Australian Government
Department of the Environment

EPBC Ref: 2013/6978

Mr Matthew Sprott
Senior Planning Officer
Resource Assessments
NSW Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Mr Sprott

Mount Owen Continued Operation Project - Response to Submissions: Additional Information Requirements

Thank you for providing the Department of the Environment (the Department) with a copy of Mount Owen Pty Limited's (the proponent's) Response to Submissions (RTS) for the above project.

Following review of the RTS, the Department recommends that additional information is sought, prior to finalisation of the Assessment Report and a determination being made on the project, to address the following outstanding matters:

- Adequacy of proposed biodiversity offsets. The following additional information is needed to assist the Department in determining whether the proposed biodiversity offsets meet the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Biodiversity Offset Policy (Offset Policy):
  - It appears that the area of woodland habitat greater than 30 years of age may have been over-estimated in previous biodiversity offset calculations. To assist the Department in identifying vegetation age classes and types, the following information is needed:
    - Separation of woodland at the impact site into ≤30 years old and >30 years old age classes
    - Identification of the number of hectares of each vegetation community type within each age class
    - Evidence, such as historical photographs overlain with vegetation community types, to support the age class calculations
  - Details of the activities to be undertaken to ensure rehabilitation success at the proposed biodiversity offsets sites are needed to refine the offsets calculations in relation to future offset habitat quality and confidence scores. In particular:
    - The area (hectares), location, density, timing and species type of any proposed plantings in grassland areas

: The area and location/s where natural regeneration is proposed

: Information about proposed strategic grazing activities, including how this will be managed to facilitate biodiversity conservation for target species and how it is compatible with conservation management and legal protection mechanisms proposed for the site

: The type and frequency of management actions to improve the quality of offset sites and how these will be implemented to ensure that the quality of the offset sites will achieve habitat quality equivalence with the impact site

- Identification of the specific legal mechanism for protection of offset sites, or a commitment to adopt a mechanism that:

: Is registered on the title of the offset sites, once approved

: Provides for the protection and ongoing conservation management of the offset sites in perpetuity

: Prevents any future development activities or clearing of native vegetation on the offset sites

: Requires the approval of a relevant State Minister to be changed or revoked.

- Adequacy of mitigation and management plans. The Department does not consider that the RTS sufficiently addresses the Department's request to identify mitigation objectives, performance measures, corrective actions and thresholds for corrective actions or describe how management plans will be updated to effectively avoid and mitigate impacts to matters of national environmental significance. The Department considers that the proponent should identify, prior to project determination, where and how each specific commitment made in the EIS / RTS would be incorporated into management plans. This should include commitments made in the RTS in relation to potential impacts on groundwater dependent vegetation.

The Department would also like to offer the following additional comments for your consideration:

- If the project is approved, incorporation of a development consent condition binding the proponent to water discharge and transfer commitments made in the RTS would strengthen protection for water resources

- It is suggested that the measurement units on the graphs contained in Section 2.2.5.2 be clarified as they do not appear to conform to the ANZECC and ARMCANZ (2000) toxicant guideline values.

Additional matters raised by the proponent in relation to the methods and rationale for the Department's assessment of proposed biodiversity offsets are addressed in Attachment A of this letter.

If you have any questions in relation to this letter, please contact the project officer, Anu Datta by email to anu.datta@environment.gov.au, or telephone 02 6274 1898 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely

Dane Roberts
Director
NSW Assessments North
Environmental Standards Division
14 September 2015

Issue Raised in RTS	Department Response
Separation of vegetation age classes into ≤30 years and >30 years of age at the impact site	The Department undertook age separation at the impact site to accommodate the proponent's desire to use plantings as a direct offset. This approach was selected on the basis that: • Seeded or planted trees or naturally regenerated woodland would not provide similar quality habitat to trees that are more than 30 years old within a timeframe that would maintain or improve the viability of an endangered species (ref Principle 1 of the EPBC Offsets Policy) • The target species relevant to this proposal display a clear preference for mature forests as foraging / denning habitat as noted in the Department's Species Profile and Threats (SPRAT) database http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl as follows: - Swift Parrots actively select medium to large trees in which to forage, a trend evident in ... box-ironbark habitats and coastal forests of New South Wales. In box-ironbark in New South Wales, diameter of forage trees was on average 60% larger than other trees present at foraging sites. Selective exclusion of small and very large trees is likely due to their less frequent and less intense flowering when compared to medium-large trees - Regent Honeyeaters select the largest trees available to forage in, as these typically provide more food (with greater nectar flows) than smaller trees. Regent Honeyeaters usually nest in the canopy of forests or woodlands, and in the crowns of tall trees, mostly eucalypts. - Spot-tailed Quoll has a preference for mature wet forest habitat. Unlogged forest or forest that has been less disturbed by timber harvesting is also preferable. Habitat requirements include suitable den sites such as hollow logs, tree

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	hollows, rock outcrops or caves. Individuals also require an abundance of food, such as birds and small mammals, and large areas of relatively intact vegetation through which to forage.
Application of 'like-for-like' in relation to the age / maturity of woodland	While the EPBC Offsets Policy principles as stated in Box 1 of the EPBC Offsets Policy do not spell out the requirement to provide habitat of a similar quality, the Department draws the proponent's attention to the guidance for application of Principle 1 on page 17 of the EPBC Offsets Policy which requires, in relation to impacts on habitat for threatened species, that "any direct offset must meet, as a minimum, the quality of the habitat at the impact site". This is clarified in the Biodiversity Offsets Guide (pg 5) as "When determining the suitability of a proposed offset using the guide, the minimum requirement is that the quality score of the offset site (future value with offset) must at least reach the same value as the quality score of the impact site". Habitat quality equivalence was not evident in the application of the biodiversity offsets calculator to the proposed offsets, which was based on information provided in the proponent's EIS. Based on the evidence presented in the EIS/RTS and the information contained within the SPRAT database on habitat needs and preferences, the Department does not consider that it could be reasonably concluded that planted or naturally regenerating woodland would provide the same or better foraging or denning resources for target species as more mature woodland, within a reasonable timeframe.
Proponent proposes that time until ecological benefit should be 10 years for the Spot-Tailed Quoll and states that Quolls have been recorded in rehabilitated areas of the site where vegetation is less than 10 years old.	The Department does not consider that records identifying the presence of species alone are sufficient to support the argument that plantings or naturally regenerating woodland would support the same abundance, density of target species or same quality of habitat as more mature woodland. In accordance with Principle 7, the proponent would need to provide scientifically robust information to support the claim that planted/regenerating woodland would provide the same quality habitat as the impacted woodland greater than 30 years of age within a period of time that would maintain or

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	improve the viability of the Spot-Tailed Quoll.
Inclusion of all 131.9 ha of Central Hunter Ironbark – Spotted Gum – Grey Box Forest as being mature woodland >30 years.	As noted in the attached letter, it appears that the area of woodland habitat greater than 30 years of age may have been over-estimated in previous biodiversity offset calculations. To assist the Department in identifying vegetation age classes and types, the following information is needed: • Separation of woodland at the impact site into ≤30 years old and >30 years old age classes • Identification of the number of hectares of each vegetation community type within each age class • Evidence, such as historical photographs overlain with vegetation community types, to support the age class calculations.
Limiting the maximum time to ecological benefit to 20 years, when this timeframe is not specified in the EPBC Offsets Guide.	As noted above, the EBPC Offsets Policy Principle 1 requires that offsets deliver an overall outcome that improves or maintains the viability of the target species. The Department does not consider a time-lag of more than 20 years to achieve habitat of a similar quality to that removed at the impact site would maintain the viability of an endangered species.
Planted / regenerated offset vegetation will be 10 years old by the time that the majority of woodland habitat has been cleared at the impact site.	The Department has already taken the staging of clearing into account by separating age classes in the impact into ≤30 years and >30 years. Therefore, offset vegetation will be up to 30 years old at the end of the 20-year lag period, thus replacing vegetation up to 30 years old at the impact site. The Department notes that adoption of these age classifications is based on the assumption that grassland areas are subject to active regeneration rather than natural regeneration.

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Risk of loss associated with the Cross Creek Offset Site. The RTS states that: • If the site is not used for offsets it would likely be sold for agricultural activities • Potential clearing and increased grazing intensity in woodland areas would be required to make the property commercially viable as a farming enterprise, which would result in the loss of some woodland habitats on site • The risk of loss score should be revised to 20% risk of loss with 90% confidence	The Department notes that evidence has not been provided to support the claim that clearing of the small remnant areas of woodland present on this site would be required to obtain commercial viability for future agricultural pursuits. The Department further notes that the primary vegetation community on this site is Central Hunter Ironbark – Spotted Gum – Grey Box Forest, which is listed as an Endangered Ecological Community in NSW and that any clearing of native vegetation in NSW would be subject to consideration under the NSW *Native Vegetation Act 2003*. Grazing is not a consideration relevant to the calculation of risk of loss. Rather, grazing is considered a factor relevant to habitat quality. Therefore, the Department considers that the risk of loss of the remnant woodland at this site is low and that the risk of loss should remain at 10%. Subject to identification of an offset site protection mechanism that meets the requirements specified in the attached letter, the Department supports the proponent's suggested 90% confidence rating for this risk of loss.
Risk of loss associated with the Esparanga Offset Site. The RTS states that: • If the site is not used as an offset it would likely be sold for agricultural activities • Potential clearing and increased grazing intensity in woodland areas would be required to make the property commercially viable as a farming enterprise, which would result in the loss of some woodland habitats on site • The risk of loss score should be revised to 10% risk of loss with 90% confidence	The Department notes that evidence has not been provided to support the claim that clearing of the remnant areas of woodland present on this site would be required to obtain commercial viability for future agricultural pursuits. Subject to identification of an offset site protection mechanism that meets the requirements specified in the attached letter, the Department concurs that the risk of loss is low and supports the proponent's 90% confidence rating in this instance.

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Risk of loss associated with the Stringybark Creek Habitat Corridor Offset Site: • If the site is not used as an offset it would likely be used for agricultural activities • There is a moderate chance that the site contains coal resources that may be mined in the future • The African Olive infestation may suppress native plant growth and regeneration • The risk of loss score should be revised to 40% risk of loss with 90% confidence	Based on the information provided, the Department concurs that there is a moderate chance that this site may be cleared for mining activities in the future. However, based on the information provided, the Department considers there remains a higher degree of uncertainty associated with this risk than proposed by the proponent due to the uncertainty in relation to the presence of a minable coal resource. Therefore, the Department supports a 40% risk of loss without an offset mechanism in place but considers that a confidence score of 80%, subject to identification of an adequate protection mechanism, is more appropriate for this site. The Department further notes that protection of this site as a biodiversity offset is unlikely to prevent clearing of the site in the event that exploitable coal resources are present and mining of this resource is approved. Therefore, the Department considers that the risk of loss with offset remains moderate (30%) with an 80% confidence score.
Offset sites will be secured for long-term conservation through the available and appropriate mechanisms listed in Section 126L of the Threatened Species Conservation Act 1995 and be determined in consultation with the relevant government agencies.	As discussed in the attached letter, the Department recommends identification of the specific legal mechanism for protection of offset sites, or a commitment to adopt a mechanism that: • Is registered on the title of the offset sites, once approved • Provides for the protection and ongoing conservation management of the offset sites in perpetuity • Prevents any future development activities or clearing of native vegetation on the offset sites • Requires the approval of a relevant State Minister to be changed or revoked.
The RTS questions the Department's restriction of habitat for the Swift Parrot and Regent Honeyeater to the spotted gum – ironbark woodlands. Table 3.5 lists the	The Department notes that the ecological communities listed in Table 3.5 of the RTS identify tree species that provide some foraging resources for the Regent Honeyeater and Swift Parrot. However, the Department notes that the proponent has requested the

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foraging species available within each ecological community present at the offset sites.	inclusion of *Angophora floribunda*, which is also present in impact site ecological communities that were not previously included as impacted Regent Honeyeater / Swift Parrot habitat. The Department will consider incorporation of these ecological communities in the revised assessment of the proposed offset sites.
Response to the Department's request for additional information on mitigation management plans.	As detailed in the attached letter, the Department considers that the proponent should identify, prior to project determination, where and how each specific commitment made in the EIS / RTS would be incorporated into management plans. This should include commitments made in the RTS in relation to potential impacts on groundwater dependent vegetation. In addition, details of the activities to be undertaken to ensure rehabilitation success at the proposed biodiversity offsets sites are needed to refine the offsets calculations in relation to future offset habitat quality and confidence scores. In particular: • The area (hectares), location, density, timing and species type of any proposed plantings in grassland areas • The area and location/s where natural regeneration is proposed • Information about proposed strategic grazing activities, including how this will be managed to facilitate biodiversity conservation for target species and how it is compatible with conservation management and legal protection mechanisms proposed for the site • The type and frequency of management actions to improve the quality of offset sites and how these will be implemented to ensure that the quality of the offset sites will achieve habitat quality equivalence with the impact site.
The RTS states that habitat for the Spot-Tail Quoll adjacent to Main Creek will be unaffected by the project.	The Department notes that the RTS identifies the presence of a groundwater dependent tree species – *Casuarina glauca* – which provides habitat along Main Creek for the

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	Quoll. The Department further notes that the RTS identifies the possibility that this species may be affected by groundwater drawdown. The Department's suggested recommendations to address this matter are included in the attached letter.