



KOALA KOALITION  
ECONETWORK PORT STEPHENS INC.

PO Box 97 Nelson Bay NSW 2315  
koalakoalition@econetworkps.org

20/12/2023

### **IPC submission - OBJECTION TO DEEP CREEK QUARRY SSD-11591659**

Carmel Northwood, Convenor, Koala Koalition EcoNetwork Port Stephens (KKEPS) gave a verbal presentation by phone speaking to powerpoint slides to the IPC public meeting on 13/12/2023. Prof Snow invited this submission so the Panel may examine the maps shown quickly in the presentation.

The Koala Koalition EcoNetwork Port Stephens (KKEPS) welcomes the opportunity to comment on the State Significant Development (SSD) proposal for the Deep Creek Quarry Project which has been referred to the Independent Planning Commission following considerable community opposition. The proposal seeks to extract up to 0.5 million tonnes per annum for an initial 30-year operation period on land located near the Karuah National Park and proximate to Deep Creek, with a new access road to be built off the Bucketts Way.

I wish to acknowledge the work to date on this proposal and that the updated BDAR has attempted to address many of the objections given in our January 2022 submission to DPE, through avoidance and mitigation strategies. Unfortunately, the 30 pages of recommended conditions fall short and still do not alleviate KKEPS or community concerns. The additional surveys and reports have highlighted the value of the biodiversity of the proposed quarry location. Far from being 'remnant' forest, this land appears to be undisturbed bushland that is home to more endangered and vulnerable species than initially appreciated.

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.

Ref s4.15 of the Environmental Planning and Assessment Act 1979 No 203, accessed via <https://legislation.nsw.gov.au/view/html/inforce/current/act-1979-203#sec.4.15>

We would, therefore, like to present our concerns for your consideration.

### ***Koala SEPP issues are preventing habitat mapping and protection of corridors***

In February 2022, the koala was listed at both State and Federal levels as Endangered (no longer just Vulnerable), and the next step left if nothing changes is Critically Endangered. This grim potential eventuality, which we as a State and as a Nation are currently working towards, one approval at a time, may result in an impossible amount of public funding being needed to bring them back from

the brink. Koalas are the umbrella species – save their habitat and we will also help save many other species.

It is crucial now to protect the few remaining native forests where koalas are known to survive. The National Recovery Plan for the Koala (April 2022) cites Habitat Fragmentation as the most important reason for their continuing demise. “The overarching threats to the listed Koala are land use change and climate change. Other direct threats include disease, dogs and vehicles (Part IV) (TSSC 2021). These threats interact to impact the population size of the listed Koala and distribution through associated ecologically threatening processes of habitat loss, fragmentation and degradation, exacerbation of disease impacts, disruption of population processes, impediments to safe movement and loss of genetic diversity (Figure 4, Part VI). Because of the listed Koala’s large distribution, the relative importance of these threats varies at local scales.” P.11

Port Stephens Council has had a Comprehensive Koala Plan of Management (CKPOM) in place since the beginning of this century. **Port Stephens CKPOM mapping** dated 2002 is unable to be updated, without a new koala SEPP coming out of the Koala Strategy. This would replace/supersede the 2021 and interim 2022 SEPPs that now apply to rural and non-rural land, as contained in 2 chapters of the [State Environmental Planning Policy \(Biodiversity and Conservation\) 2021](#), as it is impractical for PSLGA to have both. A new CKPOM has been predicted to cost around \$250,000. As PSC is unable to update the Plan or the attached mapping due to these regulation issues, there is also no funding available to prepare mapping that may be attached to a new CKPOM in the future, or be used by PSC assessment processes in the meantime. A debacle now exists as, despite 25 years of good intentions, koala/wildlife corridors have not been identified and cannot be protected.

The only action that concerned volunteers in the community can take is to write submissions objecting to development practices that increase the risk of extinctions either locally or beyond and hope for better government policies and decision-making to arrive before our wildlife is extinct. This takes a toll on volunteers who often must respond within weeks to very large proposals that have taken professionals sometimes years to prepare.

### ***Cumulative and Combined Impacts of the many existing and proposed quarries in this area***

The IPC panel is obliged to consider the cumulative and combined impacts of the many existing and proposed quarries in this area. Our local community groups have already been looking at how the growth in mine sites or extension to operations applications have a cumulative and combined impact particularly as mines have been approved for years without considering the bigger picture. We have been fighting a losing battle for years, but with ongoing habitat loss, climate warming, and more and more species being added to the threatened species lists despite commitments to improve biodiversity, it is time to look at more than the individual application.

The list of existing and proposed hard rock quarries in the vicinity of Deep Creek has grown since our last submission objecting to this quarry proposal in January 2022. There are more than what was listed by Jessie Evans, Director, DPE, Energy and Resources during in her introduction at the public meeting on 13/12/23. Due to the scant nature of her report, the following summary of the status of each quarry is given here in a little more detail to provide an overview to the panel.

1. **Deep Creek SSD-11591659, 279 Deep Creek Rd, Limeburners Creek for 500,000 tonnes per annum (tpa) over 30 years - under IPC consideration.**
2. **Stone Ridge SSD-10432 Italia Rd, Balickera, ARDG is proposing to quarry within Wallaroo State Forest;** the NSW Planning portal notes an amended response to submissions is being prepared. KKEPS objected on 19/7/2023 to removing **1.5 million tonnes per annum (mtpa) for 30 years**, for many reasons but based on multiple quarries being in close proximity to

where this quarry is proposed to have its entry **directly opposite the Seaham Quarry entrance**. The only wildlife corridor to the north, must cross Italia Rd, where the open Balickera water channel enters the Balickera tunnel (connecting the Williams River with Grahamstown Dam for drinking water). The proposed quarry will permanently destroy biodiversity by limiting possible connectivity and corridors for wildlife. This quarry would be 40 times larger than any others now operating in NSW State Forests. Quarrying is not a sustainable forestry use.

3. **Eagleton Quarry Project SSD-7332** aims to extract and process up to **600,000 tonnes** of hard rock per annum for 30 years. The quarry will use Barleigh Ranch Way to enter onto **Italia Road, Balickera**. A legal loophole allowed **Eagleton** not to prepare a current biodiversity report; being that there was no change in the disturbance area of the quarry, so even though the koala has been uplisted to endangered last year, the species list remains as it was 10 years ago, the surveys done and their report was based on work done in 2015 and 2018 in the response to submissions, but this was still considered to be acceptable.

4. **Seaham quarry (Boral) 139 Italia Rd, Balickera** has multiple applications in train:
  - a. Currently operating under a development consent (DA 2683\_85) issued by Port Stephens Council. Due to this 1985 consent there are no limits on the amounts they can remove or the number of truck loads.
  - b. Council declined a DA to expand this site on 22/9/2020, concluding that “The proposed development would cause unacceptable impacts to road safety and its approval would be contrary to the public interest.” The community breathed a short-lived sigh of relief that Italia Rd would not be subject to any more quarries. Unfortunately, this is not the case, as pressure builds from multiple developers.
  - c. Combined BA/DA (7 - 1985 - 2683 - 6) S4.55(2) Modification 6 to lower the pit floor and extend operations until 2037. KKEPS submitted an objection on 19/9/2023 concluding: No extension of quarrying approvals should be given to Boral, until appropriate and thorough strategic planning considering the cumulative effects of quarries in Port Stephens is undertaken by Council, or more appropriately by NSW Department for Planning and Environment, since most extractive industry applications are deemed State Significant Developments SSD.

TfNSW support for the extension of the pit floor was given on the understanding that work would be done to make the Italia Rd intersection with the Pacific Highway safer. The community has not been able to comment on plans. We suggested the BA/DA should be assessed as part of the broader Boral SSD, but we are unaware if any PS Council decision has been made. Once the submission period has closed, the PSC DA tracker information is no longer available and updates are not provided.

- d. SSD-59254474 (preparing EIS) involves the following key components on RU2 land:
  - increase the approved extraction area by approximately 30.6 ha
  - increase the depth of the approved extraction area to 35 m RL
  - allow quarry operations for an additional 30 years – until 2057
  - annual extraction of up to **2 mtpa** totalling 30 million tonnes
  - 24/7 operation (different quarries are approved to have different loading, hauling, crushing and blasting times – much to the chagrin of impacted community members)
  - importation and use of virgin excavated natural material (VENM) in progressive rehabilitation.

**Intersection of Italia Rd, Balickera** with the Pacific Highway is extremely dangerous with a crest to the south combined with 100kph speed limit. This narrow road stays open during floods. A DA was to be submitted in conjunction with the Eagleton application and is

supported by all 3 quarries proposed for Italia Rd within close proximity. Port Stephens Council has requested further information in regard to the Balickera water channel (within the last 2-3 months) prior to accepting it for assessment.

5. **Martins Creek quarry 1.1 mtpa** was refused by the IPC on 13/2/23 mainly on grounds of road safety and public amenity because Daracon insisted on trucking material out instead of using the rail spur – this was previously a rail ballast quarry. This IPC decision is being disputed in the Land and Environment Court 2023/00252084 BUTTAI GRAVEL PTY LTD v Independent Planning Commission.
6. **Hillview, Maytoms Lane.** The EIS for Hillview Quarry and Concreting Batching Plant at Booral is currently being prepared. A staged extraction will involve extraction at a rate **of 600,000 tpa over the first 5 years and 1.5 mtpa for the remaining 25 years.**
7. **Brandy Hill Quarry** Seaham operations were extended for a further 30 years, doubling their current production from **700,000 tpa to 1.5 mtpa**, following IPC approval in July 2020 and then approval by then Federal Environment Minister Sussan Ley on 20/10/2020 with conditions. R. R. Witt and J. Clulow – Expert opinion report – potential impact of Brandy Hill Expansion Project on the koala challenged Dr Steve Phillips’ “independent” report that “koalas would tend to move through it and not in huge numbers”. Phillips’ Spot Assessment Technique (SAT) survey method, developed last century, is no longer considered reliable as newer survey techniques such as drones and scat sniffer dogs have been shown to locate koalas in areas other techniques fail. [Drone thermal imaging technology provides a cost-effective tool for landscape-scale monitoring of a cryptic forest-dwelling species across all population densities \(csiro.au\).](#)

Long-held concern re pedestrian safety on Brandy Hill Drive was acknowledged and it is a condition for a pathway and bus shelters to be erected prior to increasing production. These have not yet been constructed, showing scant regard for community safety since a schoolgirl was hit and killed on her way to school on Brandy Hill Drive in February 2019. Community members have reported poor driver behaviour to Hanson who operates this quarry, who responds through the CCC they cannot control the behaviour of truck drivers once they leave their property, despite Driver Behaviour policies. I have found the quarry trucks to be very intimidating when visiting the area for koala rescues following motor vehicle hits.
8. **Karuah East Quarry** was approved in May 2023 to extend operations to 2054 and increase extraction to **1.5 mtpa**. KKEPS lodged an objection to the proposed increased disturbance of natural vegetation “primarily to establish additional stockpiling areas” according to the Federal Decision on deferral given by Kate Gowland, DAWE, 2/5/22, EPBC Ref 2022/9164. MidCoast Council stated “Council is of the opinion that the proposal is unsatisfactory from a biodiversity perspective”. Biodiversity Offsets were offered and stewardship sites were altered.
9. **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 Biodiversity report is based on survey data from 2012 and 2018 with only a limited update in the 2023 version.
10. **Karuah Quarry (Hunter quarries)** producing up to **500,000 tpa** for 22 years from consent in June 2005.

These hard rock quarries have many direct and indirect impacts on fauna and residents. Approving more quarries in this small area, will severely impact the rural character, health and amenity of the local communities. Tourism will also be severely impacted should the Deep Creek Quarry be approved. The combined effect of multiple developments will have a significant cumulative impact

on the wider regional environment resulting in habitat degradation and the fragmentation of key species populations. Direct impacts from quarries and building developments include the reduction of overall habitat available, noise disturbance, reduction in air quality, while further indirect impacts from supporting infrastructure and roads can result in the isolation of habitats and species.

Highways and increased road haulage/ site traffic pose a significant threat to wildlife by altering both animal movements and mortality risk. The need for ecological connectivity is fundamental in conserving wildlife as it allows individuals to move among core habitat areas, providing genetic stability to regional populations. It is inevitable that each new development requiring clear felling has implications to local species populations, therefore it is fundamental to assess the impact from a regional perspective.

I bring all of these existing and planned activities to your attention because it is the combined and cumulative impact of all these projects that is the crux of our objection. Approvals have been given to extend operations that have not yet been implemented, so the real impacts of these approvals cannot yet be ground truthed.

The community does not accept the standard justifications espoused by developers – that the hard rock material is needed for crucial state projects in the near future. Without strategic planning to properly consider the combined and cumulative effects of quarries on local communities, their environment and biodiversity, the justification cannot be proven.

On a regional level, the justification is also at odds with the environmental goals of the **Hunter Regional Plan 2041** and the Plan's objective to "diversify the Hunter's mining, energy and industrial capacity". Under this objective, Strategy 1.1 states that planning proposals for mines 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". Plans for the area should also meet Objective 6 for the conservation which requires the conservation of "heritage areas, landscapes, environmentally sensitive areas, waterways and drinking catchments". Any development is expected to "maintain **or improve** the environmental value or viability of the biodiversity network".

## **TRAFFIC**

I personally object to this proposal on the grounds of my own personal road safety as a regular tourist caravanner on the Bucketts Way. The whole of Bucketts Way is narrow, winding and already dangerous. The intersection with the Pacific Highway is frightening in holiday periods, as community members told the Panel during the Public Meeting. There is no surprise that TfNSW thinks the proposed intersection is satisfactory as many other regional road intersections, particularly onto the Pacific Highway, are known to be equally dangerous with no plans in place to address their safety. 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.

Deep Creek quarry's approval will add to the cumulative and combined impact of heavily laden quarry trucks by developers suggesting they will turn north out of Italia Road to turn south by using the Karuah exit, effectively doubling their traffic impact around the Bucketts Way intersection. I know other groups such as the local residents of VOWW who will take up this argument, but I wish to note that truck drivers usually survive, but the local driver may not.

**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 quarries	Not available
	<b>Total ~1,600 truck movements per day</b>

Statistics from two southbound Heavy Vehicle Checking Stations near Twelve Mile Creek (near the Bucketts Way 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. This is without any additional traffic resulting from quarries being permitted to start extraction or from being allowed to extend operations.

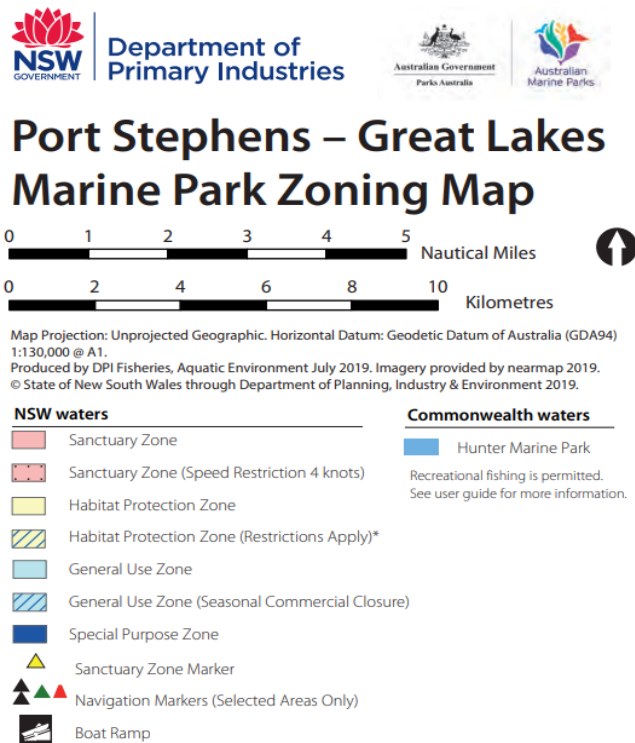
**Table: Average weekday heavy vehicle counts at two Heavy Vehicle Checking Stations, Twelve Mile Creek**

<b>HVCS T0292</b>	Twelve Mile Creek Southbound	<b>HVCS T0293</b>	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

Ref Transport for NSW, Traffic Volume Viewer, accessed via [Traffic Volume Viewer \(nsw.gov.au\)](https://www.transport.nsw.gov.au/traffic-volume-viewer)

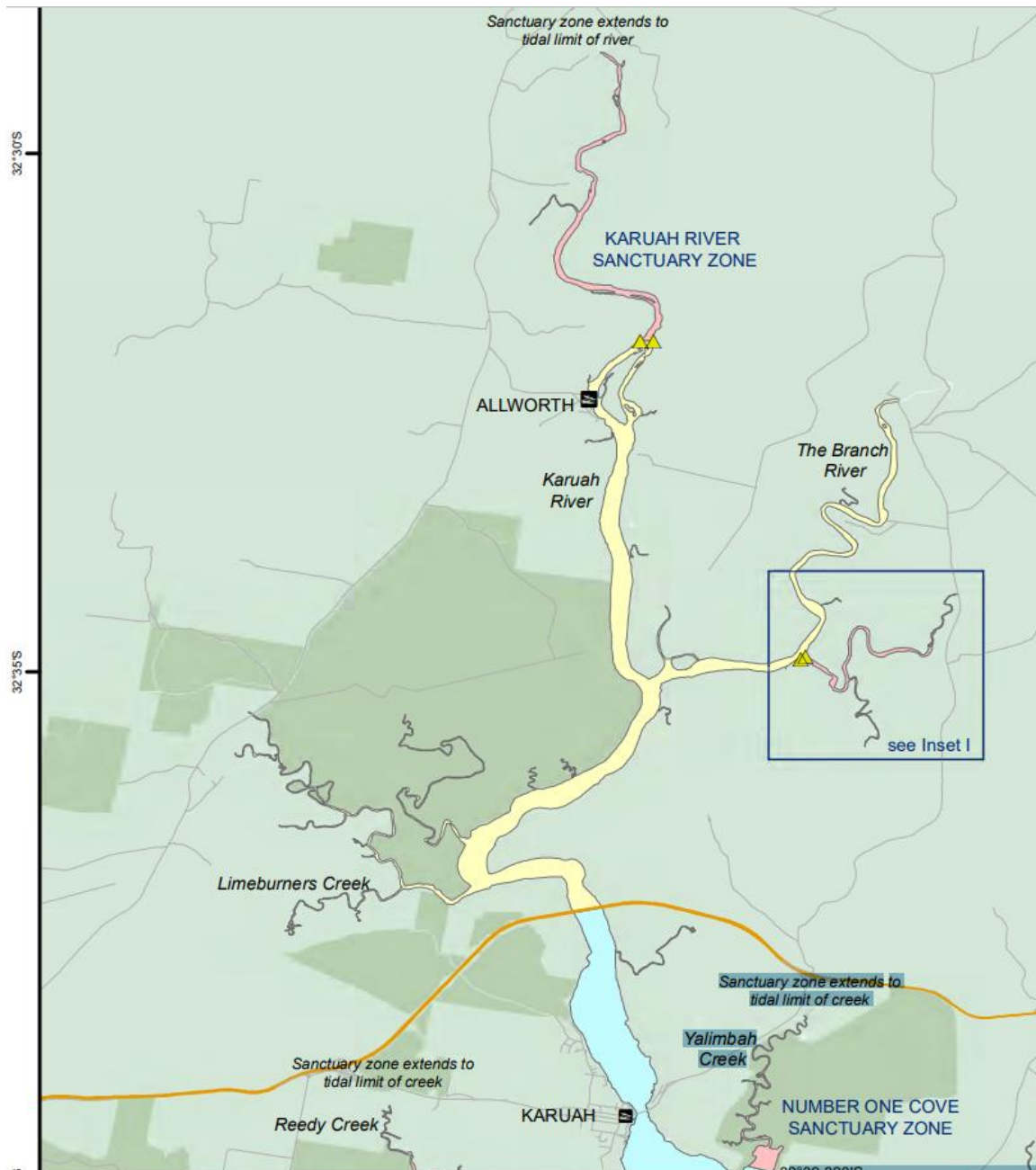
## HABITAT PROTECTION ZONE

Deep Creek is in the Habitat Protection Zone of the Port Stephens Great Lakes Marine Park. The zoning map partially copied below, shows being marked yellow denotes that restrictions are in place, not only for recreational fishing, but other activities.



Activity	Sanctuary Zone	Habitat Protection Zone	General Use Zone
<b>Recreational fishing</b>			
Line fishing	X	✓ <sup>8</sup>	✓
Spearfishing	X	✓ <sup>8</sup>	✓
Trapping	X	✓ <sup>8</sup>	✓
Bait collection	X	✓ <sup>8</sup>	✓
Nets (scissor, hand hauled, scoop, landing, hoop)	X	✓ <sup>8</sup>	✓
<b>Collecting</b>			
Recreational shell collecting	X	✓ <sup>8,2</sup>	✓ <sup>8,2</sup>
Collecting for aquariums - commercial and private	X	P <sup>8</sup>	P
Recreational seaweed collection	X	✓ <sup>8,2</sup>	✓ <sup>2</sup>
<b>Non-Extractive Recreational Activities</b>			
Navigation of vessels	✓	✓	✓
SCUBA diving and snorkelling	✓ <sup>3</sup>	✓ <sup>3</sup>	✓ <sup>3</sup>
Motorised water-sports	X <sup>1</sup>	✓	✓
Hovercraft, airboat and seaplane	P	P	P
Domesticated animals	✓ <sup>5</sup>	✓ <sup>5</sup>	✓ <sup>5</sup>
<b>Competitions</b>			
Line and spearfishing	X	P <sup>8</sup>	P
Other (non-extractive)	P	P	P
<b>Other Activities</b>			
Aquaculture	X	P <sup>1</sup>	✓ <sup>1</sup>
Anchoring	✓ <sup>6</sup>	✓	✓
Organised sporting or other activity	P	P	P
Research	P	P	P
<b>Commercial Tourist Activities</b>			
Commercial tour operators (non-extractive)	P	P	P
Charter fishing	P	P <sup>1</sup>	P
<b>Commercial Fishing</b>			
Fish and prawn trawling	X	X	✓ <sup>7</sup>
Beach hauling/purse seine/lift net	X	X <sup>5</sup>	✓
Line fishing	X	✓ <sup>8</sup>	✓
Fish and lobster trapping	X	✓ <sup>8</sup>	✓
Hand gathering	X	✓ <sup>8</sup>	✓
Longline/setline/dropline	X	X	X
Estuary prawn netting	X	X <sup>7</sup>	✓
Estuary - mesh and haul netting	X	X	✓ <sup>10</sup>
Crab and eel trapping	X	✓ <sup>8</sup>	✓





Note the yellow area marks the Habitat Protection Zone for the Karuah River and its headwaters, includes Limeburners Creek and Deep Creek. The zone commences at the crossing of the Pacific Highway over the Karuah River.

A hard rock quarry is **not** a suitable land use alongside these creeks, no matter how many conditions are put in place, or how deep the sediment dams are excavated. The existing and predicted climate change impacts of severe weather events means that sudden storms will cause overflow events at the Deep Creek quarry site that will be impossible to predict and prevent.

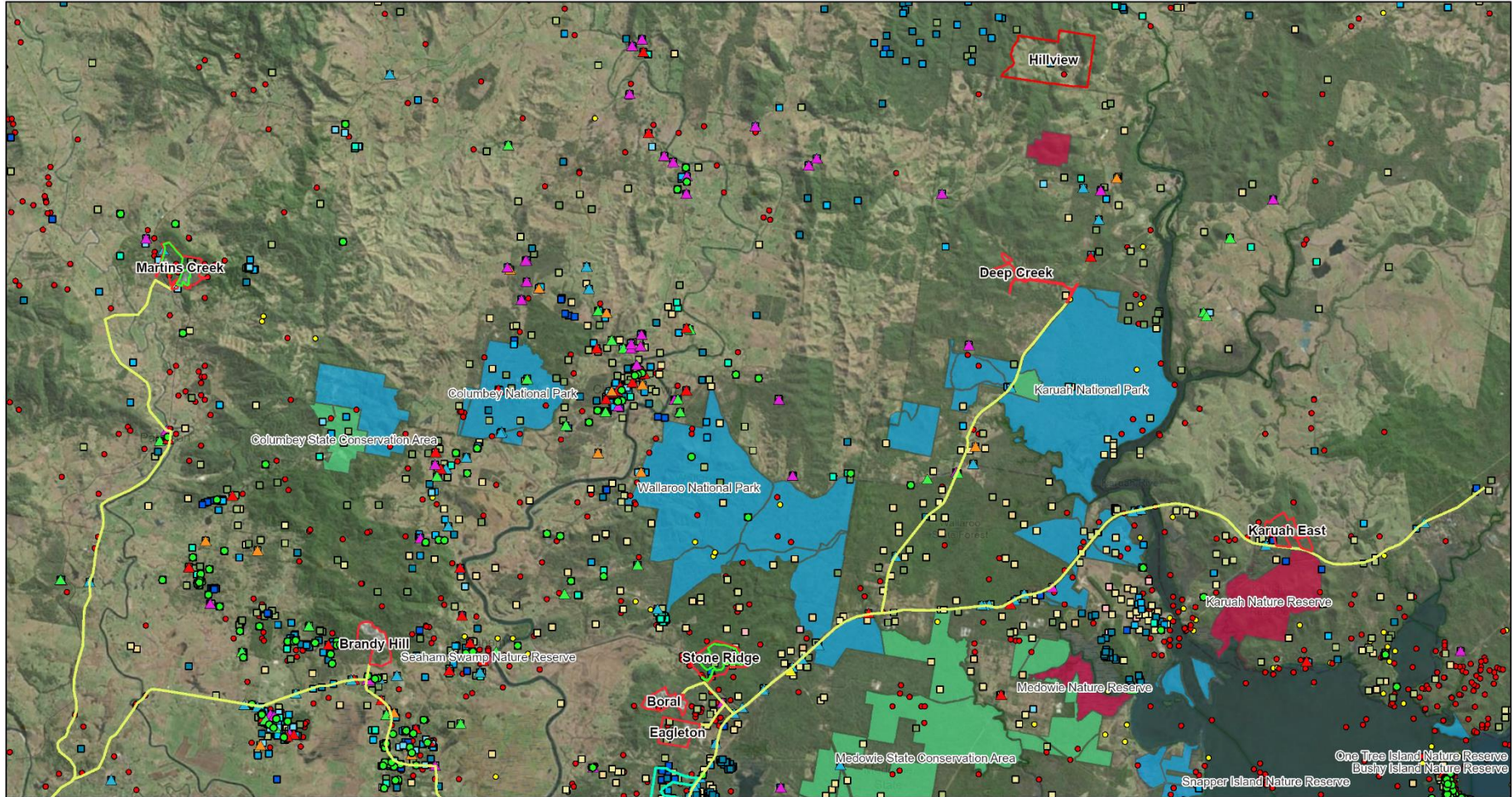
### ***KKEPS Data mapping and Connectivity***

The following maps were generated using the KKEPS data viewer. Note the shapes and colours are explained by the key at the bottom of the figure. Figure 1 data includes: Port Stephens Koala Hospital (PSKH) rescues and sightings for various reasons shown as different coloured triangles, BioNet data for Endangered and Vulnerable species, NPWS estate, quarry sites and haulage routes.



# Koala Data

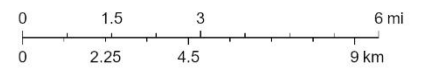
Figure 1



19/12/2023, 14:27:46

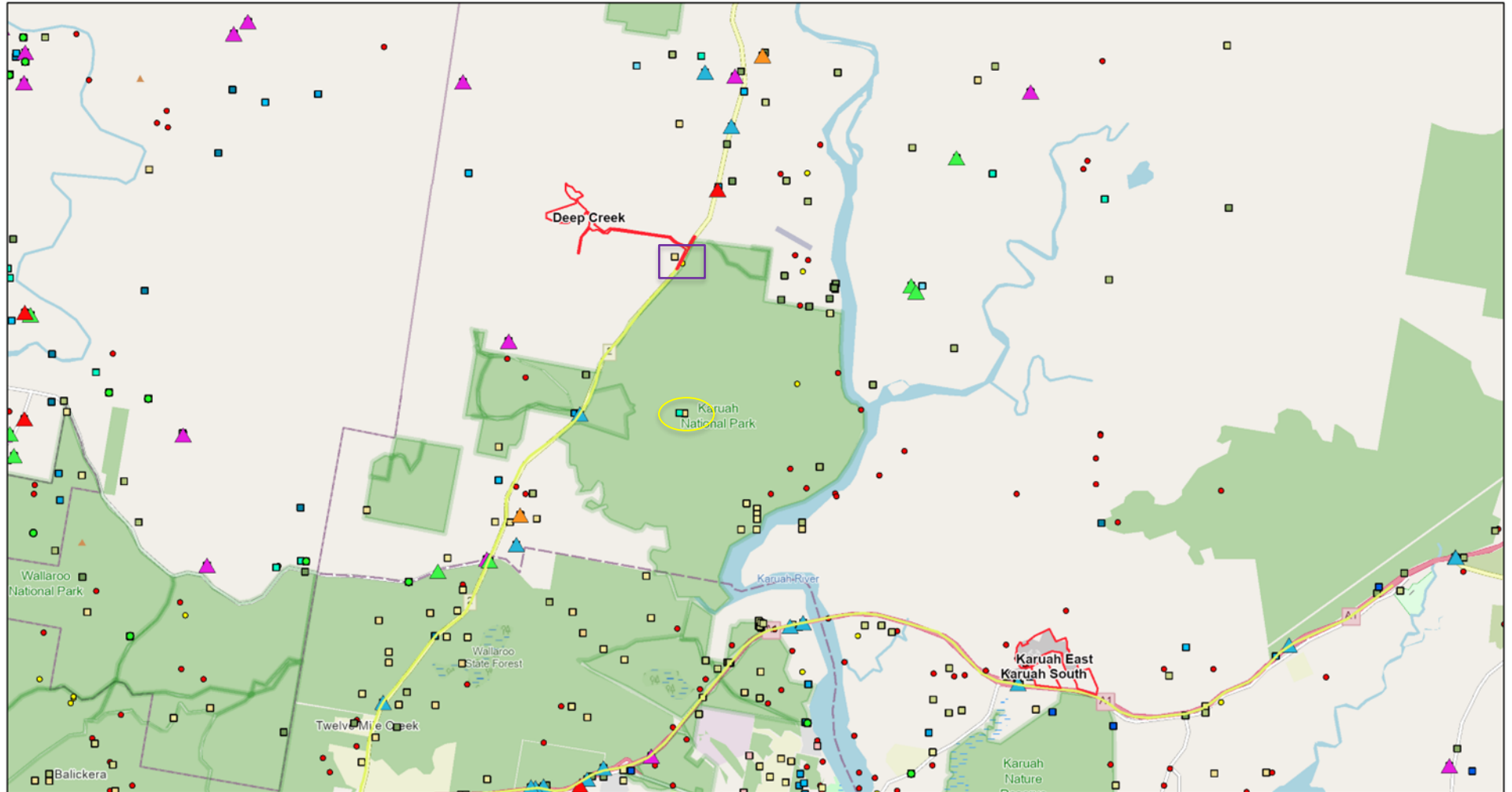
- Hillview Mine
- Quarry Locations - Rock
- Project Area
- Disturbance Area
- Quarry Haulage Routes
- Kings Hill Development
- All Koala Sightings 1995 - 2023 (updated Feb 2023)
- ▲ All Koala Rescues 1993-2023 (updated July 2023)
- ▲ Unsuitable Environment
- ▲ Motor Vehicle
- ▲ Other
- ▲ Disease
- ▲ Dog
- ▲ Fire
- ▲ Koala Species Sightings
- pre 1960
- 2017
- 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2019
- 2018
- 2006
- 2005
- 2004
- 2003
- 2002
- 2001
- 2000
- 1999
- 1998
- 1997
- 1996
- 2007
- 2006
- 2005
- 1995
- 1994
- 1993
- 1992
- 1991
- 1990
- 1989
- 1988
- 1987
- 1986
- 1996
- 1995
- 1994
- 1993
- 1984
- 1983
- 1982
- 1981
- 1980
- 1979
- 1978
- 1977
- 1976
- 1975
- 1974
- 1973
- 1972
- 1971
- 1970
- 1969
- 1968
- 1967
- 1966
- 1965
- 1964
- 1963
- 1962
- 1961
- 1960
- BioNet Data Vulnerable Species
- BioNet Data Endangered Species
- NPWS Estate - SEED Portal
- NATURE RESERVE
- NATIONAL PARK
- STATE CONSERVATION AREA

1:146,118



Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri

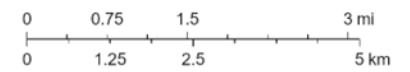
Koala Data Figure 2



09/12/2023, 11:36:39

1:84,748

- Quarry Locations - Rock
  - Project Area
  - Quarry Haulage Routes
  - All Koala Sightings 1995 - 2023 (updated Feb 2023)
  - All Koala Rescues 1993-2023 (updated July 2023)
  - Unsuitable Environment
  - Motor Vehicle
  - Other
  - Disease
  - Dog
  - Koala Species Sightings pre 1960
- |      |      |      |      |      |      |
|------|------|------|------|------|------|
| 2023 | 2012 | 2001 | 1990 | 1979 | 1968 |
| 2022 | 2011 | 2000 | 1989 | 1978 | 1967 |
| 2021 | 2010 | 1999 | 1988 | 1977 | 1966 |
| 2020 | 2009 | 1998 | 1987 | 1976 | 1965 |
| 2019 | 2008 | 1997 | 1986 | 1975 | 1964 |
| 2018 | 2007 | 1996 | 1985 | 1974 | 1963 |
| 2017 | 2006 | 1995 | 1984 | 1973 | 1962 |
| 2016 | 2005 | 1994 | 1983 | 1972 | 1961 |
| 2015 | 2004 | 1993 | 1982 | 1971 | 1960 |
| 2014 | 2003 | 1992 | 1981 | 1970 |      |
| 2013 | 2002 | 1991 | 1980 | 1969 |      |
- Bolliet Data Vulnerable Species
  - Bolliet Data Endangered Species



Map data © OpenStreetMap contributors, Microsoft, Facebook, Inc. and its affiliates, Esri Community Maps contributors, Map layer by Esri



Not all quarries and haulage routes are marked in Figure 1, but the yellow haulage routes connect (the Pacific Highway A1 and Seaham Rd intersect slightly out of view to the south at Raymond Terrace). The haulage route from Deep Creek is of significance as it cuts through Karuah National Park and Wallaroo State Forest.

The bright purple triangles in figures 1 and 2 show rescues of diseased koalas and includes rescue to the North East, North West and South West of the proposed Deep Creek quarry. In most cases this will be due to Chlamydia as nearly all our koalas have Chlamydia lying dormant in their systems all the time they're feeling safe. Stress from human activity, particularly noise and loss of habitat, impacts their immune systems and brings on the symptoms of chlamydia affecting their eyes and urogenital tract. Without timely antibiotic treatment they will become blind, infertile and die. In short, there is a correlation between what we do and whether koalas can pull back from the brink of extinction.

Figure 2 is a more detailed view of the same data but without satellite imagery. Note the yellow ringed adjacent koala records in Karuah National Park are dated 1974 and 2023 (50 years providing easy evidence of generational persistence). Inside the purple triangle are two records of a koala and a swift parrot near the proposed entrance of Deep Creek quarry.

There are no rescues and very few endangered and vulnerable species recorded near Deep Creek. This cannot be taken to mean that species are not present as records only exist where people sight and record them. The current data shows that the main clusters are around the towns of Seaham, Brandy Hill, Clarence Town and Karuah where traffic is increasing along with population growth. This brings koalas into direct contact with humans resulting in records being created.

It is usual that there are less sightings and rescues where wildlife is away from urban areas and much less likely to come into harm's way, such as in fairly large connected areas of native forests. Wildlife at Deep Creek has been enjoying a relatively undisturbed, safe existence.

If the quarry is approved, this safe existence will soon change with up to 50 heavily laden trucks per hour travelling along the entry road and Bucketts Way in one direction with empty trucks returning, adding to the combined traffic. The quarry traffic will effectively divide the core habitat.

Koalas are said to be nocturnal, but they're also crepuscular – meaning they are most active from dusk to dawn. If disturbed, however, they will move away from noise even in daylight hours. Noise is a major disruption to koala breeding and survival as they need their vocal calls to carry long distances if they are to find mates, avoid fights with other males for their territories, and to allow young to disperse safely by avoiding adults, which makes quiet rural areas so beneficial to their survival. The depth and resonance of the call advises other koalas of many attributes of the owner.

Sequential clearing of development sites, as a means to protect koalas, underlines a fundamental lack of understanding of the natural instincts of koalas and the impact of displacement. They will move onto or attempt to cross roads and directly into the path of a fatal impact, or across open ground into the path of dogs, and/or become sick.

Hugh Finn and Nahiid Stephens from Murdoch University did a paper on land clearing as animal welfare issue in 2017: Finn, H.C. and Stephens, N.S. (2017) The invisible harm: land clearing is an issue of animal welfare. *Wildlife Research*, 44 (5). pp. 377-391. [CSIRO PUBLISHING | Wildlife Research](#) From the abstract: We argue that the harm that land clearing causes to animals ought to be identified and evaluated in decision-making relating to land clearing and consider the following three propositions in support: (1) land clearing causes deaths that are physically painful and psychologically distressing because of their traumatic and debilitating nature; (2) land clearing causes physical injuries, other pathological conditions, pain and psychological distress over a prolonged period as animals attempt to survive in the cleared environment or in the environments

they are displaced to; and (3) on the basis of current clearing rates, more than 50 million mammals, birds and reptiles are likely to be killed annually because of land clearing in Queensland and New South Wales. The scientific consensus about the harm caused by land clearing means that decisions to allow land clearing are decisions to allow most of the animals present to be killed and, as such, frameworks for decision-making ought to include proper evaluation of the harm to be imposed.

The 2020 Port Stephens Koala Population Study Report prepared by OWAD Environment in collaboration with WildDNA Federation University of Australia, found that Port Stephens Koalas are already genetically different on each side of the Pacific Highway, where koalas struggle to cross. We must protect the connectivity of our koalas, as their genetic diversity may hold the key to their adaptability to climate change. Deep Creek is part of the Barrington to Hawkesbury Climate Corridors that may provide species with climate refugia into the future. Other connectivity modelling has also been ignored because the approval process seems to rely on only assessing one small piece of land at a time, even though consideration of cumulative and combined impacts is also policy.

The constant traffic along the Bucketts Way resulting from proposed quarry operations, and adding to local traffic, will help to sever any remaining connectivity. There are no proposed mitigation measures for road safety in the quarry proposal except for on site. The quarry's proposed road maintenance offering will not be sufficient to pay for any underpasses or fauna fencing to be installed. It may not be sufficient to remedy the damage caused by heavy trucks. There is no remaining funding for road mitigation works within the Koala Strategy funding.

The community and wildlife will be left to suffer much heavier traffic resulting in more dangerous roads in worse condition should the quarry be approved.

### **Ecological survey and report conclusions**

BioLink was employed to do additional surveys and reported that "Koala activity in the area is at low use/transient movement levels rather than use by individuals with established home range areas. No evidence of Koala breeding was found within the proposed disturbance area".

Yes, koalas are transient – they move through their territory according to the seasons and availability of palatable new growth and flowers, not over-browsing but conserving access to food for their next visit, especially if they are young/elderly who have been forced into occupying lesser habitat. Koalas also have larger home territories in less preferred habitat. Both possible scenarios challenge the conclusion that koalas at Deep Creek are transient.

Koalas do have home ranges (or territories), that overlap each other allowing social contact. How can a quick survey conclude koalas are not in their home range? Apparently by interpreting the volume of scratches on a few of the trees – approximately one tree per survey site using the SAT technique. This technique stops investigating if scat is found. The BioLink report said it was difficult to be certain if the scat found was possum or koala, so some was simply assumed to be koala. The scat was not collected for DNA analyses. These surveys may have coincided with or followed the very heavy continuous rain events following the 2019-2020 black summer fires. Rain quickly deteriorates the scat. The multiple surveys undertaken at Kings Hill showed how important multiple survey types over various periods are important to gain a more reliable understanding of the bigger picture.

How can quick and limited surveys gather evidence of breeding? Will it identify joeys being hidden in the mother's pouch or on her belly, or a joey who is hiding in a cluster of nearby leaves? Will it result in locating a tiny spill of pap the mother is using to establish the gut flora of her joey so that it can gradually start eating leaves beginning the weaning process? Unlikely! More specialist surveys such as scat/pap sniffer dogs would be needed to gather this sort of information.

I do not believe that this often-expressed conclusion by Biolink that the koalas are transient and not breeding on site (which was also used to approve the Brandy Hill quarry and found in the Stone Ridge reports) is sound. It is a biased conclusion for a report that has been commissioned by the developer to support the proposal.

The Koala and New Holland Mouse (pookila) were both found in the proposed pit location by Biolink. The entire mainland Australian population of pookila has been estimated to be less than 10,000 individuals. 16 were trapped indicating a likely significant population of 1000. Having found significant numbers, the report conveniently assumes that the Menkhorst et al (2008) estimates were not correct. This is an ill-advised conclusion when the species listing advice says on p 9 “surveys undertaken since 2006 have found that a number of populations have become extinct, making it likely that the species’ distribution is actually smaller than those estimates.” [Listing advice for pseudomys novaehollandiae \(environment.gov.au\)](#)

The BioLink report states on p 15 that “New Holland Mice are social animals that live in burrows (Kemper 1980; Lazenby *et al.* 2008), and because of this the species arguably requires greater consideration than may be afforded other larger and more widely distributed species. Contrary to statements in the originally submitted BDAR, neither are NHM a highly mobile species, nor do they appear to be uniformly distributed in areas of otherwise suitable habitat.” Despite this view, p 16 supports the relocation, or translocation of New Holland Mice because there are so many of them on site where the quarry pit is to be situated. So, the conclusion is that 10% of an endangered population doesn’t really matter?! The pookila is one of just 21 mammals included in the 2022-2032 Threatened Species Action Plan. [2022-2032 Threatened Species Action Plan \(dcceew.gov.au\)](#).

This BioLink suggestion was taken up in the Development Consent offered to IPC for consideration as Biodiversity Management Plan B48 d) i as the New Holland Mouse Relocation Plan. This is not appropriate for a Vulnerable species where the Commonwealth priority action is to conserve its habitat – and to protect the species [New Holland Mouse - DCCEEW](#). The pookila (NHM) may not survive relocation or translocation.

Even the well-researched koala does not often survive translocation and a relocated male in Victoria travelled over 40km to return to his home territory. A recent CSIRO publication states “Current translocation policies lack an appropriate spatial framework to guide conservation actions and this could lead to unexpected or undesirable outcomes with the potential to hinder population recovery.” [CSIRO PUBLISHING | Wildlife Research](#).

Swift parrots were not located but is now listed as Critically Endangered. This migratory bird, that breeds only in Tasmania, is recorded near the entrance to the Deep Creek Quarry and in nearby Karuah National Park. The report concluded that it may browse on the quarry site. Its habitat should be supported; not by quarrying.

Other species of gliders, bats and birds were also concluded to be not breeding on site, when they may be. The Vulnerable Green and Golden Bell Frog is also recorded nearby.

The limited surveys conducted are likely to be underestimating the biodiversity that will be disrupted if the quarry is approved. The BioLink report’s recommendations may not be appropriate as management options for Endangered and Vulnerable species. Dr Phillips’ support for a translocation of the Emigrant Creek koala population to allow the Pacific Highway upgrade near Ballina, initially seemed to have a good result, but was ultimately quite unsuccessful with 80% not surviving.

Relocation or Translocation are merely justifications for destroying precious habitat. The translocation of koalas remains a complex and risky process that requires careful consideration of the risks and benefits. Trying to relocate or translocate the much lesser understood Pookila may not be successful.

Some of the records included on KKEPS mapping may have only become available through BioNet as recently as 16/9/23 following media reports that data for the last four years had not been loaded <https://www.abc.net.au/news/2023-09-04/nsw-bionet-missing-four-years-wildlife-recue-data-102805330>. 400,000 records were urgently uploaded in September 2023. Some of the 'missing' koala records from Port Stephens went back as far as 2012.

### ***Biodiversity impacts***

While it is clear that the Stewardship site will be between 235-360 hectares at two different sites that remain unclear to me from the IPC documents and others previewed, the total hectares to be cleared for the quarry and its associated works cannot be found in the IPC documents. This seems to be a very large oversight that the IPC should seek to rectify.

Are the Deep Creek Quarry crushers and loading areas to be enclosed to prevent noise and dust pollution? If not, Edge Effects will have an ongoing impact on more of the surrounding operations area, not just in the disturbance area for the pit, the roadworks, creek crossing, dams, buildings, cables and other works required.

The three factors affecting edges can be summarized Ref [Edge effects - Wikipedia](#):

- Abiotic effect—Changes in the environmental conditions that result from the proximity to a structurally dissimilar matrix
- Direct biological effects—Changes in species abundance and distribution caused directly by physical conditions near the edge
- Indirect biological effects which involve changes in species interactions such as predation, brood parasitism, competition, herbivory, and biotic pollination and seed dispersal.

Dust is of particular concern as it covers nearby vegetation affecting its growth by inhibiting chlorophyll production, and is breathed in by koalas affecting their lungs, and ingested on leaf affecting their teeth wear and digestion efficiency.

If approval is given, there is an obvious need to monitor/survey for koalas, pookila and gliders, swift parrots, etc on an ongoing basis. Motor vehicle hits should be monitored with a condition for an independent review if they occur. But how will this be enforced? Any repercussions will mean incidents are less likely to be reported.

As this area was not affected by 2019-20 fires, the surviving fauna in this area is important to repopulate surrounding devastated areas. Plants will grow back but not necessarily in a healthy way with over-germination of certain species that can wrongly dominate the landscape. First Nations peoples regular cool burn practices prevented wildfires and encouraged healthy country while decreasing the possibility of wildfires. Cultural burn techniques should be considered for any defined stewardship areas.

Biodiversity Offsets are known to be ineffective – both the NSW Audit enquiry into the Effectiveness in August 2022 [Effectiveness of the Biodiversity Offsets Scheme | Audit Office of New South Wales \(nsw.gov.au\)](#) and Biodiversity Conservation Act review report by Dr Henry in August 2023 concluded this. [Statutory review of the Biodiversity Conservation Act 2016 | NSW Environment and Heritage](#). These policies are not halting the trajectory towards extinction of species. In Australia, more than 1,700 species and ecological communities are known to be threatened and at risk of extinction. Decisions must be made to halt the destruction of biodiversity wherever possible. Deep Creek is not essential and should be refused.

Proposing many Conditions of Consent are not the answer. Quarries submit Modification requests that ignore IPC conditions e.g. Karuah East Quarry had Modification 10 was approved in May, the

Cabbage Tree Rd Sand Quarry Modification 3 SSD-6125-Mod 3 seeks to extend the extraction area into the agreed Stewardship area. There are many more examples, that the Panel may already be aware of, that are undermining the IPC processes trying to protect our Environment.

We do not agree that the Department has rightly weighted the significance of the resource and the wider socio-economic benefits against the cumulative and combined impacts of hard rock quarries in the Port Stephens/Mid Coast LGAs. The geology of the Newcastle area shows the availability of hard rock is widespread [Newcastle 1:250,000 Geological Map \(nsw.gov.au\)](https://www.nsw.gov.au/industry/geology/newcastle-1-250-000-geological-map) . There is not sufficient justification to impact biodiversity by the approval of the quarry at Deep Creek.

### ***Climate Change***

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.

Ref NSW EPA, NSW State of Environment: Climate Change: The effects of climate change on the people and the environment of NSW are expected to become greater as warming continues, accessed via <https://www.soe.epa.nsw.gov.au/all-themes/climate-and-air/climate-change#environmental-impacts-of-climate-change-status-and-trends>

### ***The environmental goals of the Hunter Regional Plan***

One of the specific priorities in the Hunter Regional Plan which covers the local government areas (LGAs) of Dungog and Port Stephens, and thus includes the location of the proposed quarry, is to support the NSW Koala Strategy.

NSW DPE. (Dec 2022). Hunter Regional Plan 2041, Hinterland District, Planning Priority 3: Support the NSW Koala Strategy, p 132. <https://www.planning.nsw.gov.au/plans-for-your-area/regional-plans/hunter-regional-plan-2041>

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.

NSW Government (2023) NSW Koala Strategy, accessed via <https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/programs-legislation-and-framework/nsw-koala-strategy>

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.”



## **Conclusion**

Koala Koalition EcoNetwork Port Stephens strongly requests that the IPC thoroughly investigates and considers the Cumulative and Combined Impacts of the many existing and proposed quarries in Port Stephens and MidCoast LGAs, prior to accepting DPE recommendations to approve Deep Creek Quarry.

It is of serious concern to all rural communities that developments may gain approval that will have significant impacts on biodiversity and their own environment, their livelihoods, mental health and enjoyment of their own properties, on social amenity, road safety, collection of clean drinking water from rainfall, and critically on their health and wellbeing through stress caused by noise, dust and air pollution, all while making very little economic contribution locally.

We do not agree that the Department has correctly weighted the “significance” of the resource and the wider socio-economic benefits against the cumulative and combined impacts of hard rock quarries in the Port Stephens/Mid Coast LGAs.

Deep Creek Quarry will have significant impacts on Biodiversity, particularly the koala and pookila. Decisions must be made to halt the destruction of Biodiversity wherever possible. Deep Creek is not essential and should be refused.

This proposal is not in the public interest, is not in the interest of biodiversity and the survival of endangered and vulnerable species, and not in the interest of the blue water wonderland of Port Stephens waterways

**We recommend this proposal should be refused.**