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6th November 2023

NSW Department of Planning and Environment

Ref: SSD-7332, Eagleton Quarry Project, 13 Barleigh Ranch Way, Eagleton, NSW 2324 (Lot 2 DP 1108702)

The Koala Koalition EcoNetwork Port Stephens (KKEPS) objects to the approval of the Eagleton quarry project primarily because the cumulative and combined impacts of the adjoining quarry proposals at Seaham Boral and Wallaroo Forest's Stone Ridge have not been considered appropriately. The communities impacted by these existing and proposed quarries believe it is high time to consider these impacts, together with proposals for the many other quarries to the north such as the Karuah East and Karuah South, Limeburners Creek, Deep Creek, Hanson's Brandy Hill, Booral Hillview, and others.

Cumulative and Combined Impact concerns include:

The clearance of preferred or secondary koala habitat in the Eagleton/ Balickera area resulting in increased fragmentation of natural habitat and loss of biodiversity which may impact known wildlife corridors.

An increase in dust as well as noise, light and air pollution from extraction operations, extra heavy vehicle journeys along the shared haulage routes and the wear and tear of road surfaces and said vehicles, which will impact local residents and wildlife populations.

Traffic impact and road safety concerns which are still to be considered; Boral has been tasked by Council with preparing a biodiversity report on the extra lane to be built over the Balickera Channel before the joint plans for an intersection upgrade and the acceleration and deceleration lanes will be considered.

The permanent change to amenity, ambience and character of Balickera and Eagleton as the area will be transformed from a rural bush setting and country road into something akin to a massive moonscape and major haulage route.

The impact of landscape changes on the Balickera canal, the drinking water catchment area for the Grahamstown Dam which supplies the Hunter Region, and on waterways and wetlands.

The loss of natural and cultural heritage including the likely impact on Aboriginal and colonial heritage that has not been adequately assessed.

The contrary nature of the combined quarry applications to the environmental goals of the Hunter Regional Plan 2041.

Flawed project justification

The proposed Eagleton Gravel Quarry project, identified as a State Significant Development, was originally submitted to the DPE in January 2017 and is seeking approval to extract up to 600,000 tonnes of hard rock per annum (0.6 tpa) over a 30 year period within a quarry operations area of approximately 30 hectares, or

just under a third, of the quarry's study area. **1** The proposed development also includes the "construction of on-site infrastructure and facilities to support quarry activities, and transporting material off-site by truck". **2**

The project's sole justification seems to be the predicted growth in residents in the Hunter region, as identified in the Hunter Regional Plan 2041, and the plan's aim to "guide the delivery of homes, jobs, infrastructure and services to support the growing and changing needs of the Hunter". The amendment report also notes that Objective 9 identifies that NSW needs a reliable supply of construction materials to support continued growth - including sand, gravel, and crushed rock. **3**

Where is the proof of the proponent's claim that this particular quarry is needed as there are a number of proposed or operational hard rock quarries in the vicinity? There are two hard rock extraction SSD applications being considered in close proximity to this Project; the Stone Ridge Quarry Project which is at the response to submissions stage (SSD-10432) and Boral's Seaham Quarry Project (SSD-59254474) which is at the preparing the EIS stage. The proximity of the quarry areas and Kings Hill can be seen in modified Figure 1-1 from the Seaham Quarry Scoping document: **4**



In addition to this **Eagleton Quarry Project**, a number of other hard rock quarries in the area either have approval, or are seeking approval, to start or extend operations:

The **Seaham Quarry** on Italia Road is currently in operation but aims to continue operating for a further 30 years via a lateral and vertical extension to the approved Ignimbrite Pit (the Quarry's primary pit). The Seaham Quarry aims to operate 24/7 and extract up to 2 mtpa. **5**

The **Karuah East Quarry** recently had approval to extend operations to 2054 to extract 1.5 mtpa.

The **Brandy Hill Quarry Seaham** had their operations extended last year for a further 30 years, doubling their current production from 700,000 tonne pa to 1.5 mtpa.

The **Karuah South Quarry** (in between Karuah and Karuah East Quarry) has been on exhibition and plans to extract up to 600,000 tpa over a 25 year operation period.

The **Deep Creek Quarry** – responses to submissions are now being prepared.

Limeburners Creek - 500,000 tpa over 30 years.

The EIS for Booral's **Hillview Quarry and Concrete Batching Plant** is currently being prepared. A staged extraction of approximately 35 million tonnes (Mt) (total resource) of hard rock is proposed over a planned life of 30 years. This will involve extraction at a rate of 600,000 tpa over the first 5 years and 1.5 mtpa for the remaining 25 years.

This Project should not be considered on its own merit but as part of a strategic framework both in terms of how actual documented need is likely to be best met by the cohort of extraction applications and the cumulative and combined social and environmental impacts of approved sites. A similar idea was put forward for quarry proposals in the North Karuah-Limeburners Creek area.

Not Meeting the Hunter Regional Plan environmental objectives and goals

The September 2023 Amendment Report refers to how the Eagleton Quarry Project meets Objective 9 of the Hunter Regional Plan 2041. This is, in fact, a reference to a previous edition of the Plan. **6** Perhaps ironically, Objective 9 of the current plan is to “Sustain and balance productive rural landscapes”. **7** Instead it is Objective 1 “Diversify the Hunter’s mining, energy and industrial capacity”. **8** Under this objective, Strategy 1.1 states that planning proposals for mine or power station sites identified as regionally significant growth areas will be supported by a place strategy which demonstrates how the proposal will:

- “• enhance corridors within the landscape such as biodiversity corridors or disused infrastructure corridors
- complement areas with special amenity value such as critical industry clusters, open space, villages and residential areas, and
- have considered the existing and likely future uses of adjoining land and avoid land use conflict”. **9**

Without considering the above, the Eagleton Quarry Project proposal could also be negligent in meeting Objective 6 “Conserve heritage, landscapes, environmentally sensitive areas, waterways and drinking water catchments”. **10** The performance outcomes for this objective are:

1. Areas of high environmental value are protected to contribute to a sustainable region.
2. The biodiversity network is sustainably managed and provides social, environmental, health, cultural and economic benefits.
3. Development outcomes maintain or improve the environmental value or viability of the biodiversity network.
4. Connection with Country is at the core of designing and planning new projects and places.
5. Aboriginal cultural heritage is recognised and celebrated as living and dynamic and not dealt with statically through harm prevention and protection alone.
6. Items, areas, objects and places of heritage significance are conserved.
7. Water management uses innovative approaches in urban, rural and natural areas to enhance and protect the health of waterways, wetlands, coast and bays.
8. Water quality in drinking water catchments is protected.

Areas of high environmental value (HEV) include (but aren't limited to) areas important habitat mapping for serious and irreversible impact species, koala habitat, native vegetation of high conservation value, including vegetation types that have been over-cleared or occur within over-cleared landscapes, old growth forests and rainforests, key habitat for threatened species and populations and threatened ecological communities, and wetlands, rivers, estuaries and coastal features of high value. **11**

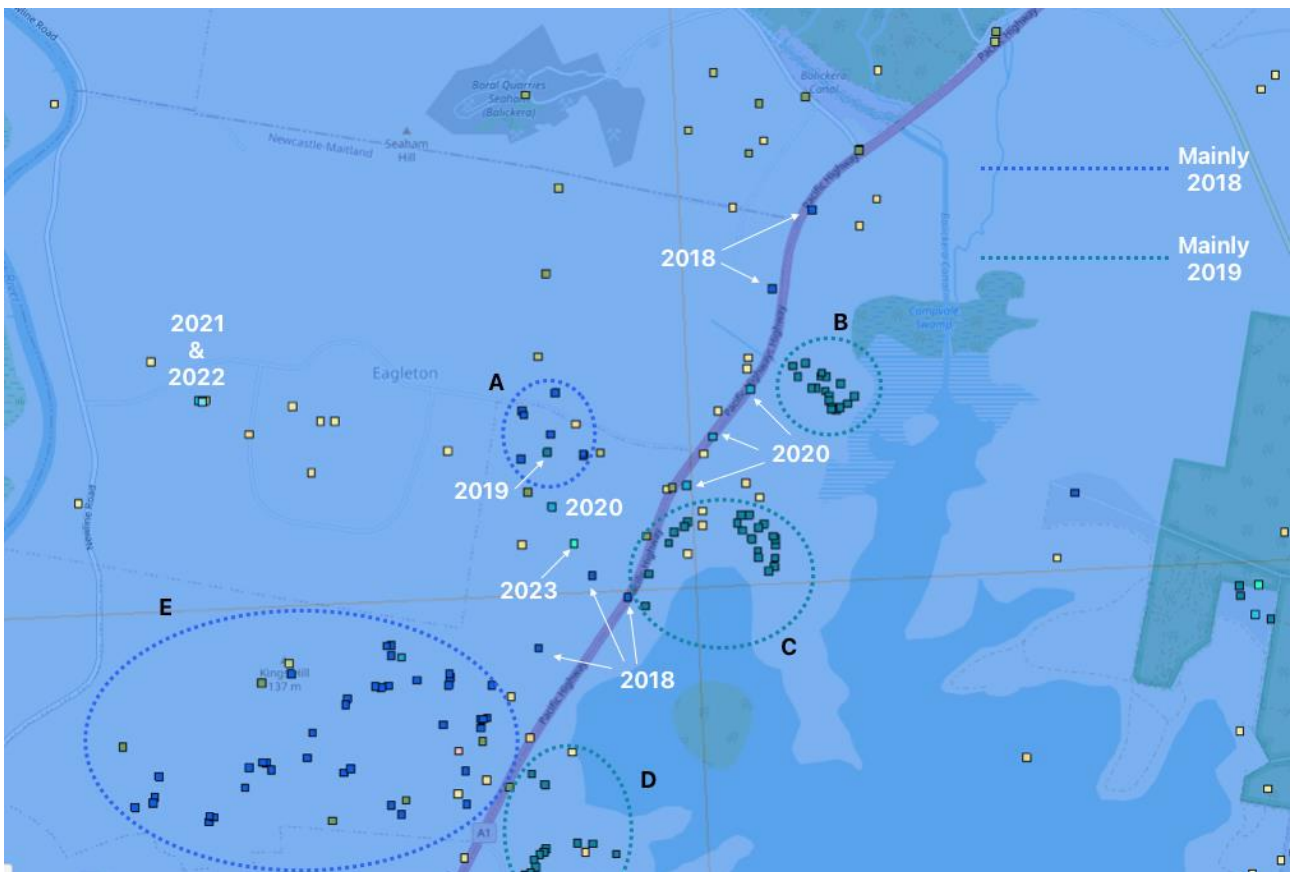
This objection will address how we believe that a number of the performance outcomes have not been considered and, therefore, will not be met.

The proposed clearance of koala habitat is based on outdated survey data

It is rather shocking that the 2023 Amendment Report confidently states that the “Project Amendments result in no significant change in the environmental impact of the proposed development, compared to the original proposal described in the EIS and the RTS” **12** and that “[A]ll other environmental issues had been previously resolved, and no significant adverse environmental, social or economic impacts have been identified” **13** given that the EIS was published in January 2017 and the BDAR published in December 2016 using Fauna survey data undertaken across the study area on 14 - 18 January 2013 and on 4 February 2013. **14** This means any approval to clear habitat in the study area will be based on data that is over TEN years old and will fail to recognise that since 2022 the koala has been classified as an ENDANGERED species.

There have been a number of development applications and surveys in this area which have been important in showing how limited survey techniques and limited survey periods can seriously under report the species diversity and species range within an area.

The image below taken from NSW SEED gives known koala sightings in the Eagleton area. **15** The blue tint is indicative of koalas being highly likely in the area, which the individual sighting markers support.



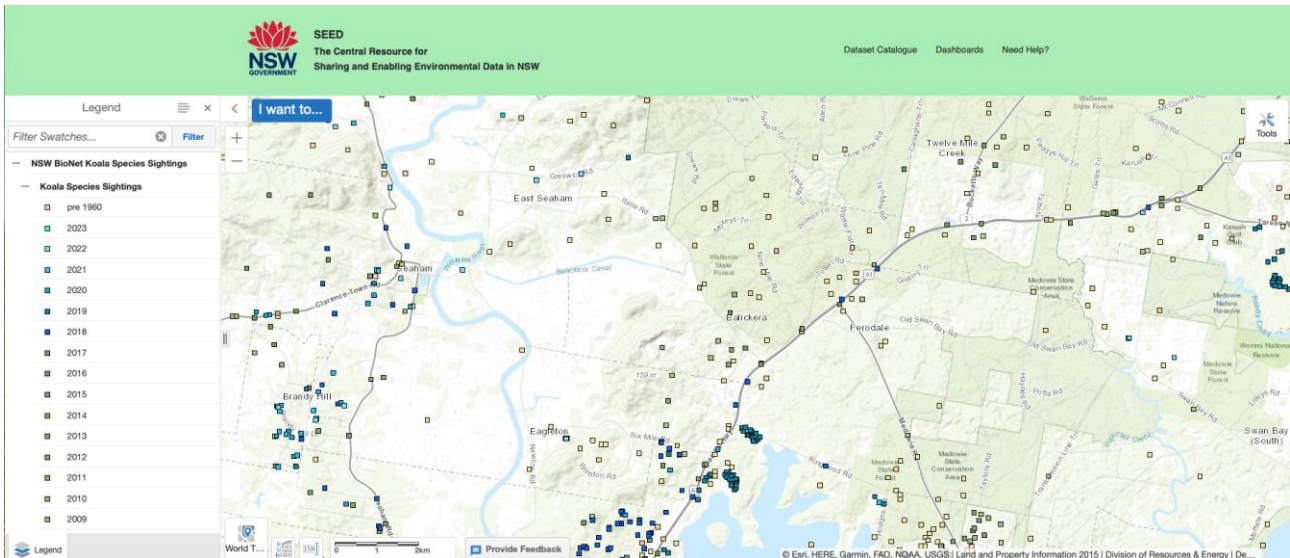
The dates of more recent sightings are identified either by a label or by an outline. The sightings within areas A and E are mainly from 2018, and from 2019 for areas B, C and D.

Area E is a prime example of how rural areas or private land may have few or no koala sightings until a range of surveys are undertaken. Area E, Kings Hill, initially had a few sightings using more traditional survey techniques. After engaging the services of more diverse survey techniques, such as scat sniffer dogs, the number of known koalas living and traversing in the area grew.

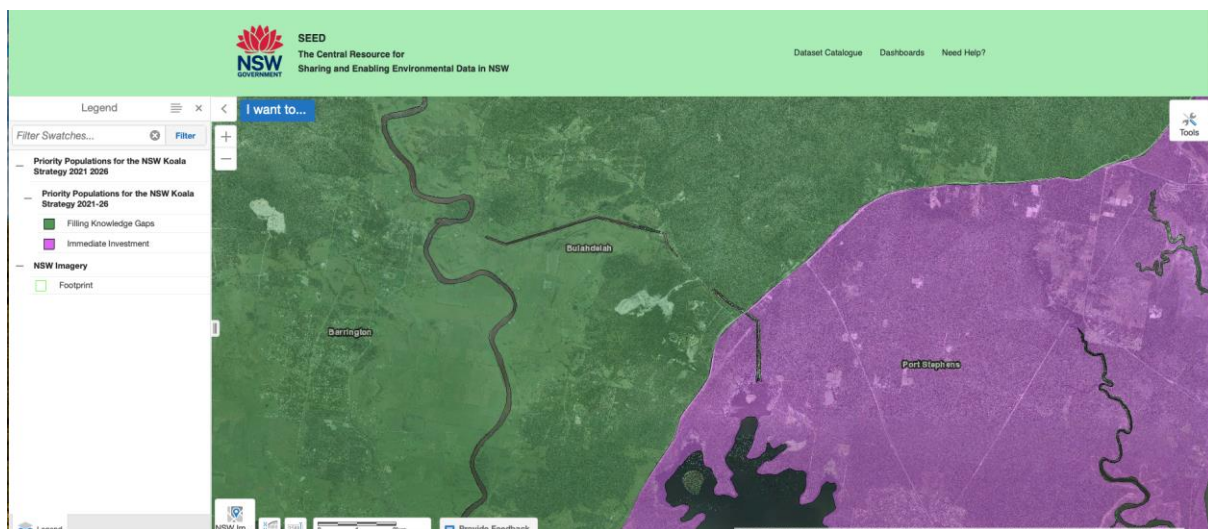
The image below from NSW SEED **16** gives a wider look at known koala sightings in the Eagleton/ Balickera area and surroundings. Points that are dark blue are generally from 2018 and 2019. The lighter blue the markers, the more recent the sightings.

It is clear that there are sightings almost all the length of Pacific Highway in the screenshot. A lack of modern day sightings should not be taken to mean that koalas are not present. Koala sightings often vary with levels of interest or campaigns to record sightings.

As koala sightings can be minimal in areas with less access or footfall, or where limited survey techniques and survey periods are used, will the precautionary principle be applied, more detailed up-to-date surveys are required.



The project site is also part of an area identified as ‘filling knowledge gaps’ in the Priority Populations for the NSW Koala Strategy 2021-2026 layer in the NSW SEED Portal. **17** The project site borders the Strategy’s Port Stephens Immediate Investment area, *although with recent sightings 18 on the boundary of the two areas*, it is likely that the same individuals or populations are moving between the two levels of priority areas. The Immediate Investment area in pink in the figure below is land to the eastern edge of the Italia Road/ Pacific Highway junction at Balickera.



Impact on existing and future wildlife corridors

The Eagleton/ Balickera area is part of a regional network of wildlife corridors indicating koala use, if not residency, in and surrounding the study site. Figure 3.2 from the Stone Ridge BDAR **19** shows Habitat Connectivity in the area. The red outline is the proposed Stone Ridge Quarry Project study area. The image indicates that there is a regional fauna corridor and local habitat linkage in the vicinity of the proposed Eagleton Quarry Project study area.

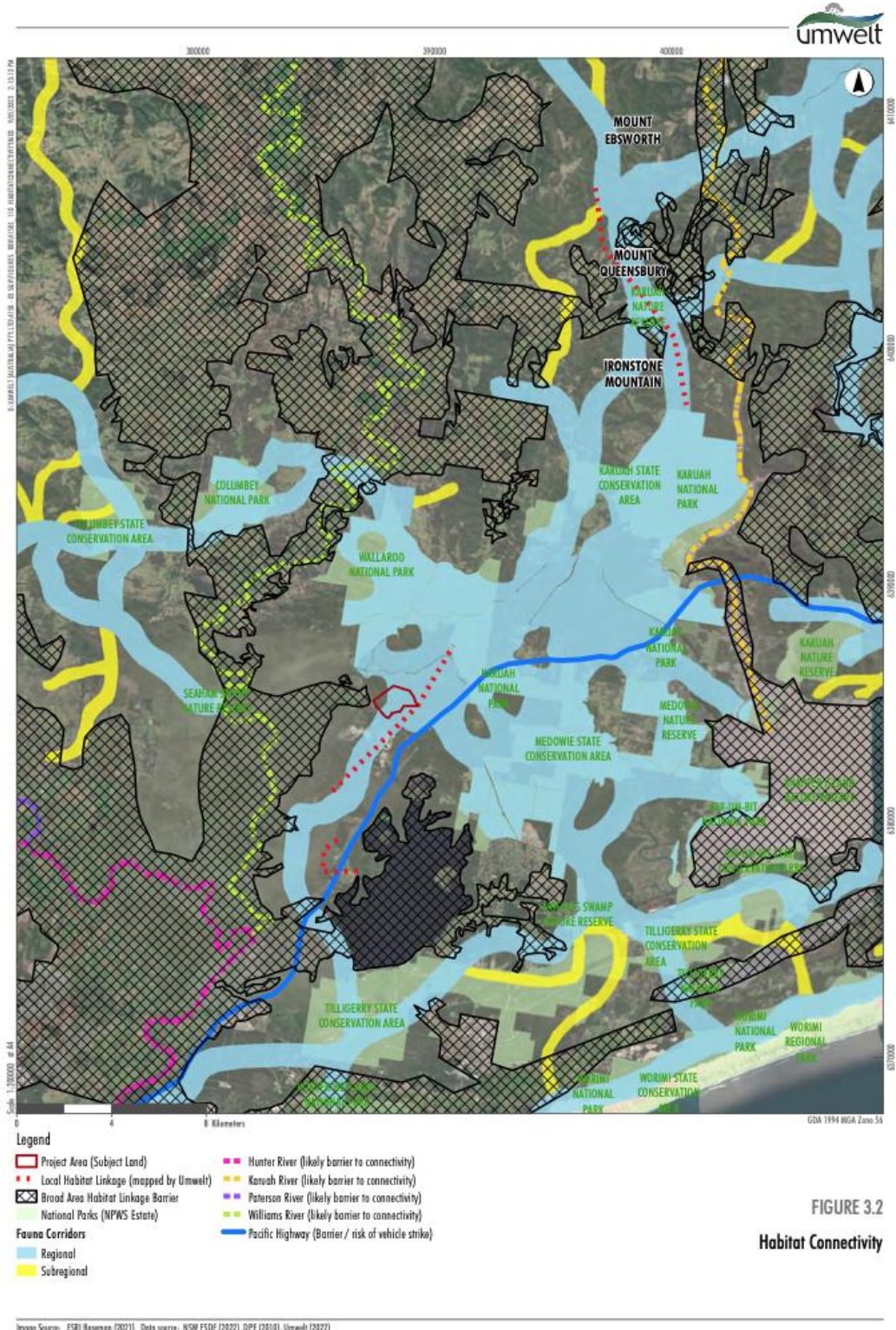


FIGURE 3.2
Habitat Connectivity

While this application plans to revegetate grassland to increase connections and manage 58.81 ha of the study area under a biobanking agreement, information on wildlife corridors can be conflicting.

The width of proposed wildlife corridors for this project is unclear and we suspect plans for corridors should be revisited. Guidance provided by the Office of the NSW Chief Scientist & Engineer to the Cumberland Plain Conservation Plan **20** recommended that:

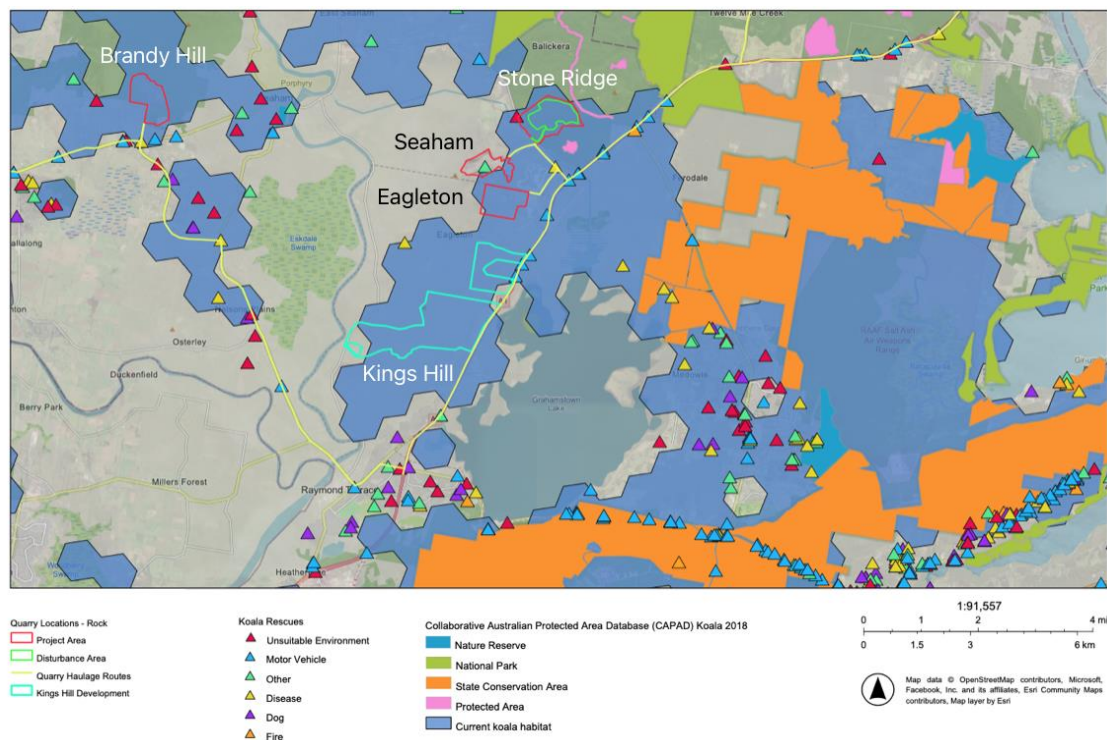
- koala corridors in the CPCP Area be expanded to an average minimum width of 390-425 metres, including a buffer within the corridor. Buffers reduce the direct and indirect impacts from humans, such as noise and light.
- buffers within the koala corridors be at least 30 metres wide if a koala exclusion fence is installed between the urban area and the habitat corridor. The buffer should be 60 metres wide if a koala exclusion fence is not able to be installed.
- koala corridors and habitat need to be separate from bushfire Asset Protection Zones (APZs).

While this expert guidance was produced for a particular plan, it suggests that koala corridors need to be wider than many projects allow for.

The importance of habitat connectivity for koala survival

Any potential connections between koala populations, such as between Kings Hill and Tilligerry koala populations, may be important for their ability to adapt to climate change. As populations become more isolated due to habitat fragmentation, their viability as a population in human-impacted landscapes drastically decreases. **21, 22**

The following image shows how the area near the three quarries: Eagleton, Stone Ridge and Seaham, could create a bottleneck for fauna movements on the northern edge of the Pacific Highway if all three were actively clearing habitat and extracting rock. If a further submission for Kings Hill is submitted, this will also add to habitat fragmentation in the regional fauna corridor.



The 2016 BDAR recognises the connectivity in the area: “The remainder of the study area primarily consists of remnant native forest vegetation... The study area has high vegetation connectivity with adjoining lands

to the north, south and west, and forms part of a large expanse of remnant forest vegetation extending from north of Raymond Terrace to Wallaroo State Forest and Wallaroo National Park.” **23**

There should be no doubt that the clearance of almost 30 hectares of mature and new growth forest will result in a loss of natural habitat and biodiversity. The cumulative and combined impact of habitat clearance should the other quarry applications be approved, also needs to be considered.

We believe that it is important to undertake current and detailed studies of koalas living in moving through the study site and wider areas before any approval is given. Suitable attention also needs to be given to the importance of scattered trees, least-cost path analysis and possible avoidance of any corridors. **24**

The increase in noise, dust and human activity will also place additional stress on local wildlife, including koalas. Increased stress on koalas has been proven to reduce immunity against disease with chlamydia disease causing blindness, infertility and death.

The letter from D.P.E. (21/10/22) states that “your proposal is likely to have a significant impact on Matters of National Environmental Significance . It will require an approval under the Commonwealth EPBC Act (1999). This approval would be in addition to any approvals required under NSW legislation.” We have not seen indication of approval from the appropriate Commonwealth department.

Australia sadly leads the way in mammal extinctions; something that the Federal Minister Tanya Plibersek promised would not continue. It definitely makes more sense to ensure the survival of Port Stephens’ koalas through appropriate planning, than to ignore the warnings for the next step of Critically Endangered that will make Australia the mockery of the world and billions of tax dollars are spent on more Koala Strategies.

Increased heavy vehicle traffic and its impacts

Increased traffic on Italia Road will add to the existing noise, air pollution, road damage and safety implications, and we do not believe that they will be resolved by the plans to be resubmitted for the intersection with the Pacific Highway.

Local resident groups suggest there could be over 1,000 extra truck movements a day in each direction on the Pacific Highway if all the above extensions and new applications are approved.

Table: Actual and potential quarry related heavy vehicle movements

| | |
|-------------------|--|
| Stone Ridge | 334 truck movements per day |
| Brandy Hill | 600 truck movements per day with the extension |
| Boral Seaham | 800 to 900 truck movements per week which may double if extension approved |
| Eagleton | 170 truck movements per day |
| Limeburners Creek | Up to 155 truck movement per day |
| Bucketts Way | Up to 300 truck movements |

Statistics from two southbound Heavy Vehicle Checking Stations near Twelve Mile Creek (before the Italia Road intersection) show a steady increase in average weekday heavy vehicle counts since 2015. Between 2018 and 2023 there was a 21% increase in heavy vehicle traffic which equates to an extra 350 heavy vehicles on average passing through HVCS each weekday. **25, 26**

Table: Average weekday heavy vehicle counts at two Heavy Vehicle Checking Stations, Twelve Mile Creek*

| HVCS T0292 | Twelve Mile Creek Southbound | HVCS T0293 | Twelve Mile Creek Southbound |
|-------------------|------------------------------|-------------------|------------------------------|
| 2018 | 1,650 | 2018 | 1,645 |
| 2019 | 1,687 | 2019 | 1,687 |
| 2020 | 1,753 | 2020 | 1,751 |
| 2021 | 1,860 | 2021 | 1,858 |
| 2022 | 1,894 | 2022 | 1,870 |
| 2023 | 1,993 | 2023 | 1,988 |

** Figures obtained in July 2023*

Any decision on whether the road network can potentially accommodate up to an extra 1,000 truck movements a day from Stone Ridge and other nearby quarries should ideally consider the increased HVCS counts and additional private vehicle use on the Pacific Highway if the Kings Hill urban development refusal is overturned.

Given the number of quarries in close proximity, if one or more are likely to be approved we suggest a rail spur from Hexham is paid for by quarries making use of rail freight services.

With habitat cleared, koalas may be forced to travel on the ground and cross roads to look for new home territory, food and mating partners.

Increased heavy vehicle traffic, especially at speed, is likely to increase the danger to wildlife of motor vehicle/heavy haulage truck strikes (i.e. deaths) as animals try to avoid new development zones. This places an increased emotional and financial burden on volunteer wildlife rehabilitation groups.

Quarry applications should not be determined prior to the consideration, approval and realisation of plans to improve the safety of the junction of Italia Rd and the Pacific Highway, to safeguard the local community.

Air pollution concerns

An increase in vehicles on the road will also add to air pollution associated with the volume of traffic and the wear and tear of vehicles and road surfaces.

The road effect zone, i.e. the area on each side of the road where pollution (noise, light, chemical), disturbance effects (such as turbulence) and habitat modification, impacts adjacent land. Although there are a number of characteristics that determine the size of the road effect zone, **27** it is generally accepted that for busy main roads the road effect zone can be 500m or more on each side although pollution generally decreases with distance from the road. Roadside dust can contain metals such as copper, cadmium, lead, antimony and zinc. **28** Habitats can be sensitive to airborne Nitrogen oxides (NOx), sulphur dioxide (SO₂) and ammonia (NH₃), as well as to nitrogen deposition and acid deposition. Transport is known to be the single largest source of NOx emissions. **29**

A lack of investigation for the potential edge effects of dust on wildlife and flora could have dire consequences. Dust affects animals who not only breathe in the material, but ingest it while eating foliage

so that it prevents effective digestion. The dust is also known to affect the health of vegetation by preventing the production of chlorophyll.

There are concerns about the potential for silicosis, asthma and other health conditions for those living proximate, and some residents are of the opinion that the impact of the existing quarry on the health of residents has not been properly addressed.

While development applications generally look at pollution readings on site, it is important to recognise how any increase in road haulage may increase levels of pollution in the road effect zone of haulage routes. This also needs to be taken into account when roads to and from the quarry sites go near residential properties, such as the new access road for the proposed Eagleton Quarry Project.

The results of a large international study on road pollution was the focus of an article published in The Age in 2010. The study found that traffic pollution within a 500-metre radius of a major thoroughfare was likely to exacerbate asthma in children, trigger new asthma cases across all ages, impair lung function in adults, and could cause cardiovascular illness and death. **30**

The 2017 Eagleton Quarry Production Increase - Air Quality and Greenhouse Gas Assessment report indicates the positions of the pollution receptors as being in the study site and at residential locations at Six Mile Road at least 800m from construction activities. The models used, however, were based on previous averages and past meteorological conditions. The Eagleton specific data seems to be from 2011 which suggests that, like the species survey data, it is very out of date. In addition, while the report lists a Climate Change document, it is not clear if any of the modelling took climate change predictions into account.

With climate change increasing mean temperatures it is to be expected that temperature-related extremes also increase. The IPCC AR6 report (2021) shows that over Australia heat-related extremes have increased and cold-related extremes have decreased. The report also concludes that these trends in hot and cold extremes are projected to continue in future. **31**

Impact on water resources

Three quarries are close to the Balickera canal and within the drinking water catchment area for the Grahamstown Dam which supplies the Hunter Region. These quarries may reduce catchment in dry times and contaminate the catchment with its sediments and pollutants during wet times. Blasting may also impact on the structural integrity of the aging Balickera tunnel which has been a known roost to threatened microbat species. Hunter Water took care to provide alternative roosts for various threatened bat species during the work on the tunnel; it was reopened in May 2022 and microbats started to return soon after. Hunter Water will be undertaking surveys as part of their Microbat Management Plan, so we suggest that the Proponent meets with Hunter Water to discuss the likelihood of threatened bat species being in the Project site. **32**

The combined number of quarries is likely to be in severe need of additional water supply during droughts, but we believe they should not be able to take water needed by residents and by threatened ecological communities, flora and fauna.

We are concerned that quarry plans to extend below the water table will interfere with the aquifer. We believe that the resultant impacts on waterways and neighbouring wetlands such as Seven Mile Creek and Mosman Swamp have not been properly assessed, and that studies have not considered the cumulative and combined impacts when considered together with Boral's plans to deepen the neighbouring Seaham Quarry.

Impacts on cultural heritage

Any increased noise, vibration and dust from blasting, through the failure to monitor and assess the impact of the existing Seaham Quarry, or assessment of the cumulative and combined impacts of proposed/existing multiple quarries on flora and fauna, as well as the health and well-being of residents, and structural integrity

of buildings including heritage listed Balickera House is of major concern. These are high priority concerns for the local community that have not been adequately addressed.

Likely loss of natural and cultural heritage including the likely impact on Aboriginal and colonial heritage that has not been adequately assessed, with heritage listed Balickera House ignored and no details provided of the AHIMS site cards for the multiple Aboriginal archaeological/heritage sites identified, must be addressed prior to any approval.

Inadequate Offset and Stewardship schemes

Without more detailed and up to date studies, any mention of species and credits seems pointless as they are inadequate.

We do, however, encourage any application of biodiversity offset credits from other DAs in the region towards a conservation agreement in the local area rather than at a distance (assuming the exchange meets the principle of 'no net loss').

That said, we believe it would be contrary to the goal of the NSW Koala Strategy 2021-2026 for public funds to be invested to create koala habitat on the one hand, and for existing koala habitat to be removed in the same area.

Not meeting the environmental goals of the Hunter Regional Plan

One of the specific priorities in the Hunter Regional Plan for the Hinterland District, covering the location of the proposed quarry, is to support the NSW Koala Strategy. **33** The NSW Koala Strategy 2021-2026, described as the biggest commitment by any government to secure koalas in the wild, involves an investment of more than \$190 million to support a range of conservation actions to provide more habitat for koalas, support local community action, improve koala safety and health, and build knowledge to improve koala conservation. **34**

There is insufficient consideration given by the proponent to avoidance and mitigation strategies to consider that the proposal meets these goals.

Objection summary

The proposal for Eagleton Quarry should not be approved due to failure to address, or inadequate information provided, to alleviate the many serious community concerns raised in this submission:

- **Cumulative and Combined Impact concerns**
- **Flawed project justifications**
- **Not Meeting the Hunter Regional Plan's Environmental objectives and goals**
- **The proposed clearance of koala habitat is based on outdated survey data**
- **Impact on existing and future wildlife corridors**
- **The importance of habitat connectivity for koala survival**
- **Increased heavy vehicle traffic and its impacts**
- **Air pollution concerns**
- **Impact on water resources**
- **Impacts on Aboriginal cultural heritage**
- **Inadequate Offset and Stewardship schemes**
- **Not meeting the Environmental goals of the Hunter Regional Plan.**

Yours faithfully,

Carmel Northwood, Convenor

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