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Director – Energy and Resource Assessments,
NSW Planning, Department of Planning and Environment

Ref: Stone Ridge Quarry Project, Italia Road, Balickera, NSW 2324
SSD-10432, EPBC ID: 2022/09368, LOT: 1, DP 724372; LOT: 36 and 65, DP: 753200; LOT 540, DP: 1207159

The Koala Koalition EcoNetwork Port Stephens (KKEPS) welcomes the opportunity to comment on the State Significant Development (SSD) application from the Stone Ridge Quarry Project which proposes to extract up to 1.5 million tonnes per annum (1.5 mtpa) for an initial 30-year operation period on land located within the Wallaroo State Forest at Balickera and zoned as RU3 (Forestry) in the Port Stephens Local Environmental Plan (LEP) 2013.

We are aware that under section 4.15 of the Environmental Planning and Assessment Act 1979 No 203, the consent authority must consider the likely impacts of the Project including environmental impacts on both the natural and built environments, and social and economic impacts in the locality, the suitability of the site, and whether it is in the public interest. **1** We present our concerns on this Project.

Having assessed the documents made available for this SSD application, we are particularly concerned with the following:

- The need or justification for the project has not been substantiated.
- The seemingly insufficient information on the cumulative impact from this and other new/ amended applications in close proximity.
- Social impacts of the project including the increase in heavy vehicle traffic from Italia Road heading north and southbound on the Pacific Highway.
- The suitability of the site for development – a quarry to be approved within State Forest is not Ecologically Sustainable Forestry Management.
- The planned staged clearing of 79 ha of koala habitat and the impact on connectivity and wildlife corridors including the corridor over the Balickera tunnel has not been adequately addressed.
- The project's impact on threatened species will be significant.
- The inclusion of threatened ecological communities within the disturbance area should be avoided.
- The use of offset and stewardship schemes to clear existing koala habitat to save another area does not meet Nature Positive Planning goals proposed by Federal Minister Plibersek.
- The presumption that meteorological conditions are stable is unfounded.
- The assessment that dust, noise and vibration from construction and operations will not exceed EPA/ statutory/ regulatory requirements is questioned, while it is certain this will impact the health of humans and threatened species.
- The proposal does not meet the environmental goals of the Hunter Regional Plan or other policies.

Is this Project needed or justified?

This Project is seeking approval to extract up to 1.5 million tonnes per annum (1.5 mtpa) of high quality, saleable, hard rock resource from within the Wallaroo State Forest, Balickera, for an initial 30-year quarrying period. The application claims that if approved the quarry will service the demand for building and construction materials in the Lower Hunter, Central Coast and northern Sydney construction materials markets resulting from forecasted population growth and proposed investment in infrastructure. There is mention that hard rock quarry products are currently being serviced by quarries in the latter stages of operation, resulting in significant supply-side issues affecting current construction projects in the region, and that replacement resources are needed. **2**

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 (some applying to extend their operations) in the vicinity? There are two hard rock extraction SSD applications being considered in close proximity to this Project; the Eagleton Quarry Project which is at assessment stage (SSD-7332) and Boral's Seaham Quarry Project (SSD-59254474) which is at the preparing of 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: **3**



The Eagleton Quarry Project aims to extract and process up to 600,000 tonnes of hard rock per annum for 30 years.

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. **4**

Karuah East Quarry recently had approval to extend operations to 2054 and increase extraction to 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) is apparently preparing an amendment report to extract 600,000 tpa over 25 years.

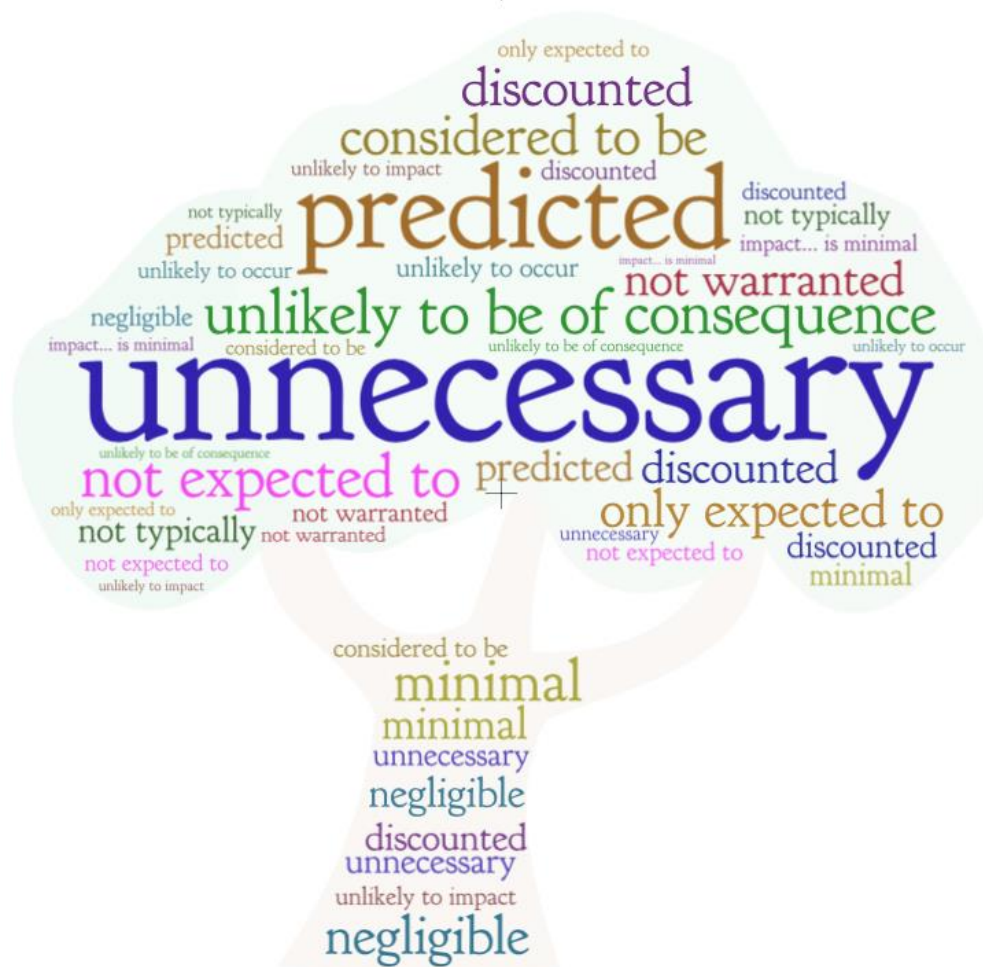
The Deep Creek Quarry – responses to submissions are now being prepared. 500,000 tpa over 30 years.

The EIS for Hillview Quarry and Concreting Batching Plant at Booral 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.

The Stone Ridge 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 social and environmental impacts of approved sites. A similar idea has already been put forward for quarry proposals in the North Karuah-Limeburners Creek area. Port Stephens cannot be considered able to have all these quarries operating at the same time. While some sites are technically outside Port Stephens LGA, the traffic will funnel through Port Stephens roads. Strategic planning is required urgently.

Cumulative impact

A Cumulative Impact Assessment was required as part of the Planning Secretary's Environmental Assessment Requirements and specific information sought in the Agency responses. The main sections of the EIS covering cumulative impact were sections 2.5 and 6.95 and Table 6.6. Other cumulative impact information and Project specific impact information was dotted around the EIS but in most cases included language such as:



For example:

The construction noise levels **are predicted to** comply with the nominated NMLs. **5**

The loss of catchment yield during dry years and early-stage operations will have **a negligible impact** on overall Grahamstown Dam and Williams River catchment yields. **6**

Construction and operational dust emissions are **not expected to** cause adverse air quality impacts at the nearby sensitive receptors. **7**

The proposed reduction in habitat associated with the Project **is considered unlikely** to result in a long-term impact that may result in the fragmentation or decrease in the size of the regional population or individuals from a collection of local populations. **8**

Although the Project will remove potential foraging habitat, the impacts proposed **are considered to be inconsequential** to any regional populations or individuals from a collection of local populations and are unlikely to impact breeding cycles. **9**

The proponent's reference to the 'do nothing option' to avoid environmental impacts was countered with "these impacts **are considered to be** manageable through the implementation of the management and mitigation measures and biodiversity offsetting proposed." **10**

From the above examples, it should be no surprise that there is limited mention of any expected social and environmental impacts from this Project in the EIS, although there is often mention of adopting mitigation and monitoring measures 'as best practice' in section 6.

The language used to discuss potential social and environmental impacts could be seen as flippant causing people to distrust the findings and future site management.

The detailed assessment of the potential indirect impacts (including noise and vibration impacts) on any threatened species, populations, endangered ecological communities or their habitats requested by Port Stephens Council does not appear to be forthcoming. **11**

The detailed habitat and genetic connectivity assessment for Koala and Brush-tailed Phascogale to assess connectivity of the local population(s) north and south of the Balickera Canal to accurately assess potential impacts and to inform mitigation and offset strategies also seems to be missing. **12**

These cumulative assessments were to include the Kings Hill Urban Release Areas and its associated critical infrastructure, adjacent quarry expansions and the proposed M1 motorway extension. There does not seem to be any serious consideration of Kings Hill in the EIS or BDAR, except to mention that it has not yet been approved.

Port Stephens Council also requested a detailed statement of commitments for measures to be included in a Biodiversity Management plan which we also have not located. **13**

The only reference to genetics we could see is in this statement from the EIS:

"The overall goal as stated in the National Recovery Plan for the EPBC Act listed Koala (DAWE 2022) is to stop the trend of decline in population size, by supporting resilient, connected and genetically healthy metapopulations across its range, and to increase the extent, quality and connectivity of habitat occupied. The Project involves the removal of 79 ha of koala habitat which will reduce the extent of habitat occupied." **14**

KKEPS submits that the cumulative impact information provided is not at a sufficient level of detail, and does not adequately address all the social and biodiversity impacts related to this project.

Social impacts

The EIS identified a number of significant social impacts that could be associated with the Project; they included “cumulative traffic movements and road safety, local impacts to biodiversity (specifically loss of habitat) and a potential decline in property values”. The proponent, however, claims that these social impacts can be “mitigated or managed to reduce their significance, with the Project’s positive impacts enhanced if appropriate measures are put in place”. **15, 16**

Of the potential and probable social impacts (way of life, community (cohesion), accessibility, culture, health and wellbeing (traffic and safety and clean air), surroundings, livelihoods, decision-making systems (trust in project management), one of the main concerns for residents of this area and within Port Stephens is traffic and road safety.

The EIS states that “cumulative traffic assessments also concluded that the road network can comfortably accommodate the level of additional traffic from both the proposed Eagleton Quarry and the Project, together with the existing traffic from the Boral Seaham Quarry.” **17**

There is no mention of peak traffic, which with more than one quarry using the Italia Road/ Pacific Highway intersection, will cause safety issues for other road users.

There is no mention of installing fauna fencing or other mitigation efforts to reduce the possibility of wildlife being pushed onto neighbouring roads by human activity within the Wallaroo State Forest.

The EIS statement also relies on an application supposedly being submitted by Boral to upgrade the existing Italia Road-Pacific Highway intersection to meet TfNSW requirements. The application will include an “extension to the northbound deceleration lane for left turns into Italia Road, prioritisation of the right turn into Italia Road, and a northbound acceleration lane for left turns onto the Pacific Highway.” These proposed changes to the junction are also the traffic impact mitigation measures. **18**

The Federal MP David Gillespie called for an interchange to fix safety concerns at Italia Road, Medowie Road and the Bucketts Way, in the Port Stephens Examiner 29/6/23. All these already busy intersections will be impacted by increased traffic from the proposed Stone Ridge quarry.

Additional quarry applications should not be determined prior to the proper consideration and commitment of funding to **improve the safety of the junction of Italia Rd and the Pacific Highway**, provide an appropriate **interchange for Medowie Rd and Bucketts Way**, and **avoiding the need to use the Karuah interchange** that was not designed for heavy truck traffic, and avoiding the proposed **inadequate solution for doubling of heavily laden truck movements between Italia Rd and Tarean Rd** that intend to travel south.

Local resident groups fear there could be over 1,000 truck movements a day in each direction on the Pacific Highway if the quarry extensions and new applications are all approved. KKEPS has sourced and compiled the following table to clearly show that total truck movements would be significantly higher.

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
Deep Creek	Up to 155 truck movement per day
Hillview	Up to 300 truck movements

Karuah South/Hunter	Not available
	Total ~1,600 truck movements per day

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. **19, 20**

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

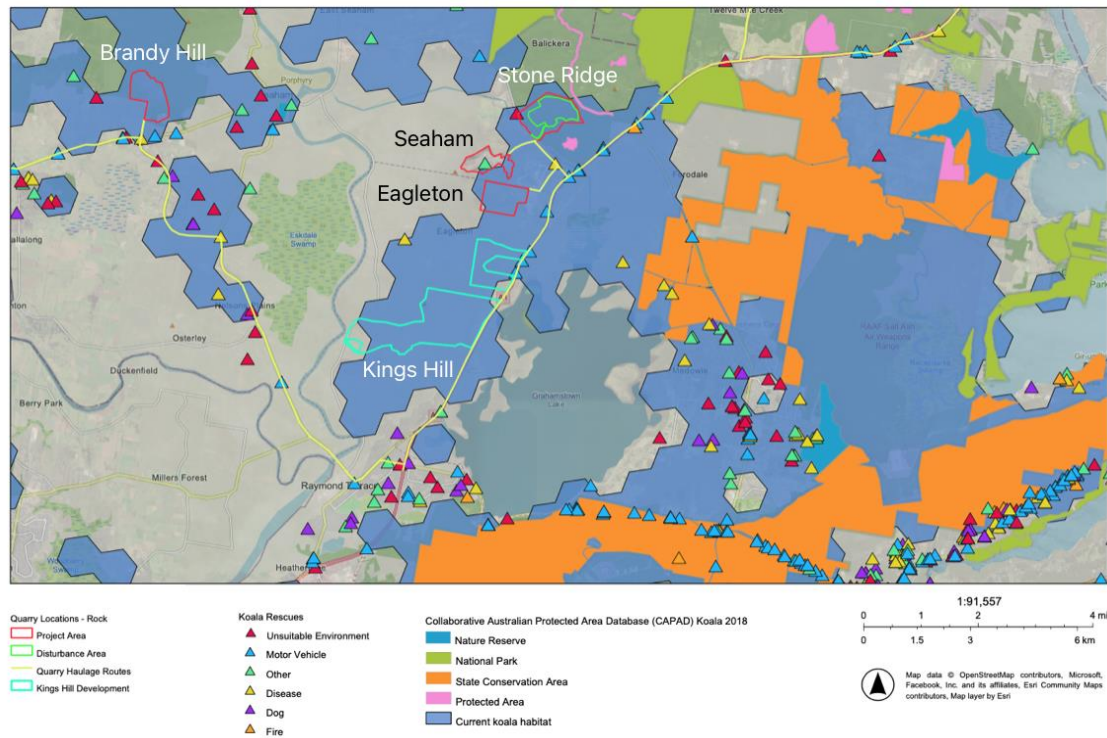
HVCS T0292	Twelve Mile Creek Southbound	HVCS T0293	Twelve Mile Creek Southbound
2018	1,650	2018	1,645
2019	1,687	2019	1,687
2020	1,753	2020	1,751
2021	1,860	2021	1,858
2022	1,894	2022	1,870
2023	1,993	2023	1,988

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.

Increased heavy vehicle traffic, especially at speed, could also result in fatal vehicle strikes with local koalas. Section 8.3.8 of the BDAR briefly looks at how the increased risk of vehicle strikes will last the duration of the project due to increased vehicle movement within the development footprint and on local roads. It suggests the length of site access and quarry operating hours will reduce the risk, but with habitat cleared koalas may be forced to travel on the ground and cross roads to look for food/ partners. There were no suggestions made for mitigation measures against vehicle strikes. **21**

The figure 'Stone Ridge in context and traffic impact on koalas' shows the shared haulage route, the Pacific Highway, and mid blue triangles near the quarries representing where koalas have previously been struck by vehicles. **22**

Stone Ridge in context and traffic impact on koalas



State Forest site suitability?

Section 10 of the Forestry Act 2012 No 96 defines multiple objectives for the FCNSW which each have equal weight. These include:

- to have regard for the community in which it operates
- where its activities affect the environment, to conduct its operations in compliance with the principles of ecologically sustainable development contained in section 6(2) of the Protection of the Environment Administration Act 1991 [e.g. the precautionary principle, intergenerational equity principle, conservation of biological diversity and ecological integrity, incorporating environmental factors into pricing and valuation, such as polluter pays, full environmental lifecycle costs etc.]
- to be an efficient and environmentally sustainable supplier of timber from Crown-timber land and land owned by it or under its control. **23**

Given the application will impact threatened species and threatened ecological communities, will not help conserve biological diversity, and will increase the volume of heavy vehicle traffic, and result in associated impacts, the project does not meet the FCNSW objectives.

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

While the Forestry Act includes provisions for quarries to operate in State Forests, the size and scale of the proposed Stone Ridge quarry goes far beyond the size of quarries historically authorised. We were not able to see how many quarries currently operate in State Forests on the Forestry Corporation of NSW (FCNSW) website, but proponent’s scoping statement indicates twenty such quarries. **24**

The latest Sustainability Report from FCNSW for 2021-22 indicates that 211,253 tonnes per annum (tpa) were quarried in State Forests [for an average of 10,562 tpa per quarry], with an additional 150,000 tpa expected when the Bago State Forest quarry becomes active. **25**

To put this into perspective, approval sought to extract 1.5 million tpa at Stone Ridge Quarry is 10 times the volume extracted at the Bago State Forest quarry, located on the site of a previously harvested hardwood plantation, **26** rather than koala habitat undisturbed for circa 40 years. **27 Excluding the Bago State Forest extraction estimates, the proposed extraction volume for Stone Ridge is over 140 times the average extraction volume of all the other quarries operating in NSW State Forests.** This suggests an order of magnitude higher than other quarries in State Forests, with significantly higher environmental and community impacts coming from a single quarry.

The prospect that native State Forests could become large-scale quarries instead of sustainably managed forests is out of balance with the Ecologically Sustainable Forest Management (ESFM) principles that underpin the NSW Forest Management Framework, including the objective to ‘maintain or increase the full suite of forest values for present and future generations across the NSW native forest estate.’ 28

Interestingly the EIS claims that the use of the Project Area as a quarry operation “potential impacts associated with the Project can be appropriately managed to allow the Project to coexist with the surrounding agricultural and non-agricultural land uses in the region”. **29** Surrounding non-agricultural land includes koala habitat which by being cleared will reduce habitat available to them and reduce habitat connectivity, a point which is discussed next.

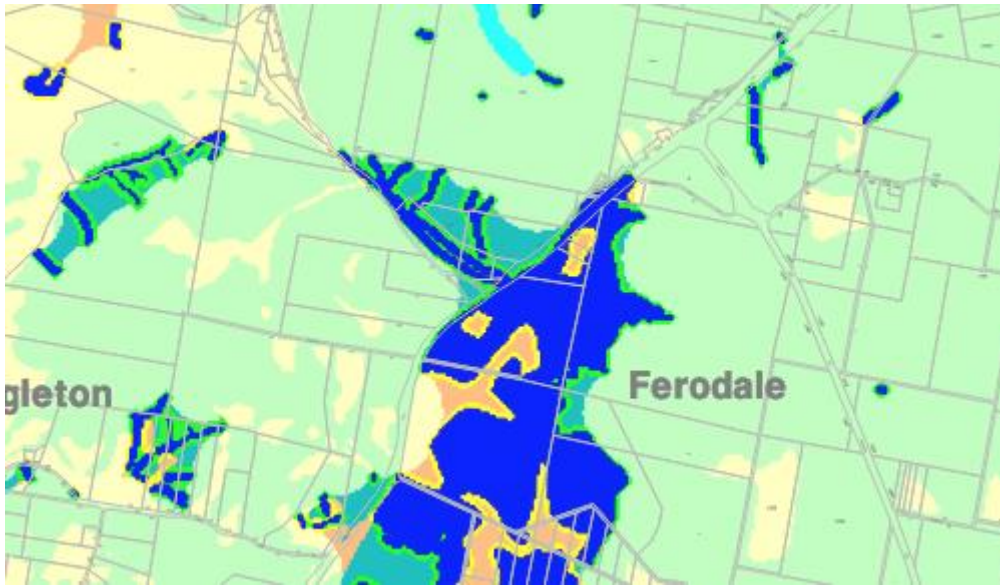
On the matter of the FCNSW submitting a letter supporting the project proposal, **30** we question whether their submission is admissible given their vested interest in this project going ahead. The documentation clearly states that the Stone Ridge quarry will provide FCNSW with a revenue stream.

The same may apply to the letter of support from the Rural Fire Service. The EIS states that the “proposed final land use for the majority of the Project Area outside the final voids (pit lakes) is to be rehabilitated with woodland vegetation similar to the surrounding forest, with the final voids able to provide a water supply suitable for firefighting purposes”. **31**

While we acknowledge that the resource may be present at Stone Ridge, KKEPS submits the site is suitable given its impacts and scale; Stone Ridge proposing 140 times the size of quarries in other forest areas. Land clearance in this site may also compromise existing wildlife corridors as discussed below.

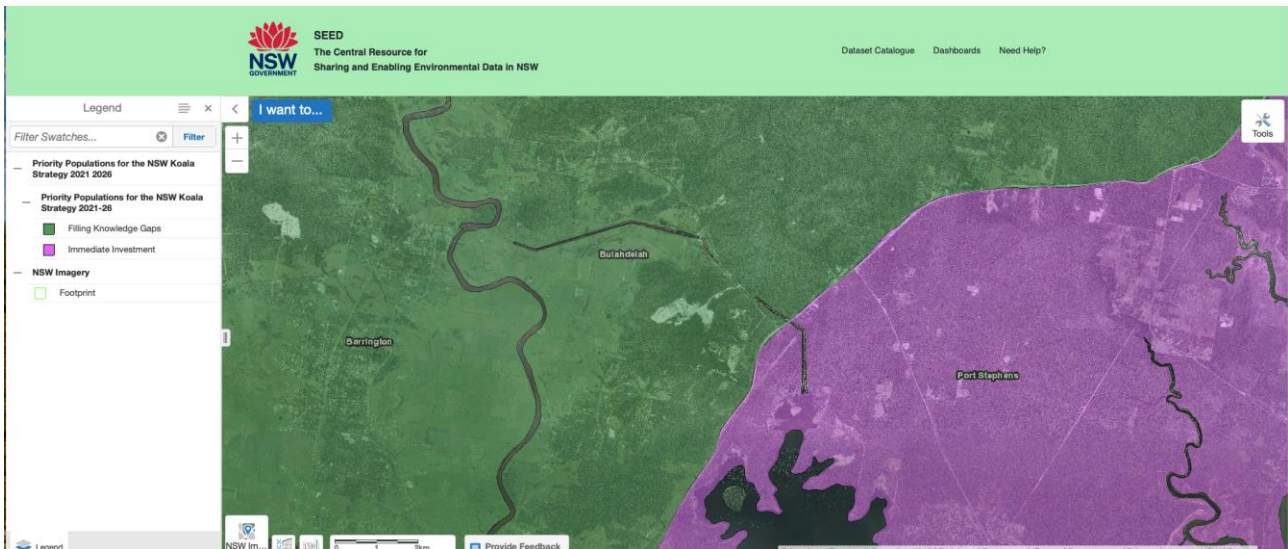
The impact of planned staged clearing of koala habitat on koalas

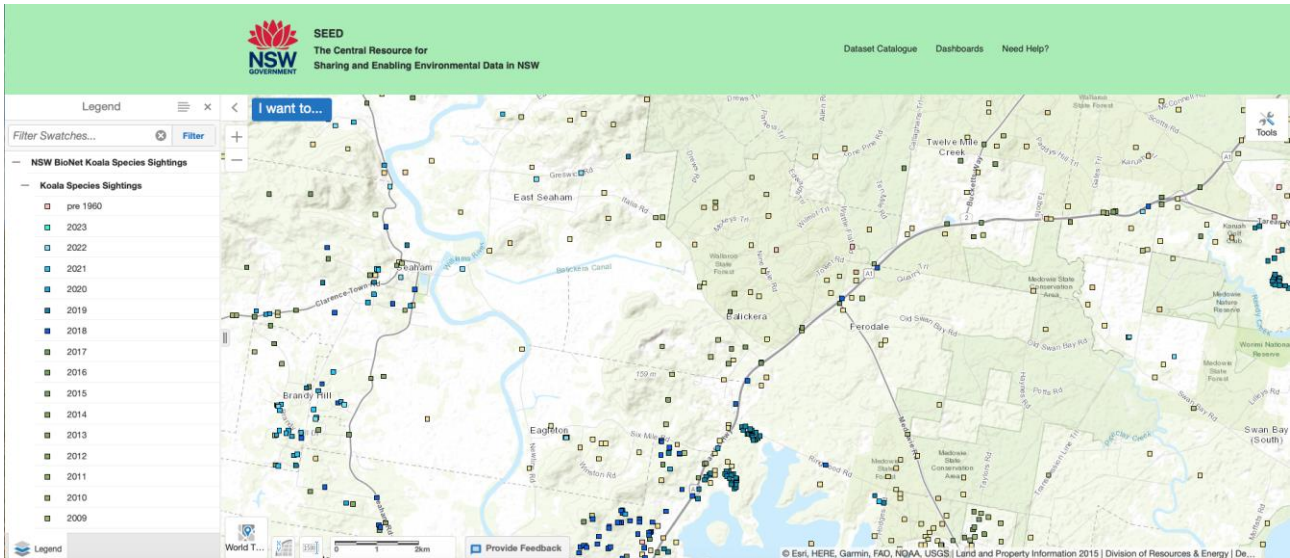
In the BDAR for Stone Ridge, Umwelt point out that as a State Significant Development the provisions of State Environmental Planning Policy (SEPP) (Biodiversity and Conservation 2021) Chapter 3 Koala Habitat Protection do not apply to this project. (BDAR 148). The report recognises, however, that the disturbance area includes land identified in the CKPoM as being preferred koala habitat **32** (see figure below), and surveys within the project site recorded koalas on three occasions during remote camera and spotlighting surveys. **33.**



Despite this, this Project will modify 139 ha (including extraction, processing, stockpiling area and buffers), with a disturbance area of approximately 79 ha over the life of the Project **34**; land recognised as “suitable habitat where the target species is expected to occur or periodically use and for the koala includes associated PCTs with a minimum of one koala use tree present”. Each of the [six] PCTs [or variants] within the disturbance site contain preferred koala trees and “all PCTs present are associated with the species.” **35**

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. **36** The project site borders the Strategy’s Port Stephens Immediate Investment area, although with recent sightings **37** 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.





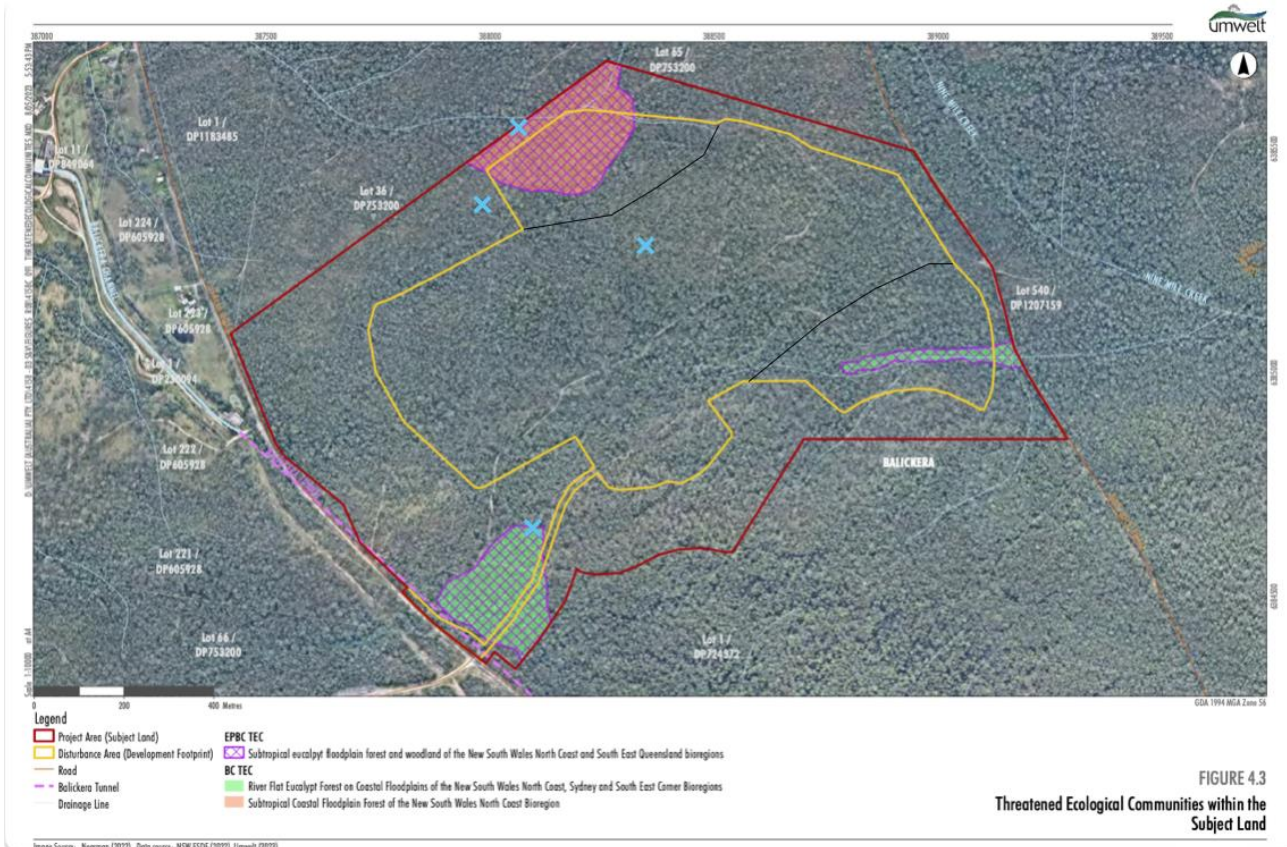
Given the preferred koala tree species on site, the CKPoM mapping, the spotlighting and remote camera results (albeit limited), the movement of koalas in the area as indicated by sightings within and around the project area (see above for BioNet sightings), and the proximity to the Port Stephens Immediate Investment Koala Strategy area, we would expect additional surveys to be undertaken before consent is given.

These additional surveys should be more extensive and include a range of survey techniques, such as scat detection dogs and drones. Recent surveys using drones and scat sniffer dogs at Kings Hill showed how these different survey techniques have significant merits when trying to locate koala presence over larger areas.

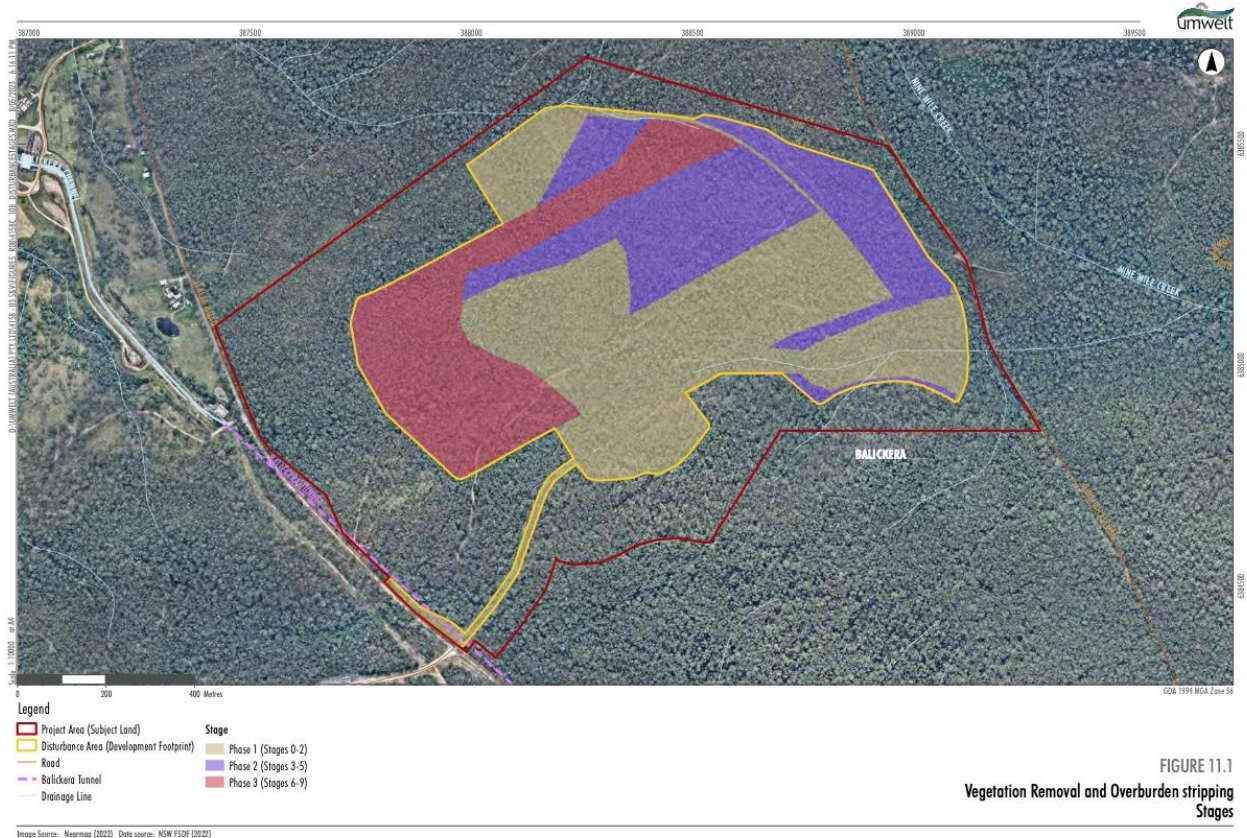
ARDG claim they have sought to avoid and minimise biodiversity impacts by preferentially siting the Disturbance Area “away from known records of threatened species and areas of higher ecological value”.

38

Combining survey information with details on threatened ecological communities (TECs), the disturbance area outlined in yellow impacts all three TECs and includes areas at or near where koalas were recorded. If the application was approved without further surveys, and without further consideration of the cumulative impact in this area, **KKEPS submits that an alternative access road be considered that avoids threatened species and TECs, and a smaller disturbance area for the same reason. An example is given below in the amended Figure 4.3 from the BDAR. 39**



The proposal to clear Project site habitat in stages within three phases, as outlined in Figure 11.1, is linked to the retirement of biodiversity credits. **KKEPS objects strongly that the first and largest phase of clearance includes habitat clearance in each of the three Threatened Ecological Communities and arrears where koalas were recorded.** 40 After each phase, a central strip running from the northeast to southwest will become narrower and narrower.



As koalas were observed on the proposed quarry site in the BDAR surveys and as the following local native koala food trees were also identified on site – Eucalyptus tereticornis, E. canaliculata, E. fibrosa, E. globoidea, E. piperita and Corymbia maculata – as well as the following koala shelter trees – E. resinifera, E. siderophloia, E. umbra, Angophora costata, C. gummifera and Allocasuarina littoralis **41** the noise, dust and loss of habitat associated with the staged removal of vegetation has the potential to increase levels of stress amongst any resident or roaming koalas.

In Appendix B, MNES Report for BDAR, the Proponent accepts that the removal of 79 ha of koala habitat will reduce the area of koala habitat long term. **42** They do not believe it will result in a reduction in population size. They suggest larger more suitable areas for koala including the Wallaroo National Park, the Karuah National Park, the Medowie State Conservation Area, the Karuah State Conservation Area, the Medowie Nature Reserve and the Karuah Nature Reserve. **43**

The Proponent also claims that breeding cycles will not be disrupted as no evidence of breeding was found at the site. A study by OWAD Environmental using scat sniffer dogs at Kings Hill was able to locate koala pap which indicates a breeding population and identify familial connections from genetic sequencing. **45** The koalas residing or passing through the Project Site may be from (or connected to) the Kings Hill koala breeding hub.

Contrary to the proposal, koalas do not easily and readily relocate to alternative areas, as having to fight for territory and locating suitable trees for browse and mating, in already occupied areas, are inherently stressful experiences, which frequently result in death.

Low levels of stress are key to koala health and welfare. Although the Proponent claims that the habitat clearance associated with the Project will not introduce disease nor disrupt the breeding cycle of koalas (B10), any environmental stressors can impact the neuroendocrine and immune systems, reducing their ability to keep symptoms of chlamydia to a minimum and reducing breeding success. 44 The clearance of areas within the disturbance area is likely to impact their foraging habits and the new edge effect could lead to increased time on the ground and a higher risk of predation.

It should be inferred that any observation within 30kms of the Kings Hill koala breeding hub, indicates that the individuals recorded are actively breeding. This could be proven by collecting scat for DNA sequencing which can elucidate familial relationships, chlamydia cells presence, etc.

KKEPS recommends further survey efforts be undertaken prior to any approval.

Habitat clearance and the impact on wildlife corridors

The section of Wallaroo State Forest where the proposed quarry is located is directly connected to the Wallaroo National Park and is part of a regional fauna corridor with broader connection to the Karuah National Park, Medowie State Conservation Area, and Medowie Nature Reserve. According to the National Parks and Wildlife Service (NPWS) Plan of Management for the Karuah, Medowie and Wallaroo Group of national parks and conservation reserves (KMWG):

“The area surrounding the parks has been extensively cleared, which has resulted in a high loss of biodiversity and fragmentation of habitat in the region... Long-term conservation of biodiversity depends upon the protection, enhancement and connection of remaining habitat across the landscape, incorporating vegetation remnants on both public and private lands”. Nearby vegetated areas contribute to the habitat value of the parks and provide ecological corridors to other vegetated areas. **Maintaining the integrity of the remaining habitat within the parks and, where possible, linking this to adjacent vegetated areas to facilitate wildlife corridors is important in ensuring long-term viability of the parks’ biological values”.** **46**

This is supported by Figure 3.2 (overleaf) in the EIS BDAR showing the proposed quarry site within the blue-shaded regional fauna corridor. **47**

If approved, the proposed quarry will result in significant negative impacts to the natural environment. These include the permanent destruction of 79 ha of native State Forest held in trust for the public, a permanent loss of habitat and increased threats for local koalas and several other species of threatened wildlife, the significant degradation and narrowing of an existing broader habitat corridor in the region, and an expected degradation of important biological values of the adjacent Wallaroo National Park.

The proponent argues that removing 79 ha of Wallaroo State Forest for a quarry still leaves room for wildlife to pass further southwest. This is not apparent from Figure 3.2 which shows the corridor narrowing to a pinch point between the quarry site and the Pacific Highway. This pinch point is made even more problematic by the presence of the Balickera Canal and the intense heavy truck traffic projected for Italia Road, which both act as additional barriers. KKEPS is concerned that no mitigation actions have been proposed to enable safe passage of koalas across Italia Road, or any other terrestrial wildlife species.

The Proponent also suggests that the Kings Hill development and M1 extension to the south of the proposed Stone Ridge quarry site will not further impact any loss in habitat connectivity. Considering a range of environmental planning instruments including State Environmental Planning Policy (SEPP) No. 55 - Remediation of Land, SEPP - State and Regional Development 2011, SEPP 44 Koala Habitat Protection, the Hunter and Central Coast Regional Planning Panel found that:

“the proposed development is likely to significantly affect threatened species population or ecological communities or their habitats and the application has not demonstrated adequate mitigation measures” and “the extent of clearing proposed to accommodate future urban development would result in unreasonable environmental impacts on both the natural and future built environment within the site.” **48**

Our submission objecting to the Kings Hill Urban development questioned plans to have wildlife corridors varying from as little as 60m up to 130m and in some cases to just over 200m, location depending, and pointed out that the proposed corridors fell short of expert guidance on corridor width provided by the Office of the NSW Chief Scientist & Engineer to the Cumberland Plain Conservation Plan. **49** The expert advice recommended that:

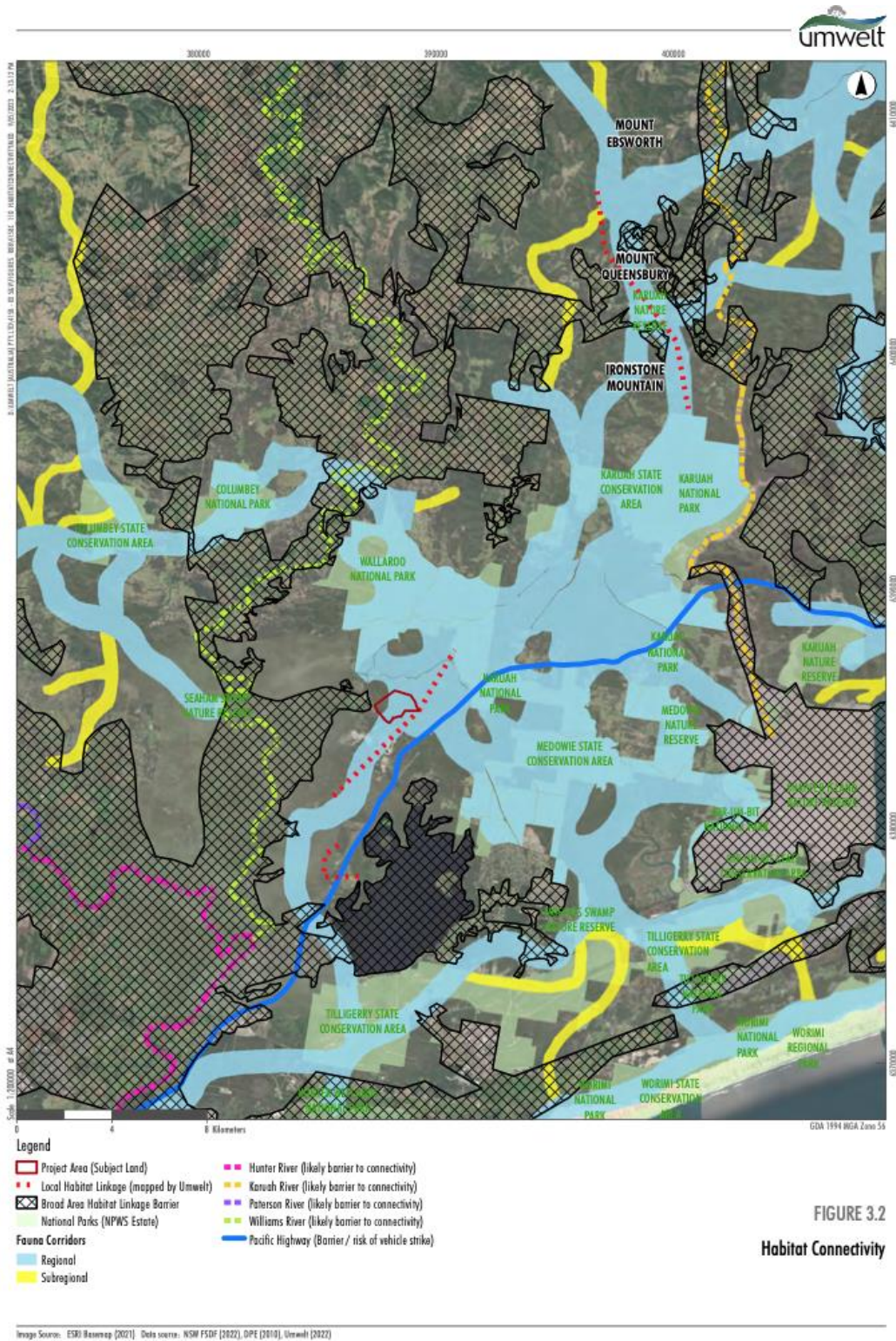
- koala corridors in the CPCP Area be expanded to an average minimum width of 390-425 metres, including a buffer within the corridor. Buffers reduce the direct and indirect impacts from humans, such as noise and light.
- buffers within the koala corridors be at least 30 metres wide if a koala exclusion 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 proposed at Kings Hill and for this Project. The guidance is also more current than the 2010 fauna corridor report referred to in the BDAR. **50**

For the Stone Ridge Quarry proposal, the Proponent is of the opinion that “additional designed features to further minimise impacts associated with habitat connectivity are not warranted.” **51**

KKEPS is of the opinion that habitat connectivity has not been addressed in a way that considers Kings Hill and also the scoping report for the extended Seaham Quarry. The Proponent already recognises that the corridor is “partly constrained to the west of Italia Road by the Boral Seaham Quarry”. 52

The cumulative impact of koala habitat clearance in this area should not be ignored. In regards to biodiversity value, the fact this site has not been disturbed since 1986 and the fact it was not burnt in the devastating 2019/20 bushfires need to be recognised.



The project’s impact on threatened species and the inclusion of threatened ecological communities

The BDAR indicates that the forest on the proposed quarry site is in moderate to good condition (either intact or regenerating), with limited invasive weeds and confirmed presence of three threatened ecological communities, a threatened orchid species, and several species of threatened fauna. 53

The presence of the same range of threatened species in surveys at Stone Ridge and across the Karuah, Medowie Wallaroo Group KMWG, including the Koala, Brush-tailed Phascogale, and Squirrel Glider, indicate that an ecological corridor is functioning across the forested estate in the area. Species also identified as being present in the KMWG list are the Grey-headed Flying Fox which was observed foraging on the Stone Ridge site – and the Powerful Owl heard on the Stone Ridge site. **54** In addition, Little Lorikeet, Varied Sitella, White-bellied Sea Eagle, Little Bent-wing Bat, Large Bent-winged Bat, Southern Myotis and the migratory Rufous Fantail were all observed or heard on the Stone Ridge site during BDAR surveys. **55** (Further BDAR surveys are still planned for Barking Owl, Masked Owl and Powerful Owl and will be completed post-submission).

The inclusion of Threatened Ecological Communities (TECs) within the project site and disturbance area is also of concern. KKEPS submits that any requested modifications to the proposal seek to exclude any clearance of, or disturbance to, the TECs. This should include relocating the access road currently placed opposite the access road to Boral that splits CKPoM koala habitat. 56

Offset and stewardship schemes

While lists of species details and credits are available, there is some confusion as to how clearing this relatively undisturbed area of koala habitat can result in a positive outcome for threatened species and populations living in Wallaroo State Forest and surrounding areas.

Details in the BDAR indicate that the biodiversity offset strategy for the project “will be developed during the assessment process in consultation with the NSW Department of Planning and Environment”. **57**

With regards to offset credits, we were surprised to see that koala was not listed in Table 5.1: Predicted Ecosystem Credit Species, despite being identified by DCCEEW as potentially significantly impacted by the Project. **58**

Table 5.2: Predicted Flora Species Credit Species, rather alarmingly includes Critically Endangered species. **59**

As for threatened species of microbats who have not been assessed as they were not observed, the Proponent may need to talk with Hunter Water who completed recent remediation work on the Balickera tunnel in 2021-2022. Surveys found that the tunnel was home to bats identified as ‘Vulnerable’ under the *NSW Biodiversity Conservation Act 2016* (BC Act) including:

- Little Bent-winged Bat (*Miniopterus australis*)
- Large Bent-winged Bat (*Miniopterus orianae oceanensis*)
- Southern Myotis (*Myotis macropus*).

Hunter Water took care to provide alternative roosts for various threatened bat species during the work on the tunnel. The tunnel 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. **60**

Ultimately whatever schemes the Proponent takes part in, if approved, an area that threatened species reside in or frequent will be lost. In exchange for the permanent destruction of existing forest habitat, the proponent proposes to pay for biodiversity offset credits and potentially apply them to another section of the Wallaroo State Forest. If there are sections of the Wallaroo State Forest in poorer condition than the proposed location of the quarry, the better course of action would be to apply biodiversity offset credits from other DAs in the region towards a conservation agreement in the Wallaroo State Forest (assuming the exchange meets the principle of ‘no net loss’). This would also not conform to Minister Plibersek’s policy of

Nature Positive Plans. **KKEPS submits that it is not an acceptable proposal to permanently destroy one section of the Wallaroo State Forest to conserve and protect another.**

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 from a state forest on the other.

Meteorological conditions and regulatory requirements

Many of the air quality modelling predictions on likely impact of **the Project claimed that meteorological conditions are stable** and used 2021 as representative of the long-term conditions near the Project Area). **61**

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. **62**

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. 63 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. **64**

One of the desired outcomes of the NPWS Management Plan for KMWG is to maintain the “values of the parks as part of a regional corridor for wildlife movement.” One of the management actions is to: “Encourage neighbouring landholders to maintain and enhance the integrity of native vegetation on their lands to improve wildlife connectivity across the landscape.” **65** The neighbouring intact and regenerating Wallaroo State Forest with confirmed observations of several threatened species must surely qualify as an important component of this goal. Rather than further degrading a section of the Wallaroo State Forest in a landscape that has already been heavily forested and regionally cleared, the forest should be valued for the habitat that remains and the wildlife corridor that it supports.

In addition, Objective 6 of the Hunter Regional Plan 2041 is to “conserve heritage, landscapes, environmentally sensitive areas, waterways and drinking water catchments.” The objective describes biodiversity networks as “patches – areas of remnant vegetation such as national parks, state forests and other core habitat – and corridors that wildlife use to move around.” The objective also states: “Large areas of remnant vegetation in the Hunter, such as national parks, state forests, council reserves, floodplains, foreshores and riparian vegetation, can be connected to secure biodiversity corridors.” Strategy 6.4 in support of the objective states: “Planning proposals should promote enterprises, housing and other uses that complement the biodiversity, scenic and water quality outcomes of biodiversity corridors. Particularly, where they can help safeguard and care for natural areas on privately owned land.” **66**

A proposal to permanently remove 79 ha of native forest in the Wallaroo State Forest on public land within a regional biodiversity corridor would not complement the desired outcomes of the biodiversity corridor and would be contrary to the strategy and overarching objective in the Hunter Regional Plan.

Recommendations

1. The Stone Ridge 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 social and environmental impacts of approved sites. A similar idea has already been put forward for quarry proposals in the North Karuah-Limeburners Creek area. **Port Stephens cannot be considered able to have all these quarries operating at the same time.** While some sites are technically outside Port Stephens LGA, the traffic will funnel through Port Stephens roads.
2. The language used by the proponent to dismiss serious potential social and environmental impacts by Stone Ridge could be seen as **flippant, causing people to distrust the findings and future management.**
3. The **cumulative impact was not addressed to a sufficient level of detail**, nor did it address all the social and biodiversity impacts related to the proposed Stone Ridge quarry project.
4. Additional quarry applications should not be determined prior to the consideration and commitment of funding to **improve the safety of the junction of Italia Rd and the Pacific Highway**, provide an appropriate **interchange for Medowie Rd and Bucketts Way**, and **avoiding the need to use the Karuah interchange** that was not designed for heavy truck traffic, and avoiding the proposed **inadequate solution for doubling of heavily laden truck movements between Italia Rd and Tarean Rd** that intend to travel south.
5. **There is no mention of peak traffic, which with more than one quarry using the Pacific Highway will cause safety issues for other road users.**
6. **There is no mention of installing fauna fencing or other mitigation efforts to reduce the possibility of wildlife being pushed onto neighbouring roads by human activity within the Wallaroo State Forest.**
7. Given the application will impact threatened species and threatened ecological communities, will not help conserve biological diversity, and will increase the volume of heavy vehicle traffic, and result in associated impacts, **the project does not meet the FCNSW objectives.**
8. As koala sightings can be minimal in areas with less access or footfall, or where limited survey techniques and survey periods are used, **the precautionary principle must be applied and more detailed surveys be required.**
9. **The prospect that native State Forests could become large-scale quarries instead of sustainably managed forests is out of balance with the Ecologically Sustainable Forest Management (ESFM) principles that underpin the NSW Forest Management Framework**, including the objective to 'maintain or increase the full suite of forest values for present and future generations across the NSW native forest estate.'
10. While KKEPS acknowledges that the resource may be present at Stone Ridge, **the site is not suitable** given its impacts and scale; Stone Ridge quarry will be 140 times the size of quarries in other State Forest areas.
11. Given that other states have already ceased, or brought forward dates to cease logging in State Forests, and NSW government is under pressure to do the same, it would be **irresponsible and short sighted to commence large-scale quarrying in State Forests**, that logically creates even greater impacts on our threatened fauna and flora, including forest types.
12. Given the high percentage of preferred koala tree species on site, the CKPoM mapping, the spotlighting and remote camera results (albeit limited), the movement of koalas in the area as indicated by sightings and incidents within and around the project area (see above for BioNet sightings), and the proximity to the Port Stephens Immediate Investment Koala Strategy area, KKEPS recommends **additional surveys must be undertaken prior to** consent being given.
13. KKEPS submits that **an alternative access road be identified that avoids threatened species and TECs**, and a smaller disturbance area for the same reason.
14. **KKEPS objects strongly to the proposal that the first and largest phase of clearance includes habitat clearance in each of the three Threatened Ecological Communities and areas where koalas were recorded.**

15. Contrary to the proposal, **koalas do not easily and readily relocate to alternative areas**, as having to fight for territory and locate suitable trees for browse and mating in already occupied areas, are **inherently stressful experiences, which frequently result in death**.
16. **Low levels of stress are key to koala health and welfare**. Although the Proponent claims that the habitat clearance associated with the Project will not introduce disease nor disrupt the breeding cycle of koalas (B10), any environmental stressors can impact the neuroendocrine and immune systems, reducing their ability to keep symptoms of chlamydia to a minimum and reducing breeding success. 44 The clearance of areas within the disturbance area is likely to impact their foraging habits and the new edge effect could lead to increased time on the ground and a higher risk of predation, as well as chlamydial symptoms emerging from a latent state. All these **consequences may be fatal**.
17. It should be inferred that any observation within 30kms of the Kings Hill koala breeding hub, indicates that **the individuals recorded are actively breeding**. This could be proven by collecting scat for DNA sequencing which can elucidate familial relationships, chlamydia presence, etc.
18. Maintaining the **integrity of the remaining habitat** within the parks and, where possible, linking this to adjacent vegetated areas to facilitate wildlife corridors is important in ensuring long-term viability of the parks' biological values". The proposed quarry will significantly decrease existing linkages in a publicly owned State Forest.
19. If approved, the proposed quarry will result in **significant negative impacts to the natural environment**. These include the **permanent destruction** of 79 ha of native State Forest held in trust for the public, a permanent loss of habitat and increased threats for local koalas and several other species of threatened wildlife, the significant degradation and narrowing of an existing broader habitat corridor in the region, and an **expected degradation of important biological values** of the adjacent Wallaroo National Park.
20. While the Proponent recognises that the corridor is "partly constrained to the west of Italia Road by the Boral Seaham Quarry", KKEPS submits that **habitat connectivity has not been addressed with adequate cumulative focus** that considers both the Kings Hill Urban Release Area, and also the scoping report for the extended Seaham Quarry.
21. The cumulative impact of koala habitat clearance in this area should not be ignored. In regards to biodiversity value, **the fact this site has not been disturbed since 1986 and the fact it was not burnt in the devastating 2019/20 bushfires need to be recognised**.
22. The **inclusion of Threatened Ecological Communities (TECs) within the project site and disturbance area is concerning**. KKEPS suggests that modifications should have been made to the proposal that exclude any clearance of or disturbance to the TECs. This should include relocating the access road currently placed opposite the access road to Boral and splits CKPoM koala habitat.
23. KKEPS supports the local residents' view that **locating the entrance to both quarries opposite each other on Italia Rd will create a dangerous intersection** where trucks waiting to turn into the quarries will block the forward view of motorists.
24. KKEPS submits that **it is not an acceptable proposal to permanently destroy one section of the Wallaroo State Forest to conserve and protect another**. This is **not a 'Nature Positive Plan'** as Federal Minister Plibersek is proposing as being essential to successful environmental policy.
25. 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 from a State Forest on the other.
26. 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**.
27. A proposal to permanently remove 79 ha of native forest in the Wallaroo State Forest on public land within a regional biodiversity corridor would not complement the desired outcomes of the biodiversity corridor and would be **contrary to the strategy and overarching objective in the Hunter Regional Plan**.

KKEPS strongly opposes the Stone Ridge Quarry proposal for all these reasons:

- **Air Quality** - dust being blown onto houses, water sources and surrounding vegetation will impact humans, wildlife and plants/trees.
- **Noise and vibration** from Clearing initially, then Drilling, Blasting and Crushing, Stockpiling and Loading will impact humans, wildlife and plants/trees, possibly the integrity of the Balickera Water Tunnel providing drinking water to the Grahamstown Dam. Although the Tunnel was recently refurbished by HWC, the impacts from a quarry within the Wallaroo State Forest would not have been considered, nor been expected that sustained heavy trucks would cross it.
- **Blasting** – there will be impacts on humans and the structural integrity of their homes. Local Residents already complain about blasting from Seaham Quarry. There will be impacts on wildlife, including threatened species occupying the Balickera Water Tunnel. There may be effects on Balickera Water Tunnel.
- **Water** - Groundwater – the mine will dig deeper than the water table. The proposed quarry may contaminate or reduce the water available to others.
- **Water** – Drainage/runoff of sediment into may enter creeks that flow into Grahamstown dam.
- **Biodiversity** – threatened fauna and flora will be directly impacted (including forest types). Squirrel glider, brush tailed phascogale and koala were all photographed during surveys. The whole forest is koala habitat. There has been no recent bushfire. The forest should continue to be forest sustainably managed.
- **Social** – way of life, community (cohesion), accessibility, culture, health and wellbeing (traffic and safety), surroundings, livelihoods, decision-making systems (trust in project management). All these social aspects will be affected for local residents, but the most concerning is the traffic and road safety. Local residents and groups are expected to address these points in detail.
- **Cumulative impact** including **Connectivity and Corridors for wildlife** – multiple quarries will be in close proximity and the only corridor across Italia Rd is over the Balickera tunnel, where this quarry is proposed. The proposed quarry will permanently destroy biodiversity by limiting planned connectivity and corridors for wildlife.
- **Suitability** of the site for development – **a quarry to be approved within a publicly owned State Forest is not ecologically sustainable!!**
- **The proposal is not in harmony with the intention of the following local, State and Federal policies: Port Stephens CKPOM, NSW Koala Strategy, National Koala Recovery Plan, Hunter Regional Plan for the Hinterland District, Nature Positive Plans, FCNSW objectives, Ecologically Sustainable Forest Management (ESFM) principles that underpin the NSW Forest Management Framework, and many more environmental regulations too numerous to mention here.**

To gain approval the Stone Ridge proposal should have an overall positive impact to be considered to be in the “public interest”.

KKEPS submits that the proposal for Stone Ridge quarry will definitely have a very clear negative impact and is therefore considered NOT to be in the public interest.

Yours sincerely,

Carmel Northwood

Convenor

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