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To Jessie Evans, Director Resource Assessments.

The Boomerang Park Preservation Group Inc. submits below its reasons for rejecting the **Stone Ridge Quarry Project SSD-10432 EXH-59321711**

References to this submission are on Attachment 5.

The Boomerang Park Preservation Group Inc. restores wildlife habitats and corridors. The proposed quarry will destroy 79 hectares habituated by threatened fauna and flora. This proposal is in the Federal electorate of Patterson. The Australian Koala Foundation found in 2021 that the Electorate of Paterson has less than 34% of koala habitat remaining (1). The Group is attempting to preserve the remaining environment for fauna.

The proposed quarry is in the Wallaroo State Forest at Balickera. The Port Stephens Koala Sighting webpage (8) has recorded 25 koala sightings approximately 2 kilometres from this project site. Furthermore, the subject land is surrounded by State and National Parks and Conservations areas. (Attachment 1 (4) Figure 1.1). Wallaroo State Forest and its adjacent areas are within the **Area of Regional Koala Significance.**

Furthermore, the subject land is on an intact **Regional Fauna Corridor** and a **local habitat linkage area** (Attachment 2 (3) Figure 3.2). This proposal is inconsistent with the environmental values and status afforded to this area. The quarry will destroy an elevated landscape and put threatened fauna and flora at further risk of extinction.

The Pacific Highway separates the Wallaroo State Forest from Karuah National Park, Medowie State Conservation Area, Tilligerry State Conservation Area, and Moffat's Swamp Nature Reserve. Threatened species, such as koalas, use both sides of the highway [Attachment 3 (10) Figure 4]. Evidently, koala road deaths are documented for this stretch of Highway despite fauna fencing (7). The south end of the Local Habitat Linkage area involves a passage of land travelling under the Irrawang Spillway underpass and then north into Wallaroo State Forest [(3) Figure 3.2]. Koalas from Balickera may use this linkage area or travel across the highway. For example, a study of koala scat DNA collected between the Pacific Highway and Grahamstown Dam south of Ferodale and Balickera indicated three discrete Koala groups. Researchers analysed a sample taken from the east side of the Pacific Highway in Ferodale and concluded that it grouped with koala samples in Balickera [(10). p 23] and (Attachment 4 (10) Figure 5 p. 23). The quarry site will intersect the local habitat

linkage area. Consequently, fragmenting it and causing fauna to change their behaviour due to the inhospitable changes to this linkage area.

This project is also on a portion of **the regional fauna corridor**. This project will excavate a hole in the fauna corridor that will fill with water at the end the project's life [Attachment 2 in (3)]. Hence, this portion of the corridor will become dysfunctional. Losing trees inside the quarry will also cause 'edge' effects on the remaining Forest. For example, wind and sun will cause the Forest to become drier and opportunistic plants such as weeds will invade the area. These changes will degrade the remaining habitat for wildlife.

The increasing temperature and declining rainfall caused by climate change will cause fauna habitats in the western regions to shrink, resulting in threatened fauna migrating to cooler and wetter environments, in higher altitudes towards the East Coast. Wallaroo State Forest provides a dry climate corridor that can support threatened species such as the Swift Parrot, Woodland birds, the Koala, the Grey-headed flying fox, the Brush Tailed Phascogale, the Giant Burrowing Frog, and the Squirrel Glider. These species' survival of climate change depends on climate refugia corridors such as Wallaroo State Forest. The quarry will fragment this corridor when fauna is desperate to find suitable habitat for survival (2).

A study found that koalas from the Port Stephens Peninsula are less genetically diverse than Koalas from Balickera [(10) 2021 p 24]. It was concluded that the movement of koalas on the peninsula is restricted to the east side of Port Stephens because of fragmentation of their corridors while Balickera koalas have a wider range of corridors.
"Any loss of connectivity in a habitat impedes the movement of koalas creating isolated populations, which leads to a decrease in genetic diversity. This can lead to inbreeding and genetic drift, which are detrimental to the survival of a population" (9).

The operational noise will scare fauna away from the corridors described above. Frightened and confused fauna may go onto the road and be at risk of a vehicle strike. A study of the impact of noise on koalas found that this species, "responds more severely to disturbances in a disturbed area" (6. p 26). Therefore, Koalas at Balickera exposed to disturbances from the quarry operations will be more disturbed by the weekly explosions than koalas that are not from a disturbed area. Flint and Melzer 2013 found koalas in less disturbed areas have lower stress levels. Therefore, increased disturbance means koalas are stressed and will have suppressed immunity to Chlamydia, one of the main causes of mortality in koala disease (5). Woosnam's study found that Chlamydia pecorum was detected in 36% of Port Stephens Koalas (Balickera 4/10, Ferodale 3/10, Karuah 1/3, and the Peninsula 6/16). The study also detected that a 100% of the study had Koala retrovirus subtype A. Although the role of KoRV in causing disease remains under investigation, evidence is emerging for association of KoRV infection with immune changes or diseases (Woosnam Page 26). Hence, koalas disturbed by quarry noises will be prone to disease and pre-mature deaths.

This project will disrupt the peaceful environment enjoyed by fauna in Wallaroo State Forest and fragment a network of corridors. These changes will create stress in koalas and reduce their immunity making them susceptible to disease and shorten life span. The quarry will not sustain this environment, but it will destroy it and should not be allowed.

Regards,

Coral Berry
Member