



Office of
Environment
& Heritage

Your reference: RZ/12/2014;
PP_2015_WYONG_002_00
Our reference: DOC15/73489-5
Contact: Karen Thumm, 4908 6829

Mr Michael Whittaker
General Manager
Wyong Shire Council
PO Box 20
WYONG NSW 2259

Attention: Jenny Mewing

Dear Mr Whittaker

RE: PLANNING PROPOSAL – REQUEST FOR AGENCY COMMENT - PLANNING PROPOSAL IN RESPECT OF LOT 642, DP 1027231, LAKE MUNMORAH, LOT 644, DP 1027231 AND LOT 100, DP 1044282, CRANGAN BAY - WYONG LGA

I refer to your email of the 5 March 2015 asking the Office of Environment and Heritage (OEH) to comment under Section 56(2)(d) and give advice in accordance with the provisions of Section 34A of the *Environmental Planning and Assessment Act, 1979* (EP&A Act) in relation to the above Planning Proposal at Munmorah/Crangan Bay.

OEH understands that this Planning Proposal has been provided as a stand-alone rezoning proposal although much of the accompanying documentation has been supplied in a different planning context e.g. as part of a larger proposal encompassing many sites and involving a biodiversity certification application.

The Planning Proposal covers 163 hectares of predominantly vegetated land, with small areas of disturbance. The proposal is for development of 75 hectares as a residential area with 88 hectares remaining as potential offsets. It is predicted that this area will supply 620 lots.

Background

The Darkinjung Local Aboriginal Land Council (DLALC) has included a Planning Proposal at Lake Munmorah in various diverse strategic planning documents for their land holdings since approximately 2008. The area was included in the DLALC's Land Portfolio Assessment in May 2009 as well as in their North Wyong Lands Conservation Strategy of October 2012.

The Central Coast Regional Strategy (2008) gave direction that the North Wyong Shire Structure Plan (NWSSP) would be prepared to identify areas for strategic future development and to protect biodiversity values. The subject site is within the NWSSP which was endorsed in October 2012. The NWSSP has mapped part of Lot 642 within the "strategically located constrained sites subject to further investigation and offset strategies to define conservation requirements and development potential". The remainder of the subject land is identified as Green Corridor. The timeframe of all development within the eastern part of the NWSSP, in the vicinity of this lot, is 'long-term'. The NWSSP delivered no development potential to the adjacent lots as well as being in conflict with the timeframes given for this part of the Plan.

Wyong Shire Council has recommended that the Planning Proposal not be held back until the Regional Growth Plan for the Central Coast has been completed.

Section 117(2) of the EP&A Act directs Councils to provide justification for any inconsistency with the objective of Section 117 which is to protect and conserve environmentally sensitive areas. The subject site is currently zoned Environmental Protection (E2 and E3) in the Wyong Local Environmental Plan 2013. The Planning Proposal requests a change of zone from E2 and E3 to R2 and E2, which is clearly a reduction in the environmental protection of this area. The current E2 areas will be retained, but part of the E3 zone will be rezoned to R2. The landowner needs to justify this inconsistency with Section 117 to Council.

Biodiversity

The biodiversity assessment method will depend on the planning process chosen for this land – as a stand-alone planning proposal or as part of a larger biodiversity certification. A significant amount of ecological work has been carried out for the subject area near Munmorah, although there are conflicting reports of the level of assessment in various reports. It appears as if no BioBanking assessment plots have been carried out to date, and that there will be a need for targeted seasonal surveys for some species. One report states that no field investigations or sample plots have been undertaken. However, maps are supplied which show that a certain amount of surveying both for flora and fauna have been carried out.

There are threatened species recorded from the site including Eastern Chestnut Mouse, Wallum Froglet, Eastern Bentwing-bat, Charmhaven Apple *Angophora inopina*, and Bynoe's Wattle *Acacia bynoeana*. Forty-two clumps of *Tetraloche juncea* have been recorded from the development area. Powerful Owl, Grey-headed Flying-fox, and Koala have also been recorded in close vicinity. It is noted that a SEPP 44 assessment has not been provided. The New Holland Mouse should also be considered. Depending on the process chosen for this planning proposal targeted and seasonal surveys may be required for 'species credit' species or to adequately satisfy OEH's threatened species survey and assessment guidelines. It is recommended that particular attention is paid to threatened orchids in this area.

Vegetation mapping

Vegetation mapping has been provided. The small areas mapped as Coastal floodplain sedgeland, rushlands and forblands of the North Coast (0.63 ha) and the *Melaleuca sieberi* – Tall saw-sedge closed shrubland in drainage line on the Central Coast, Sydney Basin (0.08 ha) are likely to be attributable to endangered ecological communities. It appears as if the proposed layout of the development avoids much of these vegetation communities, but development of part of the area of freshwater wetlands is likely to be red-flagged under the biodiversity certification process.

Corridors

Approximately half the present development footprint is within the Green Corridor endorsed in the North Wyong Shire Structure Plan. The development would reduce the NWSSP Green Corridor to approximately 100 metres in the north causing a pinch-point for wildlife wanting to use the corridor in an east-west direction. OEH does not support the reduction of corridor width. Wyong Shire Council advocates a 50 metre buffer each side of a corridor; in this case a buffer of 50 metres would mean that there would be no intact corridor remaining between the areas affected by edge effects (DEC 2004). The 'strategically located constrained land' in the NWSSP provides a 400 metre corridor at this point, which would increase corridor functionality considerably over the current proposal.

Council should also be mindful of the riparian corridors of Karignan Creek and its tributaries and the biodiversity values they are likely to be supporting. The proposal should protect these values.

Offsets and Biodiversity Certification

As outlined in 'NSW 2021: A plan to make NSW number one', the overarching goal for conservation in NSW is to protect our natural environment through protecting and conserving land, biodiversity and native vegetation. Within the relevant legislation and policy (*Threatened Species Conservation Act 1995* [TSC Act], *Native Vegetation Act 2003*, Regional Strategies and Regional Conservation Plans), this means that biodiversity and other environmental values must be 'improved or maintained'. That is, gains in biodiversity and other environmental values must be greater than or equal to any losses resulting from land clearing and / or other forms of environmental degradation.

Where impacts cannot be avoided, a reasonable attempt should be made to mitigate the impact as much as possible. After all feasible measures have been taken to avoid or mitigate impacts to biodiversity, offsets should be used to compensate for any remaining impacts in order to achieve an 'improve or maintain' outcome for the proposal.

OEH's preference is to deal with all matters of significance at the land rezoning stage with the intent of simplifying and streamlining any subsequent development application process.

Currently the proposal is for 75 hectares of development within a 163 hectare land holding. The residual 88 hectares is not presented formally as an offset, although the E2 zone indicates that it does not have development potential. Even if the 88 hectares were set aside for conservation, this is unlikely to be adequate for an Improve or Maintain outcome if using the Biodiversity Certification Biometric Tool. It is understood, however, that the DLALC own other parcels of land which may be used as additional offset land.

The current planning proposal is not accompanied by a biodiversity certification application, but appears to be included in a future proposal to certify a large part of the DLALC holdings in North Wyong. It has been discussed over many years that the DLALC may pursue biodiversity certification for the entirety of their land holdings, or for at least a large part of their holdings, including the land at Munmorah. The ecological data collected to date has been assembled in a way compatible with using in the biodiversity certification tool. However, one of the reports relating to the Darkinjung lands (October 2012) states that the DLALC does not feel catered for within the existing planning framework. It appears as if DLALC acknowledges the benefits of biodiversity certification, but that there are aspects of the methodology that they object to e.g. they want to manage the conservation lands themselves rather than have the management funds controlled by government, and do not want to sell biodiversity credits on the market.

Biodiversity Certification, however, is only possible if the "biodiversity certification assessment is [to be] made in accordance with the biodiversity certification assessment methodology, and not otherwise" (Section 126P of the TSC Act). It should be noted that any biodiversity certification application which does not adhere strictly to the methodology is likely to be fraught with additional complexity and may, in the end, be unacceptable to the Minister.

Furthermore, the DLALC appears to want to use covenants for the securing of offsets, although OEH no longer accepts covenants as a secure offset mechanism.

Referral to the federal Department of Environment

It is recommended that Darkinjung LALC refers this proposal to the federal Department of Environment so that an assessment can be made as to whether DoE wants to call in this proposal as a controlled action due to the impacts on the Black-eyed Susan. This will ensure that delays are minimised.

Aboriginal Cultural Heritage

OEH notes that no Aboriginal cultural heritage assessment was included as part of this proposal. The first step in assessing whether the lands proposed for rezoning may impact upon Aboriginal cultural heritage is to undertake a Due Diligence Archaeological Assessment (DDAA). Anyone who exercises due diligence in

determining that their actions will not harm Aboriginal objects has a defence against prosecution for the strict liability offence if they later harm an object. The [*Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*](#) can be used by individuals or organisations who are contemplating undertaking activities which could harm Aboriginal objects.

This code will provide a process whereby a reasonable determination can be made whether or not Aboriginal objects will be harmed by an activity, whether further investigation is warranted and whether the activity requires an Aboriginal Heritage Impact Permit (AHIP) application. OEH also keeps a register of notified Aboriginal objects and declared Aboriginal places in NSW. The register is called the Aboriginal Heritage Information Management System (AHIMS). You can search AHIMS to discover if an Aboriginal object has been recorded or an Aboriginal place declared on a parcel of land. AHIMS web services allow internet-based searches for information about recorded Aboriginal objects, gazetted Aboriginal Places and features of significance. Please note that surveys for Aboriginal objects have not been done in many parts of NSW. Aboriginal objects may exist on a parcel of land even though they have not been recorded in AHIMS.

Should the DDAA identify that there is a potential impact upon Aboriginal cultural heritage due to the proposed development activity, the proponent must investigate, assess and report on the harm that may be caused by that activity. The investigation and assessment of Aboriginal cultural heritage is undertaken to explore the harm of a proposed activity on Aboriginal objects and declared Aboriginal places and to clearly set out which impacts are avoidable and which are not. Harm to significant Aboriginal objects and declared Aboriginal Places should always be avoided wherever possible. Where such harm cannot be avoided, proposals that reduce the extent and severity of this harm should be developed. An Aboriginal cultural heritage assessment report is a written report detailing the results of the assessment and recommendations for actions to be taken before, during and after an activity to manage and protect Aboriginal objects and declared Aboriginal places identified by the investigation and assessment.

The Aboriginal cultural heritage assessment report will support any application made to OEH for an AHIP where harm cannot be avoided. If such an assessment is identified as being necessary, the proponent must refer to the following documents:

1. *Aboriginal Cultural Heritage Consultation Requirement for Proponents (2010)* and
2. *Code of Practice for the Archaeological Investigations of Aboriginal Objects in New South Wales (2010)*.

All relevant information can be found on the OEH website under Cultural Heritage – regulation <http://www.environment.nsw.gov.au/licences/achregulation.htm>

Floodplain

No information was provided as part of the Planning Proposal that indicates the extent of flood prone land on this site. It is anticipated that this site would be impacted by flooding from Karignan Creek, as well as local overland flows, due to the topography of the site. OEH does not have any additional information that may assist in identifying the extent of flood prone land on this site.

Wyong Shire Council, with the assistance of OEH's Floodplain Management Program of 2014/15, received grant funding to complete the Wallarah and Spring Creek Flood Study. However, an initial review indicates that this area is not located within the catchment of these creeks, and a site-specific flood study will need to be undertaken to ascertain the extent of flood prone land on this site.

The area under consideration in this Planning Proposal is extensively vegetated and currently drains to Lake Macquarie waterway via a SEPP 14 wetland to the north of the site. Any development in this area is likely to cause increases in stormwater flows and associated increases in nutrient runoff. In addition to this, the Planning Proposal indicates that the soil types in the area are highly erodible and streambanks and bed susceptible to erosion, which will be exacerbated if runoff increases. It is assumed that these water

management issues are under consideration by other agencies including the Environment Protection Authority; however they are noted here for information.

Council needs to satisfy itself that the proposed rezoning will not result in an intensification of land use within the flood prone area to ensure consistency with the Local Planning Direction 4.3 Flood Prone Land issued under Section 117(2) of the EP&A Act. Land owners, or proponents of any future development applications need to be clearly aware of the flood affectation of the site and of the proportion of the site that becomes inundated by hazard flooding in floods up to and including the 1% Annual Exceedance Probability Flood (AEP) and Probable Maximum Flood (PMF) events. These areas would generally be considered inappropriate for particular types of development or land uses; however rezoning can lead to an expectation of development in the future. It is OEH's position that that these discrepancies must be managed at this rezoning stage, rather than the individual development application stage further down the track.

In its current form, no suitable comment can be provided on the Planning Proposal until additional information is received on the floodplain management components of the proposal.

Detailed information is required on:

- flood levels and flood hazards across the site up to and including the PMF;
- details of location and impacts of any additional fill to be placed in the floodplain need to be documented.;
- detailed information required of Flood Planning Level (FPL) and how it is going to be achieved; and
- flood access and emergency management procedures.

If you have any enquiries concerning this advice, please contact Karen Thumm, Conservation Planning Officer, on 4908 6829.

Yours sincerely



2- APR 2015

STEVE LEWER
Acting Senior Team Leader Planning, Hunter Central Coast Region
Regional Operations

References:

DEC 2004 Wildlife Corridors – Natural Resource Management Advisory Series: Note 15



Our ref: DOC21/271952-4

Your ref: Email of 6 April 2021

Matthew Hill

Planning and Assessment
Department of Planning, Industry and Environment

Matthew.hill@planning.nsw.gov.au

Dear Mr Hill

Darkinjung's Lake Munmorah Planning Proposal and draft Development Control Plan

I refer to your email of 6 April 2021 to the Biodiversity and Conservation Division (BCD) of the Department of Planning, Industry and Environment (the Department) requesting comments on the Darkinjung Lake Munmorah planning proposal in response to the Hunter & Central Coast Regional Planning Panel's request for additional agency consultation to be undertaken prior to gateway exhibition.

BCD have reviewed the Lake Munmorah Planning Proposal – Exhibition version, the draft Darkinjung LALC Lake Munmorah Development Control Plan, the interim updated Biodiversity Conservation Assessment Report (Umwelt, June 2020) and the Hunter and Central Coast Regional Planning Panel pre-gateway comments.

Biodiversity and Conservation Division's (BCD) recommendations in relation to flooding and flood impacts are provided in **Attachment A** and detailed comments are provided in **Attachment B**.

The Lake Munmorah project is part of the Central Coast Strategic Conservation Plan (CCSCP) where the biodiversity impacts and conservation measures for the project will be assessed on a strategic level. BCD is unable to provide further detailed biodiversity advice at this stage as the CCSCP will inform avoidance, development and conservation outcomes for the Lake Munmorah project. BCD will work with the CCSCP project team during the assessment of avoidance, development and conservation outcomes for the Lake Munmorah project and larger CCSCP.

The interim Biodiversity Certification Assessment Report (Umwelt 2020, BCAR) for the Lake Munmorah project will be superseded by a BCAR for the CCSCP which will include an assessment of the avoidance measures, impacts and the proposed conservation measures for the Lake Munmorah project, as part of the larger CCSCP.

The CCSCP could result in additional avoidance measures being required for the Lake Munmorah project, particularly if any Serious and Irreversible Impact (SAIL) species are considered likely to occur on the site. Potential occurring SAIL impacts at the site include the swift parrot, *Caladenia tessellata*, *Corunastylis* sp. Charmhaven, *Genoplesium insigne*, and the giant dragonfly *Petulara gigantea*.

In consideration of the Darkinjung Delivery Framework and support for Darkinjung's economic self-determination and seeking to achieve a balance between development and biodiversity conservation outcomes, BCD agrees to a minimum 300 metre wide corridor at the Lake Munmorah development site. BCD recommends that a Biodiversity Stewardship Agreement is used to conserve the minimum 300 metre corridor in recognition of the corridors critical function for biodiversity in the region.

The CCSCP will provide sufficient justification (under Direction 2.1 (6)(b)) for the inconsistency with Direction 2.1 of the Section 9.1(2) of the *Environmental Planning and Assessment Act 1979* Ministerial Directions as the CCSCP is expected to give consideration to the objectives of the direction and support the Lake Munmorah project.

BCD has no further comment on the Lake Munmorah Planning Proposal and will work with the Green and Resilient Places CCSCP project team to assess the Lake Munmorah project as part of the CCSCP.

If you require any further information regarding this matter, please contact Steven Cox, Senior Team Leader Planning, Hunter Central Coast, on 4927 3140 or via email at huntercentralcoast@environment.nsw.gov.au

Yours sincerely



Joe Thompson
Director Hunter Central Coast Branch
Biodiversity and Conservation Division

Date: 27/05/2021

Enclosure: Attachments A and B

BCD's recommendations

Lake Munmorah Planning Proposal and draft Development Control Plan

Flooding and flood risk

1. BCD recommends that:
 - a. The methodology for delineating the hydraulic roughness zones are provided;
 - b. The results of the 10 temporal patterns used to estimate design rainfall in the hydrological modelling are to be provided.
 - c. The methodology for determining the burst initial losses are disclosed.
 - d. Continuing losses in the hydrological model are to be reduced in accordance with the NSW specific guidance and the model rerun for assessment.
 - e. The hydraulic model is updated to include the two weirs and earth embankment on Karignan Creek. And that a variable weir crest is used as defined by ground survey.
 - f. The stormwater drainage network is incorporated into the hydraulic model.

BCD's detailed comments

Lake Munmorah Planning Proposal and draft Development Control Plan

Flooding and flood risk

1. There are inconsistencies in the proponent's flood hydrological and hydraulic modelling

A localised flood model was prepared by Northrop to define flood extents and flood constraints for the proposal. BCD has identified numerous inconsistencies with Northrop's model that must be resolved prior to further assessment:

- Model verification: The modelling results have not been verified. If results in this location cannot be calibrated due to the absence of meaningful verification data, then the accuracy of modelling should be tested by determining the sensitivity of model assumptions and parameters.
- Rainfall losses: BCD considers that the model may significantly underestimate the design event peak flows and levels. The continuing loss parameter of 2.4mm/hr has not been adjusted for NSW conditions in accordance with the "Review of ARR Design Inputs for NSW", OEH, 2019. This document recommends that a multiplication factor of 0.4 should be applied to the ARR 2016 Data Hub continuing loss values. Also, it is not clear if the consultant has deducted the storm pre-burst rainfall from the storm initial losses.
- Hydraulic structures: There are two concrete weirs and an earth embankment located within the study area on Karignan Creek. The model only includes one weir and no embankment. Further, the weir was modelled with a crest elevation of 1.2m Australian Height Datum (AHD) that was determined from aerial survey;
- Stormwater network: The TUFLOW model used does not include the stormwater drainage network.
- Hydraulic roughness: It is not clear how hydraulic roughness zones were delineated.

Recommendation 1

BCD recommends that:

- a. The methodology for delineating the hydraulic roughness zones are provided;
- b. The results of the 10 temporal patterns used to estimate design rainfall in the hydrological modelling are to be provided.
- c. The methodology for determining the burst initial losses are disclosed.
- d. Continuing losses in the hydrological model are to be reduced in accordance with the NSW specific guidance and the model rerun for assessment.
- e. The hydraulic model is updated to include the two weirs and earth embankment on Karignan Creek. And that a variable weir crest is used as defined by ground survey.
- f. The stormwater drainage network is incorporated into the hydraulic model.



Our ref: DOC20/880425-1

Mr Andrew Hill

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Dear Mr Hill

Darkinjung's Lake Munmorah Planning Proposal – review of regional corridor

Thank you for your email of the 20 October 2020 in which you sent us documents relating to Darkinjung Local Aboriginal Land Council's Lake Munmorah planning proposal and asked us to provide feedback on the zone boundary in the north of the site.

Biodiversity Conservation Division (BCD) has reviewed the Updated Interim Biodiversity Certification Assessment Report (BCAR), the Updated Bushfire Assessment, the Lake Munmorah Corridor Assessment, the Lake Munmorah Creek Line identification document, the GHD BCAR, the indicative subdivision layout, the document referred to as Lake Munmorah Corridor and BCAR comments, the document referred to as Lake Munmorah overall structure plan – low residential, the Central Coast Regional Plan, the North Wyong Shire Structure Plan, the Wyong Shire Council Corridor Strategy, and the Greater Lake Munmorah Structure Plan.

In 2015 BCD commented on a planning proposal which included parts of Lot 642 DP 1027231, Lot 644 DP1027231 and Lot 100 DP 1044282 (the same location but referred to as 'Crangan Bay') and raised a number of issues (our reference DOC15/73489-5). BCD recommended a 400 metre regional corridor and that the riparian areas should be protected. The current proposal is inconsistent with the advice that was given previously as the corridor has been reduced to 200 metres. BCD is aware that the footprint of the development has changed considerably since then. However, BCD has not been provided with a revised planning proposal for comment.

Previous strategic planning documents

The current footprint is inconsistent with the recognition given in a series of previous strategic planning documents that the wildlife corridor in the north of the site is a regional (or 'inter-regional') corridor.

The **Central Coast Regional Plan (2016)** refers to the corridor as a 'regional corridor' which 'connects the coast to the foothills and provides an inter-regional landscape break'. The North Wyong Shire Structure Plan (NWSSP), the Wyong Corridor Strategy, and the Greater Lake Munmorah Structure Plan all have a regional corridor over the northern part of the site.

The regional corridor is part of a broader biodiversity corridor network that links to the Great Dividing Range, Hawkesbury River, Ku-ring-gai Chase National Park and the Watagans National Park. It is also part of a national wildlife corridor that extends from Victoria to Far North Queensland (Central Coast Regional Plan 2016).

The Central Coast Regional Plan includes Action 12.2 which is to 'identify and strengthen biodiversity corridors as places for priority biodiversity offsets' (Central Coast Regional Plan 2016). The corridor

is presented in the Regional Plan in a very schematic way; however, the current proposal would remove approximately two-thirds of the regional corridor.

The **North Wyong Shire Structure Plan** (2012) (NWSSP) envisaged development in the southern part of the site. The current footprint is inconsistent with the NWSSP which had no development proposed in the eastern lot (Lot 100), and a smaller development footprint in the south, with a 750-metre green corridor in the north. The current proposed footprint retains a wildlife corridor width of only 200 metres, which reduces the regional corridor to about a quarter of the regional corridor mapped in the NWSSP. The objectives of the NWSSP included a wide regional corridor in the north of the site to:

- link the mountain areas in the west of the region to the ocean foreshore in the east
- ensure connectivity for organisms at a landscape and regional scale
- to facilitate adaptation to climate change.

The site was presented in the NWSSP as a 'strategically located constrained site subject to further investigation'. The NWSSP stated that one of the key planning issues that needed to be addressed for this area included a 'more detailed understanding of the environmental features of the land and opportunities to contribute to the proposed corridor and habitat networks'.

The key objective for these 'strategically located constrained sites subject to further investigation' is to 'achieve a balance between development and biodiversity conservation, within the broader context of the green corridor'.

The NWSSP also required 'detailed ecological investigations to focus on ... the role of this land, or parts of the land, in complementing the green corridor, the location of local corridors, including riparian areas, and links to planned corridors outside the Structure Plan area'.

Retaining a regional corridor of at least 400 metre width to the north of the site would give recognition of its role within the broader context of the regional corridor.

The current footprint also encroaches to a large extent on **Wyong Shire Council's interregional corridor** of 2002, a previous strategic planning document. Wyong Shire Council's strategic corridor mapping (2002) covers between half and two-thirds of the site. The entire footprint north and north-east of the riparian corridor, a tributary to Karignan Creek, is within the corridor.

The **Greater Lake Munmorah Structure Plan** (2019) includes a footprint with no development in the eastern lot (Lot 100) and which is much smaller (concentrated in the southern half of the site). The Greater Lake Munmorah Structure Plan adheres to the basic plan provided by the North Wyong Shire Structure Plan. Adoption of the corridor area mapped by the Greater Lake Munmorah Structure Plan would see an approximate 400-500 metre regional corridor maintained in the area.

Key habitats and corridors

Scotts (2003) 'Key habitats and corridors for forest fauna. A landscape framework for conservation in north-east New South Wales' maps this area as a regional corridor. In this book he explains the rationale for providing corridors and the methodology used for his assessment. Scotts (2003) maps key habitats and the linkages (corridors) between the patches of key habitat. The mapping shows areas of 'key habitat' in the north of the lake Munmorah site (and in the south) which are linked by Scotts' (2003) regional corridor. Scotts' regional corridor covers the majority (approximately 95%) of the Lake Munmorah site.

It is generally recognised that the wider the corridor the better it functions for wildlife. Regional corridors link between formal reserves, are good for nomadic and migratory species, and span altitudinal and latitudinal gradients (Scotts 2003). Scotts states that the corridors must be wide

enough for species that are rare and have specialised habitat and foraging requirements to reside/occupy (key habitat) and to disperse (corridor). Maximising corridor widths is the most practical way of reducing edge effects, such as weeds and pest animals, light, noise, and wind, and rubbish dumping. Maximising the width of the regional corridor in accordance with the principles described in Scotts (2003) for corridor mapping would promote the functionality of the regional corridor.

Threatened species and High Environmental Values

Although fauna surveys have not been completed for the site, preliminary surveys carried out by GHD have recorded some threatened species on the site. Wallum froglets are recorded from areas of wet heath within and adjacent to the site. A 400 metre wide corridor would protect a riparian zone and buffer which is likely to support wallum froglets. Little lorikeets, little bent-wing bats and grey-headed flying-fox were also recorded during the fauna surveys.

The intent of a regional corridor is to protect biodiversity on a landscape scale (NWSSP). Other threatened species for which there is predicted habitat on the site include the yellow-bellied glider, the swift parrot, large forest owls, koala, four species of micro-bat, glossy black-cockatoo, varied sittella, spotted-tailed quoll, regent honeyeater, and the long-nosed potoroo. The entire proposal is covered by the swift parrot 'important habitat area'.

Maximising the width of the regional corridor in accordance with the principles described in Scotts (2003) for corridor mapping would assist with the protection of threatened and non-threatened species within the site and within the regional corridor.

Swamp vegetation and riparian zones

The planning proposal states that the development will fill two creeks. It also states that the development will be impacting on Swamp Sclerophyll Forest EEC, that detention basins will be placed in the riparian zone, and that the vegetation in the riparian zone will need to be 'managed' due to fire concerns. All these actions will adversely affect the condition of the riparian zones and swamp vegetation. Maintaining the corridor width at 400 metres would conserve some of these areas.

Coastal Management SEPP 2018

The Coastal Environment Area map (i.e. the map indicating the area covered by Coastal Management SEPP 2018), affects the north western section of the development footprint. Development within the SEPP coastal environment area must be considered by the consent authority in relation to its potential to cause an adverse impact on matters listed under Division 3 Section 13, including adverse impacts on native vegetation and fauna, and their habitats, and the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment. Retention of a 400 metre wide corridor would remove the development from the area affected by the Coastal Environment Area map.

Use of BAM data to assess corridor width

The Lake Munmorah Corridor Assessment (letter prepared by Umwelt dated 10 June 2020) attempts to determine a possible corridor width for the proposal using impact assessment data under the Biodiversity Assessment Method (BAM). Data generated for the purposes of a BAM assessment was not designed to inform the consideration of corridor widths and should not be used for that purpose. Additionally, the analysis provided does not support a narrower corridor, as several threatened species predicted to occur by the BAM have large patch size and native vegetation cover requirements. The assessment also fails to consider the corridor and movement requirements of non-threatened species.

Recommendation

As acknowledged by the proponent, general guidance provided by a range of publications recommends a minimum 500 metre width for regional corridors. A range of sources also note the importance of determining appropriate corridor widths on a case-by-case basis following consideration of the regional requirements of species and local strategic planning settings.

BCD recommends a 400 metre wide regional corridor is maintained in the north of the site. BCD's recommended corridor width considers regional strategic planning settings, regional corridor principles and the importance of Darkinjung LALC being able to achieve a development outcome at the Lake Munmorah site.

Ministerial Direction 2.1

Section 9.1 (2) of the Environmental Planning and Assessment Act 1979 provides a list of Ministerial Directions in relation to planning proposals. Direction 2.1 relates to the protection and conservation of environmentally sensitive areas and requires that a planning proposal justifies a reduction in environmental protection due to a change in zoning. The current proposal will change the land use zone from E2 (Environmental Conservation) and E3 (Environmental Management) to predominantly residential. This change in zone is inconsistent with the Ministerial Direction and was not appropriately justified in the 2015 version of the planning proposal. BCD has not received a more recent version of the planning proposal with a justification of this change in zone.

If you require any further information regarding this matter, please contact Steven Cox, Senior Team Leader, on 4927 3140, or via email at rog.hcc@environment.nsw.gov.au.

Yours sincerely



Joe Thompson
Director Hunter Central Coast Branch
Biodiversity and Conservation Division

5th November 2020



Our ref: DOC21/970259-6

Your ref: PP_2015_WYONG_002_01

Jose Sevilla Jr

Senior Planner, Strategic Planning
Department of Planning, Industry and Environment

Jose.sevilla@planning.nsw.gov.au

Dear Mr Sevilla

Darkinjung Planning Proposal - Lake Munmorah (PP_2015_Wyong_002_01)

I refer to your email of the 3 November 2021, seeking feedback on a document supporting the Darkinjung Planning Proposal at Lake Munmorah (PP_2015_Wyong_002_01) and asking the Biodiversity and Conservation Division (BCD) to respond to issues raised in our previous advice of the 27 May 2021 (DOC21/271952-7).

The advice BCD provided on 27 May 2021 was based on the planning proposal being included in the larger Central Coast Strategic Conservation Plan. We have been advised that the current request for advice is for a planning proposal which is associated with a stand-alone Biodiversity Certification Assessment Report (Umwelt 2021). The planning proposal associated with this request was provided to BCD on 30 April 2021 and is undated.

We note that the BCAR and associated application form have not been submitted for certification under the *Biodiversity Conservation Act 2016*. Please be aware that separate assessment is required under this process and this may result in further provision of advice regarding the BCAR.

BCD is aware that this planning proposal supports the economic self-determination of the Darkinjung Local Aboriginal Land Council (LALC) and the communities that it supports. BCD supports initiatives to provide development opportunities for Aboriginal communities such as those outlined in the Darkinjung Delivery Framework, which includes this planning proposal.

It is understood that the Department is developing policies to incorporate self-determination for Aboriginal communities into decision making for planning authorities. However, at this time such instruments have not been enacted and therefore BCD has assessed the planning proposal against the statutory requirements and guidance that currently apply to general development proponents.

Biodiversity and Conservation Division's (BCD) recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**. If you require any further information regarding this matter, please contact Steven Crick, Senior Team Leader Planning, on 4927 3248 or via email at huntercentralcoast@environment.nsw.gov.au

Yours sincerely

A handwritten signature in black ink that reads 'Joe Thompson'.

Joe Thompson
Director Hunter Central Coast Branch



Biodiversity and Conservation Division

Date: 24/11/21

Enclosure: Attachments A and B

BCD's recommendations

Darkinjung Planning Proposal – Lake Munmorah (PP_2015_Wyong_002_01)

1. BCD recommends that the planning proposal is only exhibited once it has been updated and it is confirmed that the land-uses accord with the land-uses proposed in the final BCAR.
2. BCD notes that the opportunities for development under a stand-alone BCAR are likely to differ from those under the Central Coast Strategic Conservation Plan. For example, the impacts on the potential serious and irreversible impact (SAIL) species, the swift parrot (*Lathamus discolor*), will need to be avoided on this site.
3. The planning proposal needs to justify its inconsistency with Ministerial Direction 2.1 of Section 9.1(2) of the EP&A Act.
4. The planning proposal needs to outline how the biodiversity corridor in the northern part of the site will be secured on land that is not owned by Darkinjung LALC.
5. The planning proposal must include the outcomes of an assessment of the removal of 32.4 hectares of important swift parrot habitat, as this is considered a potential Serious and Irreversible Impact. The assessment should be based on scientific evidence and consideration should be given to engaging a suitable species expert as part of the assessment.
6. BCD recommends that the BCAR and the proposal is referred to the Department of Agriculture, Water and the Environment as soon as possible.
7. BCD recommends that any proposed Biodiversity Stewardship Site is referred to the Biodiversity Conservation Trust as soon as possible.
8. The BCAR should demonstrate avoidance of impacts to threatened species and threatened ecological communities in accordance with the Biodiversity Assessment Methodology.
9. BCD recommends that the planning proposal is updated after all threatened species surveys have been completed and assessed.
10. Impacts to riparian zones and the biodiversity corridor should be avoided.
11. BCD notes that plans for future roads through adjacent lots may constrain DLALC's opportunities for using adjacent land for future offsets/Biodiversity Stewardship Sites.
12. BCD recommends that all asset protection zones should be included in the development footprint and not be included in any environmental zones.

BCD's detailed comments

Darkinjung Planning Proposal – Lake Munmorah (PP_2015_Wyong_002_01)

Biodiversity

1. BCD recommends that the finalisation of the planning proposal is delayed until the biodiversity certification footprint has been confirmed

BCD has only recently been provided with a stand-alone Biodiversity Certification Assessment Report (BCAR) to accompany the Lake Munmorah planning proposal "Exhibition Version" (undated, provided 30 April 2021). It is recommended that the making of the planning proposal is delayed until the BCAR has been assessed under the *Biodiversity Conservation Act 2016*, so that the two documents show the same intended land-uses for the site. The current BCAR land-uses do not align with the zone map in the planning proposal.

Changes may be required in relation to the development footprint as a result of the assessment of the BCAR, and that this will need to be reflected in the planning proposal. Taking this approach will reduce the likelihood of changes being required to the planning proposal. BCD will be able to finalise its comments on the planning proposal once the BCAR has been assessed and both documents updated.

Recommendation 1

BCD recommends that the planning proposal is only exhibited once it has been updated and it is confirmed that the land-uses accord with the land-uses proposed in the final BCAR.

2. BCD notes that the outcomes on site for a stand-alone BCAR may differ from the outcomes of an assessment under the Central Coast Strategic Conservation Plan

The assessment of a stand-alone BCAR may ultimately differ from an assessment under the Central Coast Strategic Conservation Plan (CCSCP), as there is more flexibility under the CCSCP to find offsets. In particular, within the context of a stand-alone BCAR, the presence of 32.4 hectares of mapped important swift parrot habitat, which triggers an assessment under Clause 6.7 of the Biodiversity Conservation Regulation 2017 as a potential Serious and Irreversible Impact (SII), is likely to limit the potential to develop the Lake Munmorah property. Impacts to areas mapped as important swift parrot habitat must be avoided.

Recommendation 2

BCD notes that the opportunities for development under a stand-alone BCAR are likely to differ from those under the Central Coast Strategic Conservation Plan. For example, the impacts on the potential SII species, the swift parrot, will need to be avoided on this site.

3. Previous justification for inconsistency with Direction 2.1 of the Section 9.1(2) of the EP&A Act 1979

BCD's advice of 5 November 2020 noted that the planning proposal was inconsistent with Direction 2.1 of the Section 9.1(2) of the *Environmental Planning and Assessment Act 1979* and that the Central Coast Strategic Conservation Plan would provide sufficient justification for this inconsistency. The planning proposal now need to justify this inconsistency with Direction 2.1 of Section 9.1(2) of the EP&A Act 1979 as this current advice is being sought for a stand-alone BCAR.

Recommendation 3

The planning proposal needs to justify its inconsistency with Ministerial Direction 2.1 of Section 9.1(2) of the EP&A Act.

4. The biodiversity corridor at the north of the site does not appear to be fully secured

Previous advice was given in the context of the Darkinjung Delivery Framework and as support for Darkinjung LALC's economic self-determination. A result of the discussion as to how the Darkinjung Delivery Framework would be considered and how a balance could be achieved between development and biodiversity conservation outcomes, included an agreement about the securing of a 300 metre wide biodiversity corridor in the north of the site (refer to BCD's letter of 27 May 2021 DOC21/271952-4).

The planning proposal currently secures a corridor of about 200m on the site, with the remaining 100m occurring on neighbouring properties. As the Darkinjung LALC does not have control over land-use on neighbouring properties, it is not clear how or if the remaining portion of the corridor would be secured. Further, the planning proposal currently does not require the establishment of a Biodiversity Stewardship Site as previously agreed.

Recommendation 4

The planning proposal needs to outline how the biodiversity corridor in the northern part of the site will be secured on land that is not owned by Darkinjung LALC.

5. The planning proposal should recognise the development impacts on swift parrot important habitat and foraging habitat

The planning proposal currently does not recognise the impact of the development on 32.4ha of habitat mapped as 'important habitat' for the swift parrot (*Lathamus discolor*), nor does it give an indication of credits expected to be required to offset any impacts on this species. Development on mapped swift parrot important habitat is considered a potential Serious and Irreversible Impact (SAIL) and must be assessed (and avoided).

The SAIL assessment for the swift parrot (*Lathamus discolor*) needs to demonstrate that the proposed removal of approximately 32.4 hectares of mapped important swift parrot habitat is unlikely to cause a further decline in its population size. The SAIL assessment relates to the mapped important swift parrot habitat and not to the swift parrot 'foraging habitat'.

Recommendation 5

The planning proposal must include the outcomes of an assessment of the removal of 32.4 hectares of important swift parrot habitat, as this is considered a potential Serious and Irreversible Impact. The assessment should be based on scientific evidence and consideration should be given to engaging a suitable species expert as part of the assessment.

6. It is recommended that the BCAR and proposal are referred to the federal Department of Agriculture Water and the Environment

As this proposal is expected to impact on federal Matters of National Environmental Significance (MNES) including the black-eyed susan (*Tetralochea juncea*) and the swift parrot (*Lathamus discolor*), BCD recommends referral to the Department of Agriculture, Water and the Environment (DAWE) as soon as possible. There are risks involved in not referring the proposal to the federal government early in the planning process as the federal legislation and state legislation can differ in their requirements for offsetting or the extent of impacts which are considered acceptable.

Recommendation 6

BCD recommends that the BCAR and the proposal is referred to the Department of Agriculture, Water and the Environment as soon as possible.

7. It is recommended that any proposed Biodiversity Stewardship Site is referred to the Biodiversity Conservation Trust as soon as possible

If the proponent is considering using a Biodiversity Stewardship Site to provide offsets, it is recommended that the proposal is provided to the Biodiversity Conservation Trust as soon as possible in order to check that the site is considered acceptable.

Recommendation 7

BCD recommends that any proposed Biodiversity Stewardship Site is referred to the Biodiversity Conservation Trust as soon as possible.

8. Impacts on threatened species habitat and threatened ecological communities should be avoided in accordance with the BAM “Avoid, Minimise, Offset” rules.

The BCAR records wallum froglet (*Crinia tinnula*), eastern osprey (*Pandion cristatus*), powerful owl (*Ninox strenua*), masked owl (*Tyto novaehollandiae*), eastern pygmy possum (*Cercartetus nanus*) and grey-headed flying-fox (*Pteropus poliocephalus*) on the site, as well as threatened ecological communities such as the federally and state listed Swamp Oak Floodplain Forest and Swamp Sclerophyll Forest on Coastal Floodplains EECs. In accordance with the Biodiversity Assessment Methodology, impacts from development on these threatened species and threatened ecological communities should be avoided, and minimised, and any residual impacts offset.

Recommendation 8

The BCAR should demonstrate avoidance of impacts to threatened species and threatened ecological communities in accordance with the Biodiversity Assessment Methodology.

9. The results of outstanding threatened species survey may change the footprint of the development site

The planning proposal states that seasonal threatened species surveys are still outstanding. As the results of these surveys may affect the position of the final development footprint, BCD recommends that an updated planning proposal is provided when the surveys have been completed and assessed.

Recommendation 9

BCD recommends that the planning proposal is updated after all threatened species surveys have been completed and assessed.

10. Riparian zones/biodiversity corridor should not be impacted by development

The report states that the riparian zone will have to be managed for fire risk, and that there will be shared pathways in the biodiversity corridor. All bushfire mitigation measures should be undertaken outside the areas, such as riparian zones and the biodiversity corridor, as these are being retained for biodiversity conservation. Roads, ‘active transport’, detention ponds/basins, or recreation impacts such as shared pathways should not be located within the biodiversity corridor (stewardship site) or riparian zones.

Recommendation 10

Impacts to riparian zones and the biodiversity corridor should be avoided.

11. **Plans for future roads should not constrain the opportunities for further conservation outcomes**

The Development Control Plan contains diagrams showing future roads crossing adjacent lots. Consideration should be given to the fact that Lot 100 DP1044282 joins two parcels of National Park, and as such has very high connectivity values which would be impacted by roads.

Recommendation 11

BCD notes that plans for future roads through adjacent lots may constrain DLALC's opportunities for using adjacent land for future offsets/Biodiversity Stewardship Sites.

12. **Asset protection zones should be included in the development footprint and not in the conservation zones**

All asset protection zones should be included in the development footprint and not be included in any environmental zones.

Recommendation 12

BCD recommends that all asset protection zones should be included in the development footprint and not be included in any environmental zones.