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Organisation Names: AJ Arabians, AJ Pro, Perrins Robertson Partnership ("AJ")

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I can receive emails and my email address (above) is correct

Please note the following:

1. The letter sent to this address was sent to John and Anne Perrins, Anne Perrins does not exist however Anne Robertson is at this address and is a partner in the below organisations - There is no reasonable excuse for this kind of error given the records that OGNZL hold.
2. The letter is dated 28 July 2025 – yet remarkably only arrived at the property on 8 August – giving less than a reasonable time to comment with no right to seek a waiver.
3. Although OGNZL engaged an expert in the fields of Equine management, "Andrew Mclean of ESI international" they have not submitted his nor evidence from any animal welfare or veterinary specialists to the committee, and despite numerous approaches OGNZL have continually failed to provide this to me.

Comments

AJ Arabians, AJ Pro, Perrins Robertson Partnership ("AJ") Submission "comments" on OceanaGold (New Zealand) Limited ("OGNZL") initial application for resource consents from Waikato Regional Council ("WRC") and Hauraki District Council ("HDC") under the Resource Management Act 1991 ("RMA") and subsequent application under the "Fast track approvals act" to authorise all necessary activities associated with the Waihi North Project ("WNP") (formally "Project Quattro").

EXECUTIVE SUMMARY AJ Arabians, AJ Pro, Perrins Robertson Partnership ("AJ") appreciates the opportunity to present its comments and findings with respect to OGNZL proposal, specifically addressing OGNZL Assessment Report and proposed conditions of consent.

For a number of years, the Waihi site(s) have been the subject of mining applications. The constancy of mining applications on these sites is an onerous burden for any industry and community to bear. It has not only imposed considerable financial and social stress on parts of the Waihi community, it has also deterred new investment in some activities in the Waihi area. Investments that have either subsequently gone to other areas or have been abandoned.

In assessing previous applications for mining on this site, **former** hearings weighed the environmental, socio-economic impacts of the proposal and whether the proposal (s) would result in unacceptable impacts on the surrounding areas.

Previous applications have not recognised the acute reputational and operational vulnerability of equine breeding operations to the threat of mining. The new AEE presented does not even recognise such operations and no buffers, protection zones or preservation orders are proposed to be implemented to protect the Equine Industry and particularly the AJ Arabians stud, given the economic and time investment the industry.

OGNZLs current application for mining poses significant serious set of risks for the environment (particularly water, noise and air quality) and similar damaging risks to the reputation and business operations of the adjoining stud, and the neighbouring properties. Assessments undertaken by experts commissioned by OGNZL economic benefits do not even address the potentially significant costs to AJ associated with this proposal. On close examination, and by using sensitivity scenarios to test key economic variables, the claimed economic benefits of result in a net loss to AJ of \$5M-\$8M. This is without accounting for other social impacts on the residents and, other externalities (including

heritage, climate change) long term water impacts and other legacy issues for future generations. The damaging risks from mine related impacts, particularly subsidence, to the recovering and vulnerable Ohinemuri River, Gladstone wetland and associated alluvials, to productive agricultural lands and soils, the permanent loss of biophysical agricultural lands and critically endangered ecological communities, and the irreversible impacts to Maori and European heritage are simply not socially or environmentally acceptable, inconsistent with the intent of NZ Government policies and clear candidates for the application of the precautionary principle. Further damaging impacts, due to noise and blasting, deleterious air quality, and the resulting risks to humans, horses and livestock are unacceptable to the stud farm of AJ, the communities that live on those farm and their valuable bloodstock. OGNZL have engaged experts in the fields of economics, surface and groundwater, air quality, noise and blasting, soils, subsidence, equine health, heritage and legal, but all have failed to address impacts on bloodstock, despite OGNZL having this drawn to their attention on numerous occasions.

Further although OGNZL engaged an expert in the fields of Equine management, “Andrew Mclean of ESI international” they have not submitted his nor evidence from any animal welfare or veterinary specialists.

In other areas where mining effects on horses and livestock have been investigated experts have have unanimously found that the risks presented by similar applications are unacceptable, cannot be managed or mitigated and cannot be conditioned. The risks of permanent damage and harm are high and once done cannot be undone. This is a very high price to pay for one mine that is not in the public interest. One mine that will not impact the mining industry but will damage studs, viability and adjacent properties. Just the announcement of the proposed operations has already had effects on investment in adjacent properties, has resulted in quantifiable loss to AJ and negatively impacted further investment.

AJ Arabians, Perrins Robertson Partnership and AJ Pro

1. The Perrins Robertson partnership owns the property at 35 Heath Road Waihi. The main focus of the property is AJ Arabians, a stud and training facility which represents NZ Arabian breeding industry in the Waihi Area . AJ Pro is an SME with offices at the property.

AJ Arabians

2. AJ Arabians is home to one of NZ Aribian breeding operations and has invested over 25 years in importing, breeding and training of of premium Arabians.

3. Until the announcement, by OGNZL, of the proposed mining extension “Project Quattro” now known as Waihi North, the Stud provided sustainable employment to the partners supported a network of equine support industries, including a significant investment in an indoor arena facility for the Waihi area.

4. The Property has a proud history in the location spanning nearly 30 years.

5. At the centre of its investment was to provide an Indoor facility to the Waihi area for local events, showing and training of horses. The announcement of Project Quattro came one day after the stud had signed a contract to build the facility. Urgent discussions with representatives of OGNZL showed that the proposed location for facility would be very close to the Gladstone open pit. With unrestricted “any time” blasting and other impacts, the location for the facility was moved as far away as possible within the property. Due to RMA and district restrictions. This had the effect of the facility no longer being able to be used for public use, enjoyed by the Waihi Community and consequently a significant loss to AJ.

6. The business model for the facility had shown the potential for significant local and wider area use with the closest comparable facilities being at Hamilton and Tauranga. The potential was to have a significant asset to Waihi, become a larger local employer and contribute to the community.

7. AEE Section 2.2,2.3: OGNZL carefully tries to cultivate an image of “Community investment”, social responsibility and respectful and durable relationships. Indeed during the early discussions with OGNZL representatives, OGNZL appeared to understand the potential benefit of such a facility in Waihi and being associated with it, and cooperated to explore ways to assist making the new location able to conform with RMA requirements for public use. This was

possible at that time as OGNZL had a problem with an impact on a neighbouring property from the announcement of “Project Quattro”, that was for sale. However, as soon as OGNZL resolved the issue with the neighbouring property in another way they started to reduce dialogue.

8. AEE Section 2.3: The AJ property has the longest boundary in proximity to the proposed Gladstone pit, The proposal is for virtually unrestricted blasting for 11 hours per day, 6 days per week and operations for 24 hours per day with associated noise, dust and light spill. Additionally the properties at Heath Road will be potentially subject to motorcycle noise and fumes from the rerouted Motocross track access 7 days a week 24 hours per day. Agistment and breeding areas will be unusable. It is well documented in RNZSPCA and MPI guidelines that horses need a lot of exercise, and they have a strong flight response when they think they are in danger. Broodmares seek out quiet, secure and dimly lit areas and times to foal. OGNZL have not engaged any experts in the relevant fields nor have they instructed any of their “experts” to investigate the impact of the proximity of the mine, or the motorcycle access on the residents, breeding, training or handling horses or indeed livestock in general.

9. Operations at the site are vertically integrated into the NZ Equine Industry which provides employment and business opportunities to many thousands of people across its national network – upstream and down from fodder and saddlery through to showing, accommodation, fashion, tourism and hospitality.

10. AJ property has taken many decades to build. International breeding and experts and investors alike consider the property has all the attributes (environmental, topographical, scenic and reputational) to continue to grow and take advantage of investment and further growth potential as our breeding markets.

11. A decision to approve a mine in close proximity to the property, would signal the end of sustainable jobs, existing property use and future and past investment potential.

12. This would be a very high price to pay for the sake of one mine, which based on the economic assessment alone, is not in the public interest, but merely provides a cheaper and easier way to make additional tailings storage facility that coincidentally provides an income to OGNZL.

13. On the matter of visual impacts, it should be noted that certain elements of the proposed mine will be visible and will be experienced by residents, employees, clients and visitors travelling to Heath Road Properties.

14. The main visible elements of the proposal will be the mine and light spill, the rerouted power lines, OGNZL infrastructure to the northeast, the potential for motocross track access realignment and potential subsidence impacts.

15. These visual impacts will contrast significantly with the highly scenic landforms and the land presentation currently in place at and will remove the current scenic buffer separating the property from mining activity to the northeast.

16. The proposed mine will have dynamic, direct and indirect impacts –including vibration and noise from blasting and dust (the noise of which will not only attract viewer’s attention to the area of the blast but will scare horses, handlers and livestock), road and surface works, and light spill from night time construction and ongoing mine operational activities.

17. In all circumstances, on close examination of the risks to the environment, to the property and the potential negative “benefits” to the residents, people and economy, mining adjacent to the property and other properties in Heath Road, is not in the public interest

INVESTMENT, BRAND AND REPUTATION

18. The breeding industry is extremely competitive and investment is highly mobile. Reputation and brand are paramount to attracting investment and retaining clients. This is reflected in every aspect of a properties appearance and operation – from the approaches, surrounds, the front gate and throughout every acre of the operation.

19. The production of elite equine athletes requires a unique operating environment combining scenic landscape, plentiful clean water, rich soils, relative tranquillity and a varied undulating terrain to produce and develop young equine athletes into champions of the future.

20. Where the property is located, all of these characteristics are present. Any threat to this environment (perceived or real) will and do threaten the fundamental basis of the AJ business model.

21. Once the Heath Road area would have been without question the ideal and natural place that investors would choose to locate and establish their operations. However, investment is now stalling as investors grapple with investment uncertainty due to the encroachment of mining and the instability and uncertainty that has entailed.

22. An example of this was shown by the loss of sale from an investor (withdrawal from contract) at 45 Heath Road on just the announcement of "Project Quattro".

SITE AND LOCALITY

23. The site upon which OGNZL intends to conduct its open cast mine operations is adjacent from a dedicated equine facility.

24. This greenfield site is currently the only buffer between the rural properties at Heath Road and processing plant to the northeast.

25. According to the Hauraki district plan and RMA "The importance of Rural landscape, its sensitivities to intensive development and the landscape character of its central players, needs to be acknowledged with the development and enforcement of appropriate buffers, exclusionary zones or preservation measures to safeguard it."

26. AJ Property operate in a highly scenic landscape which includes the Ohinemuri River (which borders the property), highly productive alluvial floodplains, foothills and the Wollemi National Park.

NATIONAL and LOCAL GOVERNMENT, POLICIES AND COMMITMENTS

27. Rural Zone (Extract from OGLNZ AEE)

A portion of Area 5 is located within the Rural Zone. There are four objectives for this zone, which collectively seek that:

- a range of **compatible** rural land use activities can be undertaken, which benefit from
- the productive potential, location and rural character of the zone;²³⁶
- the open rural landscape character of the zone is preserved and enhanced;²³⁷
- provide for further investigation and utilisation of mining resources;²³⁸ and
- adverse effects of land use activity on the environment or on the amenities of neighbours is **avoided, remedied or mitigated**.²³⁹

Key directives arising from the objectives relate to:

- **ensuring that land with high productive capability is available for such use;**²⁴⁰
- ensuring the amenity values of a predominantly open rural character and the productive use of the land is maintained and that buildings do not detract from the open rural character values of the Rural Zone;²⁴¹

236 Objective 1, Section 5.1.2, Hauraki District Plan.

237 Objective 2, Section 5.1.2, Hauraki District Plan.

238 Objective 3, Section 5.1.2, Hauraki District Plan.

239 Objective 4, Section 5.1.2, Hauraki District Plan.

240 Policy (1)(a)(i) and (ii), Section 5.1.2, Hauraki District Plan.

241 Policy (1)(a)(iii) and Policy (2)(a)(i), Section 5.1.2, Hauraki District Plan 41. Co42.

28. In our view, there are no two industries that are the antithesis of each other and so completely incompatible, particularly in such close proximity. Nowhere else in the world would anyone conceive of operating the two industries in close proximity to one another.

29. Previous similar applications in Australia have found that: a. the “the two land uses are vastly different and are not compatible in close proximity,” consequently the Council is dealing with a land use conflict. b. “...in previous comparable conflicts the conclusion has been that the land use conflict confronted cannot be overcome.” c. the mining industry is not heavily reliant on this one mine. The same cannot be said of the AJ property.

30. We respectfully submit that this irresolvable conflict in land use exists and is now the subject of this particular mine application. The Council is in the unenviable position of having to deal with an irresolvable land use conflict that could set in train a precedent for future applications.

THE “WAIHI NORTH” PROJECT

31. OGNZL has lodged an application that covers several very different operations.

32. OGNZL have combined a mining application for an open cast mine “Gladstone pit” and an increase in some processing in to one section “Area 5”

“Area 5 is a 72 ha irregularly shaped landholding situated immediately south of the Waihi urban area and north of the Ngāti Koi Reserve.”

“As shown in Figure 5, the Hauraki District Plan (“HDP”) identifies Area 5 as being located within the Rural Zone and the Martha Mineral Zone. The site is bounded by land in the Martha Mineral Zone to the east, the Reserve (Passive) Zone to the south (Ngātikoi Domain), and the Rural Zone to the west and north. The nearest land within the Residential Zone is approximately 150 m north of the site.”

Whilst highlighting the nearest dwelling in the residential zone at 150m north, OGNZL continually fail to mention that the Rural Zone to the west has residents and businesses also.

33. Rural and residential are very different. Expectations, amenity, animal welfare, business compatibility are not considered by OGNZL reports or experts.

34. OGNZL Have indicated that one of the primary reasons for the “GOP” (Gladstone open pit) is to ultimately provide tailings storage. This is easier and cheaper than building dedicated storage.

35. OGNZL have failed to provide any economic assessment of alternative methods of retrieving the gold at gladstone other than a comment that it would not be economically viable.

36. We suggest that OGNZL, by their own comments and omissions, see the gladstone pit as a way of making a lined tailings storage that provides them with some income, rather than a viable mining operation.

OGNZL SUPPORTING TECHNICAL and SOCIAL ASSESMENTS

37. In our respectful view, OGNZLs AEE is impaired by errors and questionable and potentially inexpert advice from agencies. It overly relies on the Proponent’s claims and provides little or no independent expert critique on matters critical to the decision making.

38. NONE of the reports commissioned by OGNZL address adjacent business compatibility, animal welfare, effects on animal health indeed all of them appear to make assumptions that the only possible effects are on humans.

39. The application technical assessments lack transparency on key assumptions or parameters including the claimed economic benefits in particular the GOP, and the evaluation of air, noise, water, soils, heritage, social and subsidence impacts.

40. All of the reports appear to assume that remedy and mitigation of any issues during or after the fact is acceptable, even referring to compensation. Once damage is done to a live animal it is done, it is not recoverable, the suggestions that remedy or post event mitigation as proposed by OGNZL is at best naive, at worst shows a complete disregard of consequence.

41. OGNZL Has had ample opportunity to engage relevant experts in business compatibility, animal health and animal behaviour, but have chosen not to do so. Initial engagement with us was “fair” and we expressed many issues to them and their social impact consultants. The issues we expressed have largely been left out of the reports or not

addressed at all. Instead of engaging and attempting to resolve, OGNZL are relying on the AEE to give the impression that they can mitigate any effects. By omission they appear to hope that the effects we raise and have raised will not be considered.

42. OGNZL lack of assessment of the equine related impacts of this proposal, The lack of professional, informed, scientific and sensible advice in response to our discussions with OGNZL on the mine's blasting and air quality impacts on horses and the suggestion from OGNZL to me in an email ** that *"our assessments show that we can appropriately manage the effects of the proposed operation on your property."* Without even assessing what those effects might be displays a breath-taking level of ignorance and folly.

43. OGNZL is well aware that an SME is not in a position to engage the "Experts" that they have. Relying on this fact they have only presented reports that ultimately support the AEE and use terms such as ongoing community consultation, mitigation, remedy, compensation etc, all post event – there is little to no reference to actually stopping an event happening.

BLASTING VIBRATION DUST AND NOISE

44. The important potential impacts of noise and blasting to adjoining properties and their operations, and valuable bloodstock which are acutely sensitive to unexpected noise, blasting and vibrations, have been ignored.

Horses evolved in an open grass/shrubland environment in Eurasia and as a result of being constantly visible to predators, they have evolved a deeply embedded flight response, also known as a 'startle response'. The flight response shows up in various ways in horses, typically as rapid panic behaviour that triggers horses into anti-predator behaviours such as shying, swerving, bucking and bolting (McGreevy et al., 2018).

This genetic predisposition not uncommonly causes horses to bolt blindly where they may severely injure themselves and/or personnel. Therefore, the OGNZL proposal will place these horses and the personnel of the adjacent equine property at great risk. (McLean -Director, Equitation Science International PhD, 2020) Further a horses flight response is contagious and rapidly spread to others in the herd. They have genetic predispositions to bolt blindly in response to unexpected stimuli and the risk to the public due to the possibility of a frightened horse or horses escaping to public roads and highways is significant and can not be understated. This is further supported by documents and literature (RNZSPCA MPI NZ)

The flight response is conferred by a specialised structure in the brain known as the amygdala. The amygdala connects with the pathways for learning, (basal ganglia) which provide a direct link to locomotion to enable rapid, panic-driven locomotion. The amygdala of the horse is the largest of all domestic animals. (Takeuchi and Sugita, 2007). In addition, sensory stimuli from auditory and visual input in the horse also have a shorter route to the amygdala through the extralemiscal system which further enables a rapid response to imminent threat. Because there are so many unknowns regarding noise and blast effects, timing and precise characteristics of mining, this project represents a highly risky experiment, that, is likely unprecedented in the world

45. The noise impact assessment is incomplete and inadequate for the proposed development as it relates to both human and equine comfort. It is based on inappropriate use of background noise data. It presents inadequate assessment of noise plots and scenarios. It does not demonstrate a true representation of current or future noise and blasting impacts, particularly on the adjacent AJ property and noise affected community. It lacks transparency, cannot be interrogated and cannot be relied upon.

46. The proposed "weekly "monitoring or "when there is a complaint" is insufficient, monitoring sites appear to have been carefully chosen to avoid the valley between Winner hill and the Nga Toki reserve. Current noise levels are disturbing in certain environmental conditions, any increase will be untenable.

47. The noise levels proposed relate to humans, Horses have excellent hearing, which ranges from 50 Hz to 33.5 kHz, and importantly, funnel-shaped ears of horses increase the acoustic input by 20 dB (Fletcher, 1985). The breeding and nurturing of horses therefore needs a tranquil and predictable environment. Further any fear response could trigger at any time resulting in unacceptable and unpredictable behavioural complications for both horses and handlers (McLean -2020)

Horses may become 'sensitised' to unpredictable aversive stimuli. Sensitisation results in subsequent overreactions to even milder aversive stimuli. Such overreactions can have disastrous consequences for the future mental security of the horse and can greatly impact the capacity to compete to its full potential. The nature of stimuli that startle horses are as follows:

- a. The magnitude of the aversive stimuli
- b. The novelty of the aversive stimuli
- c. The multiplicity of aversive stimuli (e.g. sound and visual stimuli combined)
- d. The proximity of the aversive stimuli
- e. The random appearance or occurrence of the aversive stimuli

(McGreevy et al., 2018)

The acoustic effects of mining largely fulfil the above criteria and therefore qualify as highly aversive stimuli. The unpredictability of the features of mining pose a serious threat to the adjacent breeding operations.

In behavioural science it is well known that there are 2 core elements that provide mental security to animals. These are predictability and controllability. As animals mature, they learn predictable elements of their environment that signal stimuli to be obtained or to avoid, such as predators. Not only do they learn predictable signals, but they also learn associated survival behaviours that give them a sense of control over resource and environment challenges. Sudden, unexpected noises deteriorate an animal's sense of predictability and controllability and this can lead to deterioration of mental security. The development of mental security in the early life of the foal is essential for its development as an athlete. (McLean 2020)

48. The Air quality report ignores academic research and publications, which cite the well known adverse effects of dust derived from mining on equine respiratory health and b. the detrimental effects of increased dustiness on equine lungs normal defence mechanisms. a. States that the equine respiratory tract is "exquisitely" sensitive to fine particulate matter and strong evidence shows that fine particulate matter reaches the lower airways of horses where it can cause disease. b. Advises that horses spend a large portion of their day grazing, disturbing and inhaling dust that has settled on the ground. c. The quantity of dust therefore inhaled by horses is much higher than suggested by standard air quality measures. This is a critical factor in the assessment of mining impacts on horses that are elite athletes whose respiratory function is critical to their athletic performance, any impairment of which has the potential to adversely affect their ability to compete. (Dr Tennent-Brown)

49. Martha open cast mine has slipped or collapsed on more than one occasion. The geotechnical report on GOP can be summed up as "engineering on the go" (PSM 125 260 R section 3) which gives little confidence that subsidence in the GOP can be managed. Further its end use is proposed to be a TSF – given that the report indicates that GOP straddles 2 ("non active") faults there is concern in regards to the stability of the area.

Finally, the danger that frightened horses present to human handlers is highly significant. Research shows that the serious injury rate (human) requiring hospitalisation is one serious injury for every 350 hours of contact, which is 20 times greater than the serious injury rate of motorcycling (Ceroni, 2007). As a result of all of the above listed characteristics of aversive stimuli, horses are statistically the most dangerous animal in the Western world. The greater proclivity of flight response in the thoroughbred poses an even greater likelihood of injury and therefore the importance of creating a safe environment cannot be understated

NEED FOR THE PROJECT

50. We respectfully submit there is no need for this open cast mine project. The "benefits" claimed by OGNZL and are simply not valid. It is our respectful opinion that there is no justification for another mine such as this project given the inherent and significant risks this mine poses economically, environmentally or socially. It is not in the public interest and should be refused. The estimated timeline can not be relied on (NB "Martha 2000") and the impact on adjoining landowners and businesses both economically and psychologically has largely been ignored.

CONDITIONS OF CONSENT

51. We respectfully submit, this proposal cannot be “adaptively managed” or conditioned.
52. The mine proposes benefits which in our opinion cannot be realised and, when properly assessed and accounted for, yield net negative benefits to adjacent properties. There are no conditions of consent that can enforce the delivery of the economic, employment, social and revenue “benefits” claimed by OGNZL.
53. The impacts to the area’s vulnerable surface and groundwater systems, the Ohinemuri river, Saddlers Creek and their alluvials, could be significant, permanently damaged, undetectable and irreversible. No conditions of consent can mitigate or remedy this risk.
54. The consequent impacts to downstream users dependent on these groundwater systems for their pastures and sustainable agricultural industries would be devastating.
55. “Make good” arrangements would be costly, impractical, and potentially not available when needed, particularly in times of extreme need.
56. How do you “make good” when you impact the operations and reputations of a neighbouring business and the wider community?
57. How do you “make good” when you destroy the over 3 decades of investment in a property and business/
58. How do you compensate for the loss of a sustainable agricultural industry and the long term security it offers?
59. Soil, water and subsidence related impacts of this proposal on critically endangered ecological communities could be potentially fatal and irreversible. The application of potential offsets on lands within the site that will similarly be affected is counterproductive and ineffective. Once the damage is done it will be irreversible.
60. Proposed noise and blasting conditions are not appropriate for humans and horses. Further proposed blasting conditions are onerous.
61. Behavioural impacts of noise, blasting and vibration on horses will be difficult to gauge, monitor and manage. They cannot be conditioned. The suggestion that these effects on AJ operations and bloodstock be examined post facto is incomprehensible and demonstrates a complete lack of understanding of this industry, its operations, reputation and bloodstock. It reduces the impacts on AJ operations to some kind of weird and uncontrolled experiment.
62. “Adaptive management” conditions are impractical, unenforceable and would be too late as the damage would already have been done – in the case of the reputations and commercial operations of the properties to horses, their handlers and general public. Potentially fatally.
63. The environmental and social impacts are significant and once the damage is done it will be irreparable and irrecoverable.
64. The general effects of seismic blasts on various species has been reviewed by Gordon et al., (2003) who documented various response effects, including startle and fright, avoidance, alterations in behaviour and vocalisation patterns in various mammalian species. There are no measures that can be implemented to avoid, mitigate, rehabilitate, monitor or offset any potential impacts of the project not only because of the as yet unknown physiological effects on horses and developing foals, but also because of the ‘hair-trigger’ nature of the flight response in hot blooded horses and their susceptibility to unpredictable aversive stimuli.
65. A tranquil setting is of critical importance in the location of breeding operations. It is hard to imagine any enterprise more incompatible with breeding than mining activities. (McClean 2022)
66. An important aspect of a tranquil environment for training and breeding operations includes the calmness of the personnel. If the handlers become stressed because of the unpredictability of noise and blasts from mining activities, they are likely to pass this stress onto the horses that they handle. This stress is likely to impact the mental security of the horses and will have a detrimental effect on the viability of breeding operations.

67. The psychological effects of unpredictable noise stimuli are well documented in both human and equine scientific literature, and should not be underestimated. Regular, unpredictable fear eliciting stimuli, can have increasingly deleterious effects on animals, resulting in chronic stress (McLean and Christensen, 2017; McGreevy, et al., 2018) and disturbances of sleep patterns (Alves-Pereira and Castelo Branco, 2007).

Chronic stress arising from mental insecurity is known to initiate the deterioration of learning abilities and the induction of glucocorticoids (long-term stress hormones) such as cortisol (McGreevy et al., 2018).

Chronic stress is known to affect the horse's gut, potentially resulting in stress colic and not uncommonly, death from colic.

Additionally, chronic mental stress can have powerful effect on the immune system, which can render animals more susceptible to disease.

With regard to the effects of seismic stimuli on animals in general, Gordon et al., (2003) have recommended a precautionary approach because there are significant gaps in knowledge of such effects. The precautionary principle should apply to all potential effects of the OGNZL project, including effects on horse behaviour.

PCBU NZ LEGISLATION

36 Primary duty of care

(1) A PCBU must ensure, so far as is reasonably practicable, the health and safety of—

- (a) workers who work for the PCBU, while the workers are at work in the business or undertaking; and
- (b) workers whose activities in carrying out work are influenced or directed by the PCBU, while the workers are carrying out the work.

(2) A PCBU must ensure, so far as is reasonably practicable, that the health and safety of other persons is not put at risk from work carried out as part of the conduct of the business or undertaking.

(3) Without limiting subsection (1) or (2), a PCBU must ensure, so far as is reasonably practicable,—

- (a) the provision and maintenance of a work environment that is without risks to health and safety; and
- (b) the provision and maintenance of safe plant and structures; and
- (c) the provision and maintenance of safe systems of work; and
- (d) the safe use, handling, and storage of plant, substances, and structures; and
- (e) the provision of adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities; and
- (f) the provision of any information, training, instruction, or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking; and
- (g) that the health of workers and the conditions at the workplace are monitored for the purpose of preventing injury or illness of workers arising from the conduct of the business or undertaking.

(4) Subsection (5) applies if—

- (a) a worker occupies accommodation that is owned by, or under the management or control of, a PCBU; and
- (b) the occupancy is necessary for the purposes of the worker's employment or engagement by the PCBU because other accommodation is not reasonably available.

(5) The PCBU must, so far as is reasonably practicable, maintain the accommodation so that the worker is not exposed to risks to his or her health and safety arising from the accommodation.

(6) A PCBU who is a self-employed person must ensure, so far as is reasonably practicable, his or her own health and safety while at work.

Conclusion

From the standpoint of horse behaviour, the OGNZL project represents a great risk to the viability of the breeding in adjacent property because of the horses acute susceptibility to unpredictable aversive stimuli.

Adding to the risk is the fact extreme fear reactions can be learned in just a single episode and spontaneous recovery of fear reactions only increases the risk to horses and handlers

Equally disastrous is the fact that aversive stimuli can sensitise horses to milder stimuli.

There is no prospect of successful habituation or conditioning young horses to the effects of these unpredictable aversive stimuli.

There are no management measures available to personnel or visitors at AJ that can mitigate the dangers arising from mining activities.

Therefore, the critical requirement of tranquillity in horse breeding operations at AJ will be compromised by the proposed OGNZL project.

The OGNZL proposal represents an ill-advised and extremely risky experiment upon the

Adjacent property, and would not only damage breeding operations but also impair the reputation of the breeders notwithstanding the substantial threat of significant harm to horses, their handlers and the public.

There is a clear conflict with NZ Health and safety legislation, OGNZL have been informed of the potential risk to personnel and public and supporting evidence from experts is listed under references.

The Perrins Robertson Partnership as a PCBU can and could not legally nor in good conscience propose that the risk could be either eliminated, mitigated or minimised by any practical means and in no way would we deem the level of risk acceptable. OGNZL, however, seem to believe that they either bear no responsibility or are willing to flout the legislation as it stands or are deeming a possible fatality as acceptable risk.

The approval of the GOP would put the Perrins Robertson partnership in the position of having our property unusable for the purposes that it has been developed. The added value of the property from the Equine investment and development of over 3 decades would be lost and any suggestion that the OGNZL "top up" scheme could compensate for this is almost ludicrous as, given that any prospective buyer as an equine property (fair price) would be in the same position, the property could only realise an offer at value for grazing which is considerably less.

Due to the uncertainty created and as responsible business operators we have already put our investment and breeding program on hold from the announcement of "Project Quattro". This is because any foals bred from that date would be vulnerable in the OGNZL timeline. This, along with the Arena issue has already resulted in a significant loss for the Perrins Robertson partnership.

OGNZL management at the time of the announcement originally seemed to understand the issues at hand and entered good faith negotiations cynically this appears to have been an attempt to "look good".

It appears that now the project has been more formally proposed the new management have either been unable to understand the current and potential consequences of their actions in a unique situation or, knowing we are only an SME, are knowingly attempting to put us out of business to clear a path for them to proceed.

Whilst this submission mainly concentrates on effects from area 5 & 6 there is a wider issue to be addressed. There is a clear conflict between what OGNZL say and what they do. Their casual attitude to serious potentially fatal risk and the absence of any attempt to inform their experts of the issues and risks to address is incomprehensible.

We respectfully suggest that OGNZL can and could not be trusted to successfully prevent any negative effects from the proposed project. Some things cannot be "made good", throughout the AEE OGNZL indicate what they would do if things go wrong instead of what they are going to do to prevent them.

Further given OGNZLs record of not supplying evidence to the committee or affected parties we respectfully suggest that OGNZL can and could not be trusted in general.

The application in its entirety should be rejected

alternatively OGCL should provide suitable alternative compensation that reflects actual loss – as previously mentioned the “top up” scheme is almost farcical in some cases.

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