Watermark Coal Project
(SSD-4975 and EPBC 2011/6201)
Shenhua Watermark Coal Pty Ltd
Merit Review Comments

Reviewer: Department of Sustainability, Environment, Water, Population and Communities (DSEWPAC, or the department)
Document Title: Watermark Coal Project - Environmental Impact Statement (EIS), February 2013
Date of Review: 4 July 2013

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General	The department notes that the proponent has added some further information to the Environmental Impact Statement (EIS) in response to the department's adequacy review comments of November 2012. This is helpful, however, many of the department's substantive adequacy review comments remain applicable to the current version of the EIS, and should be adequately addressed prior to any EPBC Act decision on approval of the proposal. The key outstanding issues are restated below, with the intention of guiding the further improvement and refinement of the EIS and related proposed plans and strategies, to assist the proponent to better demonstrate the overall acceptability of the proposed environmental impacts.
General	The department also notes that many of the recommendations provided by the NSW Office of Environment and Heritage (OEH) on 2 May 2013 regarding biodiversity are also applicable to EPBC Act protected matters in relation to this project. In this regard, the department supports all recommendations by OEH (dated 2 May 2013), and encourages the proponent to address these in full, noting that resolution of OEH's concerns are also likely to address many of the department's comments as outlined below. The sole exception in this regard is the portion of the OEH advice relating to "Issues Specific to the Koala" (pages 12-20): it is not appropriate for the department to provide substantive comments on this as the koala is not part of the EPBC Act controlling provisions for this project and therefore is not formally considered as part of the EPBC Act assessment. However, the department broadly supports the OEH recommendation that any dual conservation objectives for the koala and for other EPBC Act protected matters should be carefully planned, and separated where appropriate. This will be important to ensure that conservation objectives for the protection and enhancement of other EPBC-listed threatened species and

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	communities can be achieved.
Appendix K, Appendix M	**Habitat condition** Habitat condition descriptions are used by the department to determine the quality, extent and landscape context of ecological communities and threatened species habitat being impacted by a proposed action. This information is also used at proposed offset sites to determine the conservation gain offered by particular sites against listed matters. The more detailed description of condition and context in the landscape that can be provided, the more able the proponent will be to demonstrate to the department: a) the extent of any residual impacts to listed species or ecological communities at the proposed action site; b) the conservation gain and benefits provided by securing the proposed offsets for listed matters. In the absence of more detailed information to rule out uncertainties, the precautionary principle will be applied. Habitat condition and context should be discussed in relation to each EPBC Act listed matter identified as likely to be impacted by the proposed action, according to their behavior/s and habitat requirements. The EIS does not contain sufficient information in this regard. Comments relating to specific ecological communities and species are provided below.
Appendix K, Appendix M	**EPBC listed ecological communities** It appears that significant proportions of the proposed offset revegetation areas as identified in the EIS are currently and/or have historically been under agricultural use, for example, involving fertilizers and other forms of pasture improvement, potentially making them unsuitable for full ecological community re-creation. This is particularly the case with the critically endangered White Box, Yellow Box, Blakely's Red Gum Grassy Woodland and Derived Native Grasslands ecological community. Furthermore, scientific evidence suggests that the timeframe to the full re-establishment of potential habitat values is likely to be up to 50-200 years, depending on the target species, and there is a considerable risk that without suitable baseline conditions and long term management (including active management of threats such as weeds and salinity), it may be extremely difficult to fully establish/re-establish fully functional ecological communities on offset and revegetation sites. These risks will be considered in any departmental evaluation of the proposed offset strategy against the EPBC Act offsets policy, and as such, the department recommends that the EIS more fully considers these risks and their implications for meeting the identified offset objectives. The departments notes that planting of koala feed trees does not in itself constitute habitat values in terms of other relevant EPBC listed matters and

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	ecological communities. Should the proponent consider that such dual objectives can be delivered from these plantings, more evidence is required to demonstrate how the proposed revegetation will provide viable habitat for EPBC Act listed species and communities, and to what extent this will occur. The department remains concerned that both the proposed offset areas for White Box, Yellow Box, Blakely's Red Gum Grassy Woodland and Derived Native Grasslands is insufficient, and the proposed offset area for Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, as set out in the EIS, is likely to be insufficient in providing a measurable environmental outcome that improves or maintains the viability of these communities in the region, commensurate to the proposed loss. Offsets are discussed further below. When considering the extent of EPBC-listed ecological communities with derived grassland components, the department considers the entirety ecological community which meets the listed definition. The grassland component is not considered separately under the EPBC Act. However, when considering an offset for an ecological community, the proportion of woodland to grassland components may influence interpretation of habitat condition where a proposed offset is also intended to provide habitat values for other species. For an example, an offset with a greater component of woodland (or verified capacity for woodland regeneration) may provide habitat co-benefits for listed woodland bird species.
Appendix K, Appendix M	**Specific Species** The information provided in the EIS does not demonstrate that loss of habitat is unlikely to result in a significant impact. Further detail on landscape context and condition is required, and particularly in relation to movement corridors across the proposed action site and beyond. Some examples include: • The vulnerable grass *Bochriochloa biloba* is recorded along roadsides within the disturbance footprint. The loss of this stretch of *Bochriochloa biloba* could result in fragmentation of the population which may extend to the south and north of the project area. Information about this species outside the project boundary is not provided in sufficient detail to determine whether the proposed action will result in fragmentation of an important population. On a precautionary basis, evidence of compensation for the loss of this population consistent with the EPBC Act offsets policy will be required. • The endangered Spot-tailed Quoll is noted as having potential habitat present, although was not identified in surveys. The department understands that vegetated corridors that do exist within the project area will be impacted, potentially fragmenting populations and habitat/movement areas. The connectivity potential of proposed offsets for EPBC listed threatened fauna species other than the koala (such as the quoll) needs to be presented in further detail to determine the value of proposed offsets for such species. • Please advise whether the identification of the vulnerable South-Eastern Long-eared Bat (*Nyctophilus corbeni*) at the Onsite Offset Area was

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	by trapping or Anabat call recording. Presence of this species may indicate an important population. The South-Eastern Long-eared Bat roosts in tree crevices and hollows, moves roosting location almost daily and has a foraging range of up to seven kilometres. The EIS estimates that the proposal will result in the loss of an estimated 96.8 hollows per hectare within woodland remnants in the proposed action site. On a precautionary basis, evidence of compensation for the loss of this habitat for this species (including details of the values presented by the offset site/s) consistent with the EPBC Act offsets policy will be required. The combination of the loss of habitat connectivity, loss of hollows and loss of woodland (listed and non-listed ecological communities) is likely to present cumulative impacts on woodland and blossom-dependent listed threatened bird species, and the Rainbow Bee-eater. Specific requirements for woodland birds can include, for example, canopy cover, minimum distances between patches, understorey food sources and suitable roosting sites (noting that the formation of hollows can take a long time). More information is required on how and to what extent the proposed offset package will provide these habitat features, and maintain and improve the viability of the relevant listed species and communities in the region. In presenting such information, the proponent may also wish to: • Consider the recovery priorities for relevant species, where a recovery plan has been prepared; • Consult with representatives of the recovery team/s for relevant species; • Consider linkages with other major recovery initiatives for relevant species in the region, including those required through other EPBC Act conditions of approval for NSW mining developments, to build more efficient and coordinated landscape scale outcomes for listed species; • Continue to consult with NSW OEH in relation to the above points.
Appendix K, Appendix M	**Biodiversity Management Plan** Please provide more detail on how existing woodland remnants at offset sites will be managed, improved and expanded, and what management actions will be included for species other than the koala, such as the quoll, woodland birds and flora species with particular disturbance requirements. The Plan should describe and quantify expected outcomes from management actions, and include contingencies in case of failure to achieve outcomes, for example in case of an unplanned destructive event such as a very hot wildfire. The Plan should also include discussion about how adaptive management will be applied. Timeframes to achieve specified outcomes should be included, as far as possible, and include details on how the Plan will be resourced, monitored and reviewed. The department will also require further specification on the temporal relationship between the staged clearing of ecological communities and species

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	habitat at the mine site, the securing of offsets, and the proposed revegetation and other management actions to enhance the quality and extent of biodiversity values on the offset and mine sites. This will assist in understanding the value of the proposed overall conversation gain, relative to the progressive impacts of the project. This information should include quantitative performance targets for management actions on the offset sites, based on best available science.
Appendix K, Appendix M	**Offsets** The Biodiversity Offset Package as presented in the EIS requires further details of the on-ground values on the offset sites, and stronger outcomes overall, to meet EPBC Act requirements. Offsets should be designed to meet the principles outlined in the *EPBC Act Environmental Offsets Policy* (DSEWPaC, October 2012). Specifically, there needs to be greater emphasis on protecting existing high quality ecological community remnants, and supplementation of this with regeneration and improvement of existing patches where likely success of regeneration can be demonstrated. Individual listed species have also been identified as having residual impacts, and therefore require offsets that can demonstrate presence and/or capacity for habitat values to be restored to a state where they are viable and sustainable for listed species within a reasonable timeframe. A proposed offset site's context in the landscape (including surrounding land use), long term viability, and connectivity to existing remnants and priority restoration areas will influence a site's suitability and value as an offset. The department will continue to have close regard to the local expertise and strategic priorities of NSW OEH in relation to proposed offset site selection. In the context of this project, the proposed offset package should be able to demonstrate the following: • offsets should be secured in-perpetuity, such as through covenants on title, Biobanking mechanisms, and/or land transfers where agreed with OEH. The department is also willing to consider contributions to agreed private land management and stewardship arrangements where the outcomes are secure, long term and of a landscape scale; • there must be a commitment to no future mining activity or other major disturbance within offset areas; • offsets must demonstrate a conservation gain for each listed matter identified as having residual impacts at the proposed action site. This can be achieved through protection of high quality habitat, protection of important dispersal corridors, improvement to existing poorer quality remnants or a combination of these options, and to a scale appropriate to the degree of impact, consistent with the *EPBC Act Environmental Offsets Policy*; • offsets should contribute to the long term sustainability of listed matters, such as through improving landscape connectivity and consolidating existing conservation reserve networks, where this is possible;

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	• where offset sites are identified for regeneration works, there must be sufficient information provided to demonstrate likely success. For example, attempting regeneration of previously fertilized pastures and cropping land is unlikely to qualify as an offset; • rehabilitation of disturbance footprints does not qualify as an offset and should be referred to as a component of the project's ongoing operations rather than an 'offset'; • the effectiveness of the offsets to contribute to the management of salinity resulting from the proposed action should be discussed, as per the IESC advice.
Appendices as relevant to the IESC advice	**IESC Issues** The IESC provided its final advice on 27 May 2013 (Attachment B), raising a number of issues in relation to potential groundwater, surface water and salinity impacts, which the department recommends the proponent addresses in the Response to Submissions. The department is available to discuss this further with the proponent and NSW agencies.
Main Report, Section 3.7	**Power Supply** The proponent is in discussion with Essential Energy for the upgrade an existing 22kW power line from the Carroll substation to the Breeza substation. The proposed upgrade, or alternative options for power supply, may need to be considered as part of this project, in relation to any consequential or facilitated impacts to EPBC Act protected matters. Further detail on the likely presence of EPBC listed matters and potential impacts in relation to this activity is required.