such key assumption is that HDC is emphasising that the Rehabilitation Bond should be called at the same time as the Capitalisation Bond is called.

[692] In the report from Bentley & Co which formed part of the HDC's comments, the allowances in the rehabilitation bond calculations for the purchase of Industrial and Special Risk Insurance in the sum of $17 million (2025 dollars) and public liability insurance to the sum of $7 million (2025 dollars) were discussed:

> The basis for these sums has not been the subject of an assessment in the application to ascertain their quantum, relative to their purpose. HDC consider it incumbent on the applicant to address this, to provide rationalisation for the proposed condition.

[693] As to the Martha Trust provisions, it was noted:

> The proposed conditions require a Trust (the Martha Trust (the Trust)) that was established for a separate consent matter to take responsibility for post closure matters. The scope of these conditions requires the approval of a third party. In the absence of this, HDC as the consent authority cannot impose/enforce this condition. Further to this, with the proposed consent condition(s) being based on a previous consent matter, HDC is concerned (despite the wording of the condition) that it is unclear how such a condition can impose requirements on HDC to perform.

[694] And as to the capitalisation bond:

> The proposed conditions require a capitalisation bond to secure the settlement on the Trust of the required capital sum to fund the Trust to carry out its obligations. ...[T]his proposed bond is to be based on a residual risk assessment. The application material does not contain an explanation/assessment of the terms/parameters that such a residual risk assessment is to contain, or what acceptance, approval, or certification process this is to follow. HDC consider it incumbent on the applicant to address this, to provide rationalisation for this matter to inform the basis for the condition, as there is no mechanism proposed to debate the scope and suitability of the assessment to be provided. Related to this, HDC is concerned as to the costs incurred in this process, particularly if there is a dispute, and HDC consider this to be a matter that should be clarified by the applicant.

[695] This means that the following issues were raised:

(a) a possible "first principles review" including as to the time the bonds are called and residual risk assessment;

(b) the allowances in the rehabilitation bond for the costs of Industrial and Special Risk Insurance in the sum of $17 million (2025 dollars) and public liability insurance to the sum of $7 million (2025 dollars);

(c) the need for the Martha Trust to accept its extended role in relation to the WNP (including having its trust deed amended to permit it to do so).

(d) whether the conditions adequately protect HDC in relation to costs.

Conferencing

[696] There was a conference as to bond conditions on 24 October 2025 and they were alluded to at a further conference on 7 November 2025 where the DOC bond was mentioned.

A "first principles review" including as to the time the bonds are called and residual risk assessment

[697] In the course of the conference on 24 October, the HDC representatives advised that the HDC was not seeking variation of the proposed conditions as to the fixing the amount of the bonds, but rather an explanation in our decision of how current arrangements developed and their rationale.

[698] We have just provided the explanation sought.

[699] As to when the bonds might be called, default by OGNZL prior to completion of closure and rehabilitation would almost certainly result in both bonds being called at the same time.

The allowances in the rehabilitation bond for the costs of Industrial and Special Risk Insurance in the sum of $17 million (2025 dollars) and public liability insurance to the sum of $7 million (2025 dollars)

[700] The sum insured figures in the proposed condition are taken from the 1999 conditions with adjustments for inflation as provided for in those conditions.

[701] At the conference a consensus emerged between OGNZL, HDC and WRC that, as the risks may change with extended mining operations, the condition should not refer to the sums insured in dollar terms (ie as currently) but rather leave the sums insured to be arbitrated if agreement cannot be reached. There was also agreement that, because of conditions in relation to other consents and planning provisions, the conditions should provide that the sums insured be at least those provided for the proposed conditions, ie $17 million and $7 million (2025 dollars).

The need for the Martha Trust to accept its extended role in relation to the WNP (including having its trust deed amended to permit it to do so).

[702] As at the date of the conference, the trust deed for the Martha Trust had not been amended to apply to its role in relation to the WNP. This is to be confirmed by OGNZL.

Whether the conditions adequately protect HDC in relation to costs

[703] Proposed condition C81 in the Combined HDC and WRC conditions provides:

All costs relating to the rehabilitation bond must be paid by the Consent Holder.

And condition C91 is to similar effect: However, the proposed condition C77 provided that in relation to any arbitration as to the amount of the rehabilitation bond, that the "parties shall bear their own costs in connection with the arbitration."

[704] At the conference, it was agreed between representatives of OGNZL, HDC and WRC that condition C77 should be amended to provide that the costs of arbitration would be in the discretion of the arbitrator. This change will also affect any arbitration as to the capitalisation bond.

A concluding comment

[705] The bond methodology and process proposed by OGNZL are substantially the same as those in place since 1999. HDC and WRC see them as appropriate. We were subsequently told that the same methodology and process have been used by other Councils, including, in relation to OGNZL's other mines, the West Coast Regional Council, the Buller District Council, the Otago Regional Council, the Dunedin City Council and the Waitaki District Council.

[706] With the minor adjustments already referred to, we see the bond conditions proposed by OGNZL as appropriate.