File No: NTH10/00182
Your Ref: D14/13062, T6-14-122, LA16289, LA20144

The General Manager
Kempsey Shire Council
PO Box 3078
WEST KEMPSEY NSW 2440

Attention: Rachael Jeffrey

Dear Sir

Development Application T6-14-122. Response to Submissions Extractive Industry. Lot 1324 DP 785874 and Lot 323 DP 855616, Tea Tree Lane, Belmore River.

I refer to your letter of 1 June 2015 requesting comments from Roads and Maritime Services on the Response to Submissions for the proposed development.

Roles and Responsibilities

The key interests for Roads and Maritime are the safety and efficiency of the road network, traffic management, the integrity of infrastructure assets and the integration of land use and transport.

In accordance with Clause 16 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*, Roads and Maritime is given the opportunity to review and provide comment on the subject development application.

Roads and Maritime Response

Roads and Maritime has reviewed the Response to Submissions report and found that points 3 and 5 of our letter dated 22 August 2014 (copy attached) have not been addressed. Roads and Maritime would request that Council consider the following when compiling the conditions of consent:

1. The Traffic Impact Assessment (TIA) dated September 2013 and included in Appendix H of the EIS has provided a number of recommendations that Council may wish to implement to address the traffic related impacts of the proposed development.

2. An inspection undertaken by Roads and Maritime in August 2014 identified that the Basic Right turn (BAR) and basic left-turn (BAL) treatments recommended by the TIA at the Belmore River Road and Access Road intersection are not currently in place. The narrow bridge on Bellmore River Road and adjacent water courses may make it difficult to implement such treatments.

Council may wish to consider requiring appropriate signage and ongoing vegetation management to improve visibility and site lines at the intersection. The intersection should be sealed to an appropriate distance along the access road to minimise the tracking of material onto the public road.

3. To improve safety for vehicles turning into Bellmore Road the line marking at the South West Rocks Road and Bellmore River Road intersection could be updated to a channelized right-turn (CHR-S) treatment as per current warrants provided in Figure 4.9 of the *Austroads Guide to Road Design Part 4A.*

4. It is suggested that Council condition the Draft Operational Management Plan outlined in Section 4 of the EIS to be amended to address the following matters under a heading for Traffic and Transport Management;
    a. A Code of Conduct for heavy vehicle operators, staff and contractors
    b. An induction procedure for the Code of Conduct
    c. A map of the approved haulage route/s highlighting considerations for;
        i. Residential areas
        ii. School zones
        iii. Known safety issues, including; narrow bridges, concealed driveways, etc
    d. A complaints handling and resolution procedure

5. Any works required on a classified road should be designed and constructed in accordance with the current Austroads Guidelines, Australian Standards and RMS Supplements.

Upon determination of the application, it would be appreciated if Council could forward a copy of the Notice of Determination for our records. If you have any further enquiries regarding the above comments please do not hesitate to contact Liz Smith, Manager Land Use Assessment on (02) 6640 1362 or via email at: development.northern@rms.nsw.gov.au

Yours faithfully

19 June 2015
for Monica Sirol
Network & Safety Manager, Northern Region

Transport
Roads & Maritime
Services

File No: NTH10/00182; CR2014/004022
Your Ref: D14/13062; T6-14-122; LA16289; LA20144; EF:KMP

The General Manager
Kempsey Shire Council
PO Box 3078
WEST KEMPSEY NSW 2440

Attn: Ms Erin Fuller – Development Assessment

Dear Ms Fuller,

Designated Development Application T6-14-122 for Extractive Industry (Sand) – Lots 1324 DP 758874 & Lot 323 DP 855616 Tea Tree Lane, Belmore River

I refer to your letter of 30 July 2014 regarding the abovementioned development application referred to Roads and Maritime Services for consideration.

Roles & Responsibilities

The key interests for Roads and Maritime are the safety and efficiency of the road network, traffic management, the integrity of infrastructure assets and the integration of land use and transport.

Kempsey Shire Council is the 'Roads Authority' for Tea Tree Road and all public roads in the subject area. Roads and Maritime is required to provide concurrence to works on a classified road under Section 138 of the *Roads Act 1993*.

In accordance with *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* Clause 16(3), Roads and Maritime is given the opportunity to review and provide comment on the subject development application.

Roads and Maritime Response

Roads and Maritime has undertaken a review of the referred Environmental Impact Statement (EIS) and provides the following comments to assist Council in making a determination;

1. The Traffic Impact Assessment (TIA) dated September 2013 and included in Appendix H of the EIS has provided a number of recommendations that Council may wish to implement to address the traffic related impacts of the proposed development.

2. A recent inspection undertaken by Roads and Maritime in August 2014 identified that the Basic Right turn (BAR) and basic left-turn (BAL) treatments recommended by the TIA at the Belmore River Road and Access Road intersection are not currently in place. The narrow bridge on Bellmore River Road and adjacent water courses may make it difficult to implement such treatments.

Council may wish to consider requiring appropriate signage and ongoing vegetation management to improve visibility site lines at the intersection. The intersection should be sealed to an appropriate distance along the access road to minimise the tracking of material onto the public road.

3. The TIA states that a road safety audit was undertaken for the TIA and that the primary haul route complies with the RMS and Austroads Standards. It should be noted the intersection treatment at South West Rocks Road and Bellmore River Road is line marked to a superseded standard.

   Council may wish to consider the existing traffic conditions at this intersection and the warrants provided in Figure 4.9 of the *Austroads Guide to Road Design Part 4A* to determine whether a channelized right-turn (CHR-S) treatment is needed to improve safety for vehicles turning into Bellmore Road.

4. It is likely that the materials extracted by the subject operation may require delivery to regional centres outside of the Kempsey LGA. The most direct route to the Pacific Highway will be via Smithtown to the northern interchange of the Kempsey Bypass. Council may wish to consider any likely impact upon residential areas and school zones along this route.

5. It is suggested that Council consider requiring that the Draft Operational Management Plan outlined in Section 4 of the EIS to be amended to address the following matters under a heading for Traffic and Transport Management;
   a. A Code of Conduct for heavy vehicle operators, staff and contractors
   b. An induction procedure addressing the adopted Code of Conduct
   c. A map of the approved haulage route/s highlighting considerations for;
      i. Residential areas
      ii. School zones
      iii. Known safety issues, including; narrow bridges, concealed driveways, etc
   d. A complaints handling and resolution procedure

6. Any works required on a classified road should be designed and constructed in accordance with the current Austroads Guidelines, Australian Standards and RMS Supplements.

Advice to the Consent Authority

Upon determination of the application, it would be appreciated if Council could forward a copy of the Notice of Determination for our records. If you have any further enquiries regarding the above comments please do not hesitate to contact Matt Adams on 6640 1362 or email development.northern@rms.nsw.gov.au

Yours sincerely

22 August 2014

for Monica Sirol
Network & Safety Manager, Northern Region

NSW GOVERNMENT | Office of Environment & Heritage

Our Ref: DOC15/272880
Your Ref: Belmore River Sand Quarry

Mr David Rawlings
General Manager
Kempsey Shire Council
PO Box 3078
West Kempsey NSW 2440

Attention: Ms Rachael Jeffrey

Dear Mr Rawlings

Re: Impact of the Belmore River Sand Quarry on Biodiversity

Thank you for your email dated 21 July 2015 regarding ongoing concerns of the proposed Belmore River Sand Quarry and its impact on the threatened Brush-tailed Phascogales that occur on site. I appreciate the opportunity to provide input.

The Office of Environment and Heritage (OEH) has statutory responsibilities relating to biodiversity (including threatened species, populations, ecological communities, or their habitats), Aboriginal and historic heritage, National Parks and Wildlife Service estate, flooding and estuary management. Matters relating to noise, air and water quality and any licensing requirements under the *Protection of the Environment Operations Act 1997* should be addressed separately to the Environment Protection Authority because that authority is now independent of us.

We have reviewed the documents supplied in response to a previous OEH submission on this matter, dated 17 June 2015. The OEH has identified a number of outstanding issues relating to Brush-tailed Phascogales and the offsets proposed. These matters are discussed in detail in **Attachment 1** to this letter. In summary, to progress this matter, the OEH recommends that the applicant should:

a) Determine the extent of the local population of Brush-tailed Phascogales, by using a combination of survey techniques. This information will be used to provide an adequate response to Section 5A (2) (a) of the Assessment of Significance (AoS). If a significant impact is likely, this triggers the need for a Species Impact Statement (SIS).
b) Determine the location, size and density of hollow bearing trees present across the site and in proximate areas. This information can then be used to ascertain the importance of habitat to be removed, modified, fragmented or isolated to the long-term survival of Brush-tailed Phascogales in the locality, in response to Section 5A (2) (d)(iii) of the AoS. Again, if a significant impact is likely, this triggers the need for a SIS.
c) Give consideration to retaining all hollow bearing trees *in situ*, and establishing the staggered clearing of quarry cells so as not to remove contiguous habitat.

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d) Utilise the BioBanking Assessment Methodology Calculator to determine an appropriate quantity of offset lands.
e) Use an appropriate mechanism to secure the offset (determined following application of the calculator) in perpetuity.
f) Consider utilising the BioBanking scheme as part of the proposed quarry operation. Information about BioBanking can be found at the following link - http://www.environment.nsw.gov.au/biobanking/

If you have any further questions about this issue, I can be contacted on 6659 8254 or at nicky.owner@environment.nsw.gov.au.

Yours sincerely

Owner 3 August 2015

NICKY OWNER
A/Senior Team Leader Planning, North East Region
Regional Operations

Contact officer: NICKY OWNER
6659 8254

Attachment 1: Detailed OEH Comments – Belmore River Sand Quarry

Threatened Species Assessment - Brush-tailed Phascogales

Insufficient detail on the extent of the local population

The OEH reiterates its view that insufficient information is known about the extent of the local population of Brush-tailed Phascogales to give proper consideration to Section 5A (2) (a) of the Assessment of Significance (AoS). Without this information, the OEH considers that Kempsey Shire Council, as the consent authority, is unable to conclude whether or not the quarry will adversely affect the life cycle of Brush-tailed Phascogales such that a viable local population of the species is likely to be placed at risk of extinction, and therefore, it cannot conclude whether the quarry will or will not have a significant impact on Brush-tailed Phascogales.

As stated within Soderquist and Rhind (2008), sparse densities, fluctuating reproductive success and the annual die off of males make the species highly vulnerable to local extinction. These facts, combined with the impact of the proposed removal of known habitat to facilitate the operation of the sand quarry will place the persistence of the local population of Brush-tailed Phascogales under increasing threat.

The term 'family group' was used instead of the correct term 'local population' in our previous advice on this matter, dated 17 June 2015. The term 'local population' is defined in the Threatened Species Assessment Guidelines (August 2007) as:

> *'The local population of resident fauna species comprises those individuals known or likely to occur in the study area, as well as any individuals occurring in adjoining areas (contiguous or otherwise) that are known or likely to utilise habitats in the study area.'*

Further to consideration of a 'local population' of Brush-tailed Phascogales, there appears to be an assumption within the ecological assessment, including the response provided by the applicant and dated 8 July 2015, that the site forms habitat for only one individual male Brush-tailed Phascogale and therefore, consideration of a local population is not warranted. This assumption appears to be based on the fact that only one male was captured; that Brush-tailed Phascogales are solitary, and that they have large (and in the case of females) exclusive home ranges.

It is stated in the OEH's threatened species profile for Brush-tailed Phascogales that females have exclusive territories of approximately 20 - 40 ha, while males have overlapping territories often greater than 100 ha. Further research expands on this knowledge and indicates that whilst female Brush-tailed Phascogales exclude unrelated females from their territories, the territories of close female relatives as well as other males, do partly overlap. The territories of males, although much larger than females overlap extensively with both females and other males. On the basis of this information, it is considered possible for the site to comprise the home range of both males and females. The density of occupation is unknown, but generally, where phascogales occur, their occurrence is usually sparse.

Furthermore, given the limited extent and timing of arboreal trapping and spotlighting across the site, in consideration of the sizeable home ranges of individuals and the knowledge that home ranges overlap, it is unlikely that the survey would have detected all individual Brush-tailed Phascogales that utilise the site over time. The capture of only one male does not mean that the site does not support additional individuals. Even though the site may not be continuously used by all individuals whose home range includes part or all of the subject site, it is probable that the site forms an important part of the home range of a (small) number of individuals. This is increasingly likely given the spatially limited extent of contiguous forest habitat, apparent following examination of aerial photography across the site and over proximate areas.

Additionally, it is stated within the response that *'the adult male dies after mating and would be expected to be dead already of natural causes'*. The inclusion of this statement in the ecologist's response in questioned, as its intent and meaning in the context of the response is unclear. Although it is true that the death of males does occur, this does not necessarily mean the local population is unviable. Rather, it is more likely that it is viable and therefore, if normal conditions existed and breeding was successful in the seasons precluding and following the death of the individual male detected on site, it is probable that one or more young dispersing animals now occupy the territory of the deceased male.

OEH Recommendation:

1. Determine the extent of the local population of Brush-tailed Phascogales, by using a combination of survey techniques, including (but not limited to) arboreal Elliott traps, stag watching, spotlighting and potentially, motion detecting cameras. The use of radio tracking may also be of value to assist in the determination of the approximate extent of home ranges. This information will be used to provide an adequate response to Section 5A (2) (a) of the AoS. If a significant impact is likely, this triggers the need for a Species Impact Statement (SIS).

Insufficient information on the importance of the habitat to be affected.

Section 5A (2) (d) (iii) of the AoS, as it relates to threatened species, requires an assessment of *'the importance of habitat to be removed, modified, fragmented or isolated to the long-term survival of the species'*... It is the view of the OEH that this fundamental question has not been answered. This is a critical question in relation to the Brush-tailed Phascogale and the quarry proposal given the species is highly vulnerable to local extinction. The removal of essential habitat features, such as hollows and foraging resources further increases their vulnerability to local extinction.

The landform of and adjacent to the subject site is predominantly a dry sclerophyll, heath and wetland complex. Although it is recognised that Phascogales will utilise heath and wetland areas for foraging, Brush-tailed Phascogales require trees that contain large hollows with small entrances for nesting and sleeping; resources that are not commonly found in heath or wetland communities, but which are apparently abundant on the subject site, but many of which will be removed to facilitate the quarrying activities proposed.

There is an absence of detail on the location, size and density of hollow-bearing trees, on both the subject site and proximate areas. The potential exists for hollow resources in the locality to be largely restricted to the subject site. If this is the case, their removal is highly likely to cause a local extinction.

To emphasise the potential impact of hollow-bearing tree removal on hollow-dependant fauna species, the loss of hollow-bearing trees has been listed as a 'key threatening process' on the schedules of the *Threatened Species Conservation Act 1995*.

OEH Recommendation:

2. Due to the central role that tree hollows play in the life cycle of phascogales it is of fundamental importance that the location, size and density of hollow bearing trees present across the site and in proximate areas is determined. This information can then be used to ascertain the importance of habitat to be removed, modified, fragmented or isolated to the long-term survival of Brush-tailed Phascogales in the locality, as required by Section 5A (2) (d) (iii) of the AoS. If a significant impact is likely, this triggers the need for a SIS.

Questionable effectiveness of the mitigation measures proposed

Even though only one quarry cell will be cleared in any one to two year cycle, any depletion of hollows in a particular area requires vast periods of time before adequate replacement occurs. The usefulness of the replacement of natural hollows with artificial hollow resources in proximate areas is

questionable. Firstly, there is never a guarantee that Brush-tailed Phascogales will use artificial nest boxes. There is also evidence to suggest that artificial nest boxes can degrade quickly when exposed to fluctuating climatic conditions, are susceptible to fire damage, are not as well insulated as natural hollows, and tend to provide ready access to predators such as goannas, due partly to their low installation height. Importantly also is the cost of establishing a nest box program, including the fact that a constant supply of nest boxes would need to be provided for at least 50 to 100 years before natural replacement of hollows begins.

There is also uncertainty around the ability to regenerate the site using those species which currently occur on site, as a result of the removal of the forest substrate to within one metre of ground water. This may limit the regeneration potential of trees in which hollows will develop and that are preferred by Brush-tailed Phascogales.

We also question the consistency of the offset proposed with the 13 principles for offsetting published by OEH. The OEH is of the view that the quantity of offset provided should be determined with the assistance of a suitable biometric tool, such as that provided within the BioBanking Assessment Methodology. Additionally, it is necessary for any offset provided to be protected and managed in perpetuity.

OEH Recommendations:

3. The applicant give consideration to retaining all hollow bearing trees *in situ*, as has been done in other locations where there are known populations of threatened arboreal fauna. As an example, the operator of a sand quarry in the Kyogle Local Government Area retained all hollow-bearing trees (including all soil out to the drip line of the canopy), given the known significance of the site to Squirrel Gliders. They also established the staggered clearing of quarry cells so as not to remove contiguous habitat.

4. Use of the BioBanking Assessment Methodology calculator to quantity the required offset.

5. Use of an appropriate mechanism to secure the offset in perpetuity.

Biobanking – An alternative approach

As an alternative approach to the recommendations made above, OEH suggests the applicant consider use of the Biodiversity Banking Scheme, known as BioBanking to progress the proposed quarry.

BioBanking is a biodiversity banking and offsets scheme that streamlines the threatened species assessment process for developers and improves overall biodiversity. BioBanking is a voluntary scheme with a consistent, scientific methodology which provides greater certainty during the development process.

Where a biobanking statement is granted for a development site, the consent authority must accept that the requirements for threatened species under section 79C of the *Environmental Planning and Assessment Act 1997* (EP&A Act) have been met. Also, a biobanking statement cannot be appealed in the Land and Environment Court.

OEH Recommendation:

6. The applicant is encouraged to examine the following link for more information about BioBanking - http://www.environment.nsw.gov.au/biobanking/

Reference:

Soderquist, T. and Rhind, S. (2008) in Strahan, R. (ed.) *The Mammals of Australia*. 3rd edition. pp105-107.

NSW GOVERNMENT | Office of Environment & Heritage

Your reference: DA14/13062, T6-14-122, LA20144, EF:KMP
Our reference: DOC14/277076
Contact: Ms Kelly Roche 02 66598288

Ms Erin Fuller
Kempsey Shire Council
PO BOX 3078
West Kempsey NSW 2440

By email: erin.fuller@kempsey.nsw.gov.au

Dear Ms Erin Fuller

Re: Proposed Sand Mine at Belmore River Road, McGuires Crossing
Lot 1324 DP 785874 and Lot 323 DP 855616

Thank you for your letter received 17 November 2014 regarding the above proposal requesting comments from the Office of Environment and Heritage (OEH). I appreciate the opportunity to provide input.

OEH has statutory responsibilities relating to biodiversity (including threatened species, populations, ecological communities, or their habitats), Aboriginal and historic heritage, National Parks and Wildlife Service (NPWS) estate, flooding and estuary management. Matters relating to noise, air and water quality and any licensing requirements under the *Protection of the Environment Operations Act 1997* should be addressed separately to the Environment Protection Authority because that authority is now independent of OEH.

OEH has reviewed the Environmental Impact Statement (EIS) supplied and advises that, although it has no concerns in relation to flooding or historic heritage, a number of issues are apparent with respect to the assessments for biodiversity, NPWS estate and Aboriginal cultural heritage. These issues are discussed in detail in **Attachment 1**.

In summary OEH recommends that prior to determination of the development application:

1. Further consideration should be given to the cumulative effects of biodiversity impacts associated with this and similar operations in the vicinity of the subject site.

2. A more realistic assessment of rehabilitation capacity should be prepared along with a suitably detailed rehabilitation plan that includes monitoring of revegetation more frequently that the annual timeframe that is currently proposed in the EIS, and which considers the need for pest control to ensure that the proposal does not contribute to the Key Threatening Process *Predation by the European Red Fox.*

3. It is necessary for the EIS to address the need for pest species and weed control programs, ensuring that efforts to control pests will be effectively co-ordinated with programs operating on adjoining lands, particularly within Hat Head National Park.

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4. Clarification should be provided regarding whether additional clearing is proposed to erect fencing around buffer zones, the type of fencing to be erected and the potential barrier to fauna movement arising from fencing.

5. Further consideration of likely impacts to Hat Head National Park is provided in the EIS and direct engagement between NPWS, the proponent and the consent authority is undertaken, as requested by NPWS, to ensure appropriate protections for NPWS estate are included in the EIS prior to its finalisation. These should include the adequacy of proposed impact mitigation such as buffer distances between park boundaries and the proposed operational area, weed and pest control programs, restrictions on park access, and bushfire management needs.

6. Additional and appropriate biodiversity assessment should be undertaken in accordance with the OEH threatened species survey and assessment guidelines to inform the EIS. Biodiversity assessment must include impacts through all stages of the proposal. It would be appropriate for the EIS to commit to implementation of a suitable biodiversity monitoring and adaptive management program for the life of the proposal.

7. All unavoidable direct and indirect impacts on biodiversity should be offset in accordance with the OEH offset principles.

8. The BioBanking Assessment Methodology should be used as a suitable metric to determine the quantum of offsets required to compensate for the impacts of the proposal.

9. The recommendations of the Aboriginal cultural heritage assessment report, all of which are supported by OEH, should be reflected in the EIS.

Should you require further information or clarification, or should Council be in possession of information that suggests that OEH's statutory interests may be affected, please contact Regional Biodiversity Conservation Officer, Ms Kelly Roche, on 02 6659 8288.

Yours sincerely

Dimitri Young 15 December 2014

DIMITRI YOUNG
Senior Team Leader Planning, North East Region
Regional Operations

Attachment 1 – Detailed OEH Comments – Sand Mine EIS – Belmore River

Biodiversity

Cumulative Impact Assessment

The Environmental Impact Statement (EIS) does not appear to have adequately considered cumulative impacts on biodiversity. OEH recommends that further consideration be given to the cumulative effects of biodiversity impacts associated with this and similar operations in the vicinity of the subject site.

Rehabilitation, Buffers and Pest Species

The EIS describes impacts to biodiversity that will result from the proposal as being insignificant and not noticeable as a result of the planned progressive revegetation of the site. The EIS proposes that the rehabilitation will be achieved within two to three years. This statement is not supported by OEH in that it is not considered possible to replace native vegetation with well-developed structural layers, habitat features such as tree hollows in a range of sizes, and with appropriate floristic diversity within this period of time. A more realistic assessment of rehabilitation capacity should be prepared and OEH suggests that a suitably detailed rehabilitation plan be submitted to the consent authority to assist with consideration of the capacity for adequate rehabilitation and revegetation to be achieved.

As part of any rehabilitation plan, OEH recommends that monitoring of revegetation be conducted more frequently that the annual timeframe that is currently proposed in the EIS.

Use of felled trees within a rehabilitation program may have value in providing potential habitat for small to medium sized mammals and reptiles, but it can also provide harbour for European Red Fox. OEH recommends that the rehabilitation program consider the need for pest control to ensure that the proposal does not contribute to the Key Threatening Process *Predation by the European Red Fox* listed under the NSW *Threatened Species Conservation Act 1995*. Further information is available in the Fox Threat Abatement Plan for NSW which available at http://www.environment.nsw.gov.au/resources/pestsweeds/RedfoxApproved.pdf.

To be effective, any pest species (including weeds) control program on the land would need to be developed and implemented so as to co-ordinate with any control programs on neighbouring land, particularly any programs run within Hat Head National Park.

The EIS refers to the fencing of buffer zones around the work area. It is often the case that vegetation clearing is carried out to facilitate fencing. The EIS does not clarify whether additional clearing is proposed to erect fencing to delineate buffer zones and/or property boundaries. The type of fencing is not described and the potential barrier to fauna movement arising from fencing is not evaluated. These matters require further clarification.

Impacts to Hat Head National Park

Potential impacts to Hat Head National Park require further consideration. Issues of concern to NPWS include the adequacy of buffers to the park boundaries, the potential for wind borne weeds that are likely to establish within the operational area (such as Whiskey Grass) to encroach into the park, the potential for boundary encroachments, and provisions for bushfire management access. OEH recommends that the proponent and consent authority meet with NPWS to discuss and resolve these concerns prior to finalising the EIS.

Habitat Assessment

The EIS states that 6.4 ha of vegetation described as Open Pink Bloodwood Forest will be directly impacted through sand extraction across that area. This vegetation appears to be of high conservation value in that it is part of a relatively intact landscape with low levels of disturbance, contains hollow-bearing trees, and features a diversity of flora species with well-developed structural layers.

The biodiversity assessment did not include a systematic (plot or transect based) survey of flora. The assessment of fauna was very limited and did not involve any field surveys that would have been appropriate to detect a range of threatened fauna species that are likely to be found at the site. The habitat feature assessment seemed minimal and appeared to rely on conducting a random meander survey to identify threatened species and form the basis of the biodiversity assessment.

The survey effort was limited to a single day, during daylight hours, which does not provide adequate opportunity for detection of the full suite of fauna that are likely to utilise habitat on the site. OEH considers that the EIS does not provide an accurate assessment of biodiversity as the survey design, timing, effort and techniques were not adequate to determine the likely presence or absence of threatened species.

In addition, the threatened species habitat assessment lacked relevant detail and sound justification for the conclusions reached regarding the extent and nature of likely impacts. For example, the statement that the site is not likely to support terrestrial fauna due to the presence of SEPP 14 Coastal Wetlands in the surrounding landscape is not supported. There are many threatened species that inhabit such environments and in fact prefer habitats adjacent to wetland areas, such as the Common Planigale (*Planigale maculata*).

The assessment of Koala presented in the EIS is confusing and does not clearly assess the habitat potential for Koala on the subject site. Reference is made in the EIS to survey methods and habitat evaluation using the criteria in relation to SEPP44 mapping, but it is not clear whether and to what extent this methodology was used to assess the potential for Koala to occur on the subject site. The timing and effort dedicated to Koala survey on the site or surrounding landscape is also not clear.

Based on the information presented, OEH does not support the conclusion that the proposal would not generate significant impacts to threatened species or their habitats. OEH recommends that additional and appropriate biodiversity assessment be undertaken to inform the EIS. The biodiversity assessment should be conducted in accordance with the OEH threatened species survey and assessment guidelines, which are available on the internet at:
http://www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm.

Information on threatened species that are likely to be found on the site is available by searching the OEH Threatened Species website, which provides useful profiles on threatened species and ecological communities: http://www.environment.nsw.gov.au/threatenedSpeciesApp/.

The EIS does not consider biodiversity management issues that have the potential to arise during operation of the proposal. For example, the threatened Green and Golden Bell Frog (*Litoria aurea*) is known to occur in wetland habitats in the vicinity of the land. There is the potential for this species to colonise disturbed areas during operation of the quarry, with the result that there may be negative impacts for this species. The EIS is required to consider the potential impacts to, and management of biodiversity at all stages of the proposal.

The EIS lacks any commitment to undertake a program of biodiversity monitoring to ensure that the condition and use of habitats on the land is not diminished as a result of the proposal. Should the proposal be approved, OEH recommends requirement of an appropriately resourced biodiversity monitoring program on the land to inform management of the biodiversity assets throughout the life of the project.

Biodiversity Offsets

The EIS states that no offset for biodiversity impacts is required, on the basis that impacts to threatened species are not significant. OEH recommends that all unavoidable direct and indirect impacts on biodiversity are offset in accordance with the OEH offset principles available at:
http://www.environment.nsw.gov.au/biodivoffsets/oehoffsetprincip.htm

OEH also recommends use of the BioBanking Assessment Methodology as a suitable metric to determine the quantum of offsets required to compensate for the impacts of the proposal prior to determination of the application by Council.

As stated previously above, OEH recommends further and more detailed assessment of likely impacts to biodiversity, including threatened species and their habitats, through application of appropriate biodiversity survey and assessment methods. The need to avoid, reduce or mitigate impacts, or for provision of biodiversity offsets should be re-evaluated once the impacts to biodiversity are better understood and have been quantified.

Aboriginal Cultural Heritage

OEH notes that an assessment of Aboriginal cultural heritage (ACH) has been undertaken as part of the EIS and is appended. However, the recommendations from that process are not reflected in the overarching environmental assessment documentation.

OEH supports the recommendations of the appended report and recommends they are reflected in the environmental assessment documentation.

NSW GOVERNMENT | Office of Environment & Heritage

Your reference: DA14/13062, T6-14-122, LA16289, LA20144, RJ:KMP
Our reference: DOC15/200069
Contact: Ms Marcy Mills 02 66598233

General Manager
Kempsey Shire Council
PO BOX 3078
West Kempsey NSW 2440

Attention: Ms Rachael Jeffrey

Dear Mr Rawlings

Re: Proposed Extractive Industry at Belmore River Road, McGuires Crossing
Lot 1324 DP 785874 and Lot 323 DP 855616

Thank you for your letter of 1 June 2015 seeking comment from the NSW Office of Environment and Heritage (OEH) on the proponent's response to submissions for the above proposal. I appreciate the opportunity to provide further input.

OEH has reviewed the proponent's response to OEH's previous submissions (letters dated 15 December 2014 and 29 April 2015). On the basis of this review, OEH provides the following advice relating to the statutory responsibilities of OEH, which include Aboriginal cultural heritage, historic heritage, biodiversity values including threatened flora and fauna, OEH Estate and potential impacts on flooding, coasts and estuaries:

1. Brush-tailed Phascogale

   OEH notes the additional biodiversity assessment by FloraFauna Consulting (May 2015) undertaken for the proposed development in accordance with OEH's threatened species survey and assessment guidelines.

   The results of this further assessment substantiate that the habitat within the study area is of high ecological value comprising a significant number of old growth or hollow-bearing trees with potential and known foraging and nesting/roosting/denning habitat for a number of threatened fauna species.

   The FloraFauna Consulting Report (May 2015) states that the proposed development is likely to result in a significant impact on biodiversity as it involves the complete removal of the habitat within the proposed development footprint over a staged period of time.

   The Assessment of Significance (AoS) for Brush-tailed Phascogale in the FloraFauna Consulting Report (May 2015) does not adequately characterise the local population of this threatened species in accordance with the AoS Guidelines. This is necessary before the questions regarding Brush-tailed Phascogale in the AoS can be appropriately answered. In the absence of further information regarding the local population of this threatened species, it is possible that the proposal may result in the extinction of a family group.

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OEH recommends that prior to the determination of the development application, additional work be undertaken by a suitably qualified and experienced field ecologist to identify the location and extent of family groups of Brush-tailed Phascogales across the quarry site, as well as in habitats beyond the confines of the quarry site to assess the full extent of territories that extend into neighbouring lands.

This information should then be used to determine an appropriate clearing, extraction and rehabilitation sequence so as to minimise the cumulative impact on any one family group of Brush-tailed Phascogales over the life span of the quarry. This knowledge and resulting extraction sequencing, combined with the proposed retention of hollow-bearing habitat trees has the highest likelihood for the persistence of Brush-tailed Phascogales across the quarry site and should be used to re-apply the AoS for this threatened species. This additional information and re-applied AoS should be submitted to Council for consideration. Alternatively, the proponent could seek a BioBanking Statement for the proposal and use the BioBanking Scheme to retire the necessary biodiversity credits to enable this biodiversity impact to occur.

2. Biodversity Offsets

OEH commends the proposal to amend the scope of the project to avoid some of the impacts on biodiversity in the areas identified as Cell 11 and Cell 12 and set aside these areas as a biodiversity offset, as documented in the FloraFauna Consulting Report (May 2015). However, as recommended in previous advice from OEH (letter dated 1 June 2015), all unavoidable direct and indirect impacts from the development on biodiversity should be offset in accordance with OEH's *Principles for the use of biodiversity offsets in NSW*. Further, OEH maintains that the BioBanking Assessment Methodology should be used as a suitable metric to determine the type and quantum of offsets required to compensate for the impacts of the proposal.

Based on the high ecological value of the habitat to be impacted, the proposed offset area does not satisfy OEH's offset principles. The proposed offset is significantly less than what would be required when calculated via the BioBanking Assessment Methodology resulting in a significant net loss in biodiversity from the subject site. In addition, the EIS does not identify the mechanism to be used for securing the offset in perpetuity.

OEH maintains that all unavoidable direct and indirect impacts from the development on biodiversity should be offset in accordance with OEH's offset principles. OEH recommends that this matter be resolved before Council determines the development application and is willing to assist Council and the proponent in determining and achieving the required biodiversity offsets.

3. Impacts on OEH Estate

Direct engagement should be undertaken between the National Parks and Wildlife Service (Macleay Area), the proponent and Council prior to determining the development application to ensure appropriate protection is afforded to adjoining NPWS estate, such as adequate buffer distances between park boundaries and the proposed operational area, fencing, weed and pest control programs, restrictions on park access, and bushfire management. NPWS has requested that the following matters be considered by Council prior to determining the development application:

a. Requiring vegetated buffers in the order of 50-100m in width between the proposal and adjacent wetlands and between the proposal and the National Park and excluding quarrying operations from these buffer areas. Vegetated buffers are essential impact mitigation measures for accepting indirect impacts associated with clearing and sand extraction operations. The proposal is at least 50m from wetlands and the National Park in the east, west and south, but the quarry footprint would need to be reduced in the north to achieve a minimum 50m buffer to the National Park. Vegetated buffer widths should be maximised wherever possible.

b. Requiring the management of the vegetated buffers as an environmental protection area with no residual development, ancillary development or storage of materials in the buffer or the National Park including, but not limited to:

   i. No dumping of removed trees, sand or topsoil in the buffer or the National Park

   ii. No storage of any other materials associated with the proposal in the buffer or the National Park

   iii. No locating fire trails, access points or water control structures in the buffer or the National Park.

   NPWS has advised that past experience with other sand mines in the locality has demonstrated that these activities have resulted in direct impacts on the National Park and it is essential that this proposal be stringently conditioned and monitored to ensure such impacts do not recur.

c. Requiring the preparation of a weed and pest management plan for the proposal. The plan should address weed and pest management within the quarry footprint, quarry access tracks and the vegetated buffers, and should include monitoring and reporting to Council at appropriate intervals to demonstrate successful implementation.

   NPWS has advised that other sand mines in the locality are sources of whiskey grass and giant paramatta grass which enter the National Park and require the expenditure of public funds to control. It is essential that this proposal be stringently conditioned and monitored to ensure such impacts are not exacerbated by this proposal.

d. Requiring the edge of the vegetated buffer to be fenced to clearly delineate the boundary between work areas and the buffer. Quarry workers should also be appropriately inducted regarding the protection of vegetated buffer areas, limits of the work area, the potential for Aboriginal cultural heritage to be unearthed during quarry operations and the procedures to be followed should unexpected Aboriginal cultural heritage be unearthed.

e. Requiring property boundary identification by a registered surveyor along common boundaries with the National Park, excluding wetland areas, with minimal surveying impact to vegetation along these boundaries to ensure that quarry operations and the appropriate width of the vegetated buffer are accurately established on the ground. The registered surveyor should contact the NPWS Macleay Area office prior to undertaking the survey.

f. Requiring that no vehicle access be provided into the National Park and prohibiting the use of Tea Tree Lane as access to the quarry.

4. Conditions of Consent

Following resolution of the issues set out in 1, 2 and 3 above, OEH recommends that conditions are imposed on any development consent issued for the proposal to address the following matters:

a. provision of adequate biodiversity offsets that are identified and secured in perpetuity in accordance with OEH's *Principles for the use of biodiversity offsets in NSW*;

b. implementation of a biodiversity monitoring and adaptive management program for high conservation value land retained within the study area (adjoining coastal wetland and any offset areas);

c. mitigation measures for vegetation and habitat removal as detailed in the FloraFauna Consulting Report (May 2015);

d. establishment of vegetated buffers 50-100m in width between the proposal and adjacent wetlands and between the proposal and the National Park and excluding quarrying operations from these buffer areas;

e. management of the vegetated buffers as an environmental protection area with no residual development, ancillary development or storage of materials in the buffer or the National Park;

f. provision of fencing for the edge of the vegetated buffers to clearly delineate the boundary between work areas and the buffers, whilst enabling fauna movement;

g. property boundary identification by a registered surveyor along common boundaries with the National Park, excluding wetland areas, with minimal surveying impact to vegetation along these boundaries to ensure that quarry operations and the appropriate width of the vegetated buffer are accurately established on the ground;

h. prohibition of vehicle access into the National Park and prohibition of the use of Tea Tree Lane for quarry operations;

i. implementation of nest box strategy as detailed in the FloraFauna Consulting Report (May 2015);

j. implementation of site rehabilitation plan incorporating the strategies and timeframes detailed in the FloraFauna Consulting Report (May 2015);

k. procedures for weed and fox control and bushfire management in consultation with National Parks and Wildlife Service (Macleay Area) including the preparation of a weed and pest management plan for the quarry footprint, quarry access tracks and the vegetated buffers, including monitoring and reporting to Council at appropriate intervals to demonstrate successful implementation;

l. procedures for Aboriginal objects that may be identified throughout the proposed works, such as the potential requirement for an Aboriginal Heritage Impact Permit (AHIP) to be obtained (see previous advice provided by OEH to Council on this matter – letter dated 29 April 2015); and

m. appropriate induction of quarry workers regarding the protection of vegetated buffer areas, limits of the work area, the potential for Aboriginal cultural heritage to be unearthed during quarry operations and the procedures to be followed should unexpected Aboriginal cultural heritage be unearthed.

If you require further information or clarification, or should Council be in possession of information that suggests that OEH's statutory interests may be affected, please contact Conservation Planning Officer, Ms Marcy Mills, on 6659 8233, or via email at marcelle.mills@environment.nsw.gov.au. Please note that Marcy works Thursdays and Fridays only.

Yours sincerely

Dimitri Young 17 June 2015

DIMITRI YOUNG
Senior Team Leader Planning, North East Region
Regional Operations

NSW GOVERNMENT | Office of Environment & Heritage

Your reference T6-14-122
Our reference: DOC15/92648
Contact Ms Rosalie Neve (02) 6659 8221

General Manager
Kempsey Shire Council
PO Box 3078
West Kempsey NSW 2440

Attention: Ms Rachael Jeffrey

Dear Mr Rawlings

Re: Belmore River Sand Quarry – Aboriginal Cultural Heritage Considerations

Thank you for your email of 18 March 2015 requesting additional advice from the Office of Environment and Heritage (OEH). I appreciate the opportunity to provide further input.

Your email follows receipt of a response from the planning consultant acting on behalf of the applicant for the Belmore River Sand Quarry Development Application. OEH understands that the additional information provided relates to Aboriginal cultural heritage matters raised in response to OEH concerns outlined in correspondence to Council dated 15 December 2014.

OEH has reviewed the additional information provided in relation to the proposed sand extraction at Belmore River and provides the following comments for consideration.

OEH notes that an Aboriginal cultural heritage assessment was undertaken in consultation with the registered Aboriginal stakeholders with respect to the proposed quarry expansion area. OEH further notes that the archaeologist's recommendation for further archaeological investigations within the area was not supported by the registered Aboriginal stakeholders. OEH acknowledges the Aboriginal knowledge-holders' determination that the shell material identified on the access track is not of a cultural nature.

OEH supports the ongoing working relationship with the community detailed in the *Draft Plan of Management* and the proposed management strategy of ongoing monitoring by representatives of the registered Aboriginal parties for the project to identify any potential Aboriginal objects to be uncovered as part of the proposed works. However, OEH notes the strategies outlined in the draft plan only cover procedures to ensure the identification of any potential Aboriginal objects encountered during the proposed development works, as opposed to their management.

The importance of protecting Aboriginal cultural heritage is reflected in the provisions of the *National Parks and Wildlife Act 1974* (NPW Act). The NPW Act clearly establishes that Aboriginal objects and places are protected and may not be damaged, defaced or disturbed without appropriate authorisation.

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Importantly, approvals under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) do not absolve the proponent of their obligations under the NPW Act. As such, if Aboriginal objects are identified within the project area during the proposed quarrying works, all work must cease within the area until the registration and management of the Aboriginal objects is finalised.

In this instance, should the proposed quarry receive approval, OEH recommends conditions that clarify the procedure to follow should Aboriginal objects be identified through the proposed works, such as the potential requirement for an Aboriginal Heritage Impact Permit (AHIP) to be obtained. Where it is identified that a permit is required to harm Aboriginal objects, an AHIP application is to accord with the guideline *Applying for an Aboriginal Heritage Impact Permit: Guide for Applicants* (OEH May 2011) available at the link below (http://www.environment.nsw.gov.au/resources/cultureheritage/20110280AHIPguideforapplicants.pdf.

Any Aboriginal objects identified within the project boundary prior to or during any subsequent works approved under the current development proposal must be registered on OEH's Aboriginal Heritage Information Management System (AHIMS). Penalties apply for failing to do this.

If you require further information or clarification, or should Council be in possession of information that suggests that OEH's statutory interests may be affected, please contact Aboriginal Heritage Planning Officer, Ms Rosalie Neve, either by telephone (02) 6659 8221 or email rosalie.neve@environment.nsw.gov.au.

Yours sincerely

Dimitri Young 29 April 2015

DIMITRI YOUNG
Senior Team Leader Planning, North East Region
Regional Operations

NSW EPA

Our reference: DOC14/152906/03, SF14/15440
Contact: Robert Donohoe Phone (02) 6640 2518

The General Manager
Kempsey Shire Council
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WEST KEMPSEY NSW 2440

Attention: Erin Fuller

Re: Designated Development Application T6-14-122 Lot 1324 DP785874 & Lot 323 DP855616, Tea Tree Lane, Belmore River Extractive Industry - sand

Please accept my apology for the inordinate delay in the Environment Protection Authority (EPA) providing you with a response to your request for comments on the above development proposal.

The EPA has reviewed the above Development Application, including the Town Planning Consultants Environmental Impact Statement (EIS) for the proposed sand extraction activity and has the below comments in regard the proposal.

In reviewing the above documents the EPA has identified that the volumes of sand proposed to be extracted per annum, i.e. 20,000 cubic metres (approximately 29,000 tonnes), falls below the licensing threshold (30,000 tonnes per annum) set out for land-based extractive activities under schedule 1 of the *Protection of the Environment Operations Act 1997*. As such the proponent **will not** be required to hold an Environment Protection Licence issued by the EPA.

If Kempsey Shire Council intends to approve the proposal the EPA recommends that the consent conditions specifically restrict the annual extraction volume to 20,000 cubic metres (29,000 tonnes). If in future there is increased demand for the resource above and beyond the 20,000 cubic metre volume requiring an Environment Protection Licence from the EPA, the proponent will be expected to apply to Council for a s.96 EP&A Act modification to the development consent, with appropriate consultation with the EPA as part of any intended modification.

As Council is likely aware, the presence of the Pacific Highway Upgrade projects throughout the region has found several extractive industry operators that have increased their extraction volume in breach of both consent conditions and EPA licensing limits. In a number of instances these operators have been prosecuted by the EPA due to the seriousness of the breaches. The EPA is monitoring these industries to ensure any temptation to breach POEO licensing requirements is avoided.

If you wish to discuss the above comments please contact Robert Donohoe on 6640 2518 or by email at Robert.Donohoe@epa.nsw.gov.au

Yours sincerely

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14/11/14

Graeme Budd
Head Environment Management Unit - North Region
Environment Protection Authority