Director General's Environmental Assessment Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

State Significant Development

Application Number	SSD 5581
Development	The Airly Mine Extension Project, which includes: • expansion of an existing underground coal mine using bord and pillar mining and panel and pillar methods to produce up to 1.8 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal for up to 25 years; • construction of reject emplacement areas; service and monitoring bores and associated infrastructure; • potential for underground disposal of coal rejects; • construction of a previously approved coal handling and preparation plant; • transportation of processed coal by rail to market; and • decommissioning all site infrastructure on completion of operations, and rehabilitating the site.
Location	Glen Davis Road, Capertee
Applicant	Centennial Airly Pty Ltd
Date of Issue	4 February 2014
General Requirements	The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.* In addition, the EIS must include: • a detailed description of the development, including: – need for the proposed development; – likely staging of the development - including construction, operational stage/s and rehabilitation; – likely interactions between the development and any approved and proposed mining operations, including detailed assessments of any required modifications to the approvals for these operations; – likely interactions with other approved developments/projects at the site; and – plans of any proposed building works; • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • a risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • a detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data; – an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and – a description of the measures that would be implemented to avoid, minimise and, if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and • a consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. The EIS must be accompanied by a report from a qualified quantity surveyor

	providing: • a detailed calculation of the capital investment value (as defined in clause 3 of the *Environmental Planning and Assessment Regulation 2000*) of the proposal, including details of all the assumptions and components from which the CIV calculation is derived; • a close estimate of the jobs that will be created by the development during the construction and operational phases of the development; and • certification that the information provided is accurate at the date of preparation.
Key Issues	The EIS must address the following specific issues: • **Subsidence** – including a detailed quantitative and qualitative assessment of the potential conventional and non-conventional subsidence impacts of the development that includes: - the identification of the natural and built features (both surface and sub-surface) within the area that could be affected by subsidence, and an assessment of the respective values of these features; - accurate predictions of the potential subsidence effects and impacts of the development, including a robust sensitivity analysis of these predictions; - a detailed assessment of the potential environmental consequences of these effects and impacts on both the natural and built environment, paying particular attention to those features that are considered to have significant economic, social, cultural or environmental values; and - consideration of potential cumulative impacts and consequences in those areas previously mined for oil shale; - a detailed description of the measures that would be implemented to avoid, minimise, remediate and/or offset subsidence impacts and environmental consequences (including adaptive management and proposed performance measures); • **Land Resources** – including a detailed assessment of impacts to: - soils and land capability (including erosion and land contamination); - landforms and topography, including 'the Grotto', cliffs, rock formations, steep slopes, etc; and - land use, including agricultural, forestry, conservation and recreational use; • **Water Resources** – including: - detailed assessment of potential impacts on the quality and quantity of existing surface water and ground water resources in accordance with the NSW Aquifer Interference Policy, including; o impacts on affected licensed water users and basic landholder rights; and o impacts on riparian, ecological, geo-morphological and hydrological values of watercourses, including groundwater dependent ecosystems and environmental flows; - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures; and - identification of any licensing requirements, including existing or future Environment Protection Licences (EPLs) or Pollution Reduction Programs (PRPs), and approvals under the *Water Act 1912* and/or *Water Management Act 2000*; - demonstration that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP); - a description of the measures proposed to ensure the development can operate in accordance with the requirements of any relevant WSP or water source embargo; and - a detailed description of the proposed water management system (including sewerage), water monitoring regime, beneficial water re-use program and all other proposed measures to mitigate surface water and groundwater impacts; • **Biodiversity** – including: - measures that would be taken to avoid, reduce or mitigate impacts on

biodiversity;
- accurate estimates of direct vegetation impacts, such as clearing and subsidence and indirect impacts such as 'edge effects';
- a detailed assessment of potential impacts of the development on any:
    - o terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities, groundwater dependent ecosystems; and
    - o regionally significant remnant vegetation, or vegetation corridors;
- a detailed assessment of the impact of the project on the Mugii Murrumban State Conservation Area (SCA), with reference to the issues identified in the Draft Plan of Management for the SCA and how subsidence monitoring is proposed to be undertaken with minimal impacts in the SCA; and
- an offset strategy, which is clearly quantified, to ensure that the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term;

- **Heritage** – including:
  - an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must:
    - o demonstrate effective consultation with the Aboriginal community in determining and assessing impacts, and developing and selecting mitigation options and measures; and
    - o outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); and
  - a Historic heritage assessment (including archaeology) which must:
    - o include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and,
    - o outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures);
- **Air Quality** – including a quantitative assessment of potential:
  - construction and operational impacts, with a particular focus on dust emissions including $PM_{2.5}$ and PM_{10} emissions and dust generation from coal transport;
  - an investigation of methods to control dust lift-off from coal wagons;
  - reasonable and feasible mitigation measures to minimise dust emissions, including evidence that there are no such other available measures; and
  - monitoring and best practice management measures, in particular real-time air quality monitoring;
- **Greenhouse Gases** – including:
  - a quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions;
  - a qualitative assessment of the potential impacts of these emissions on the environment; and
  - an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency;
- **Noise** – including a quantitative assessment of potential:
  - construction, operational and off-site transport noise impacts;
  - reasonable and feasible mitigation measures, including evidence that there are no such other available measures; and
  - monitoring and management measures, in particular real-time and attended noise monitoring;
- **Traffic & Transport** – including:
  - an assessment of potential traffic impacts on the capacity, efficiency and safety of the road network; and
  - a description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road network in the surrounding area over the life of the development;
- **Visual** – including:
  - a detailed assessment of the potential visual impacts of the development on private landowners in the surrounding area as well as from key vantage points in the public domain in particular, those available to recreational

	users from State forests, State conservation areas and national parks; and - a detailed description of the measures that would be implemented to minimise the visual impacts of the development; • **Waste** – including: - accurate estimates of the quantity and nature of the potential waste streams of the development, including tailings and coarse reject; - a tailings and coarse reject disposal strategy, including an adequate justification of the chosen strategy over other alternative disposal options, including underground stowage; and - a description of measures that would be implemented to minimise production of other waste, and ensure that that waste is appropriately managed; • **Hazards** – paying particular attention to public safety, including bushfires; • **Social & Economic** – including an assessment of the: - potential direct and indirect economic benefits of the development for local and regional communities and the State; - potential impacts on local and regional communities, including: o any increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and o impacts on social amenity, particularly impacts on local residents of and other nearby landowners and residents; - a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the development, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanism; and - a detailed assessment of the costs and benefits of the development as a whole, and whether it would result in a net benefit for the NSW community; and • **Rehabilitation** – including the proposed rehabilitation strategy for the site, having regard to the key principles in *Strategic Framework for Mine Closure*, including: - rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; - nominated final land use, having regard to any relevant strategic land use planning or resource management plans or policies; - a conceptual final landform design, including a detailed figure depicting relevant site features; and - the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*. These documents should be included as part of the EIS rather than as separate documents.
Consultation	During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with the: • Commonwealth Department of Environment; • Office of Environment and Heritage (including the National Parks and Wildlife Service and Heritage Branch); • Environment Protection Authority; • Division of Resources and Energy within the Department of Trade and Investment, Regional Infrastructure and Services; • Department of Primary Industries (including the NSW Office of Water, NSW Agriculture, Fisheries NSW, and Catchments and Lands (Crown Lands Division)); • Roads and Maritime Services; • NSW Health;

	• Hawkesbury-Nepean Catchment Management Authority; • Lithgow City Council; • Delta Electricity; and • relevant Aboriginal stakeholders. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, justification should be provided.
Further consultation after 2 years	If you do not lodge a DA and EIS for the development within 2 years of the issue date of these DGRs, you must consult further with the Director-General in relation to the lodgement requirements.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal.

Many of these documents can be found on the following websites:
http://www.planning.nsw.gov.au
http://www.bookshop.nsw.gov.au
http://www.publications.gov.au

Policies, Guidelines & Plans

Risk Assessment	
	AS/NZS 4360:2004 Risk Management (Standards Australia)
	HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)
Biodiversity	
	Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians (OEH)
	Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DECC 2004)
	BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW 2008)
	The Threatened Species Assessment Guideline – The Assessment of Significance (DECC 2007)
	NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Principles for the Use of Biodiversity Offsets in NSW (OEH)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
Water Resources	
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	State Water Management Outcomes Plan
	Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011
	NSW Government Water Quality and River Flow Objectives (OEH)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries.
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Floodplain Development Manual (DIPNR)
	Floodplain Risk Management Guideline (DECC)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	Technical Guidelines: Bunding & Spill Management (DECC)
	Environmental Guidelines: Use of Effluent by Irrigation (DECC)

	State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011
	Office of Water Guidelines for Controlled Activities (2012)
Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC, 1997)
	NSW State Groundwater Quality Protection Policy (DLWC, 1998)
	NSW State Groundwater Quantity Management Policy (DLWC, 1998)
	Murray-Darling Basin Groundwater Quality. Sampling Guidelines. Technical Report No 3 (MDBC)
	Murray-Darling Basin Commission. Groundwater Flow Modelling Guideline (Aquaterra Consulting Pty Ltd)
	Guidelines for the Assessment & Management of Groundwater Contamination (DECC, 2007)
	Any relevant Water Sharing Plan for groundwater and surface water resources
	NSW Aquifer Interference Policy 2012 (NOW)
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation 2002
	The Assessment and Management of Odour from Stationary Sources in NSW: Technical Framework and Notes (OEH)
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Noise & Blasting	
	NSW Industrial Noise Policy (DECC)
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	NSW Road Noise Policy (DECCW)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC)
	Environmental Assessment Requirements for Rail Traffic – Generating Development (OEH)
Land Resources	
	Agricultural Impact Assessment Guidelines 2012 (DP&I)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
Traffic & Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Heritage	
Aboriginal	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Historic	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Greenhouse Gases	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
Waste	
	Waste Classification Guidelines (DECC)
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

	Hazardous and Offensive Development Application Guidelines - Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
Socio-Economic	
	Draft Economic Evaluation in Environmental Impact Assessment (DoP)
	Techniques for Effective Social Impact Assessment: A Practical Guide (Office of Social Policy, NSW Government Social Policy Directorate)

ATTACHMENT 3
Department of Environment Requirements

Department of the Environment

Section 78A (8A) of the NSW *Environmental Planning and Assessment Act 1979*

A delegate for the Commonwealth Minister for the Environment has determined the Airly Mine Extension Project (EPBC 2013/7076), involving the expansion of underground mining operations at the existing Airly Mine in the Western Coalfields, 1 km north-east of Capertee, NSW to be a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The action is likely to have a significant impact on the following matters of National Environmental Significance:

- The values of a World Heritage property (s12 & 15A)
- The values of a National Heritage place (s15B & 15C)
- Listed threatened species and communities (s18 & 18A)
- A water resource, in relation to coal seam gas development and large coal mining development (s24D & 24E).

In particular, the proposed action is likely to cause subsidence related impacts, which may in turn, cause changes to the quantity and quality of water resources, the ecological integrity and function of ecological communities, habitat(s) for threatened species including, but not limited to, those listed in Appendix A, and the only known occurrence of a critically endangered species, *Pultenaea sp. Genowlan Point*. Impacts to water resources are also considered likely to impact on the values of the nearby Greater Blue Mountains World Heritage property (and National Heritage place).

In accordance with the bilateral assessment process for this project, the environmental assessment of the impacts of the controlled action must be assessed under the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The assessment must include enough information about the action and its relevant impacts to allow the Minister for the Environment to make an informed decision on whether or not to approve the action under the EPBC Act. To this end, provided below are the Environment Assessment requirements under the EPBC Act for input into the Director-General Requirements. The Director-General is required to notify the proponent of these requirements.

General information

1. The background of the action, including:
   a. the title of the action
   b. the full name and postal address of the designated proponent
   c. a clear outline of the objective of the action
   d. the location of the action
   e. the background to the development of the action
   f. how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action

g. the current status of the action, and

h. the consequences of not proceeding with the action.

Description of the controlled action

2. A description of the action, including:
    a. all the components of the action
    b. the precise location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts
    c. how the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts
    d. the timing and duration of the works to be undertaken, and
    e. to the extent reasonably practicable, a description of any feasible alternatives to the controlled action that have been identified through the assessment, and their likely impact, including:
        i. if relevant, the alternative of taking no action
        ii. a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action, and
        iii. sufficient detail to clarify why any alternative is preferred to another.

    Short, medium and long-term advantages and disadvantages of the options should be discussed.

Description of the existing environment

3. A description of the existing environment of the proposal location and the surrounding areas that may be affected by the action, including but not limited to:
    a. A detailed description of the methodology, timing, effort and results of all targeted surveys undertaken for all relevant matters, undertaken using accepted methodology for targeting listed threatened species, ecological communities and their respective habitat, including but not limited to OEH's *Survey and assessment guidelines* (2009), available at: http://www.environment.nsw.gov.au/threatenedspecies/surveymethodsfauna.htm and the Department of the Environment's species-specific survey guidelines for nationally threatened species, available at: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl; and a description of any limitations and constraints of the surveys undertaken. Please note that surveys should be undertaken within the site and in surrounding areas that may provide habitat for threatened species and ecological communities and that may be directly or indirectly impacted by the proposal
    b. a description of the nature, location and extent of all vegetation types occurring on-site and immediately adjacent to the site(s) that are likely to provide suitable habitat for threatened species and ecological communities
    c. a description and map of the nature, location and extent of likely suitable habitat, and the distribution, abundance and records for threatened species and ecological communities (including breeding, foraging, roosting habitat, habitat critical to the survival of the relevant species and ecological communities, movement corridors and migration paths) within the site and in surrounding areas that may be impacted by the proposal. Specifically, this must include but not be limited to the species at Appendix A.
    d. the regional distribution and abundance of suitable and potential habitat for threatened species and ecological communities surrounding the site

e. a description of the habitat parameters for relevant areas that support listed threatened species and ecological communities, including but not limited to ecological, geological and hydrological conditions for these areas

f. details of relevant baseline conditions to be used to assess the impacts of the action and the performance and effectiveness of proposed mitigation measures, including habitat parameters for relevant areas that support listed threatened species and ecological communities, or

g. details of the monitoring programs to be implemented before, during and after construction to determine these baseline conditions and measure the effectiveness of proposed mitigation measures

h. a description of the important water resources within the site and in surrounding areas, which is consistent with the most recent version of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development's *Information Guidelines for Proposals Relating to the Development of Coal Seam Gas and Large Coal Mines where there is a Significant Impact on Water* Resources

i. a description of water related assets that are dependent on any important water resources, including an estimation of the water requirements of those assets (i.e. regional water use), and

j. a description of World Heritage values and National Heritage values of the Greater Blue Mountains World Heritage property and National Heritage place, including but not limited to the riparian, stream/waterbody and aquatic flora and fauna values of Airly and Coco Creeks and The Capertee River.

Description of the relevant impacts of the controlled action

4. An assessment of all relevant impacts[1] with reference to the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines Matters of National Environmental Significance (2009)* and species specific guidelines as relevant (available at: www.environment.gov.au/epbc/guidelines-policies.html) that the controlled action has, will have or is likely to have. Information must include:

   a. a description of the relevant impacts of the action on matters of national environmental significance

   b. a detailed assessment of the nature and extent of the likely short term and long term relevant impacts

   c. a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible

   d. analysis of the significance of the relevant impacts, and

   e. any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

5. A description of the relevant impacts on EPBC Act listed species or ecological communities should include, inter alia, direct, indirect, cumulative and facilitative impacts on the:

   a. population of the species at the site

   b. area of occupancy of the species

   c. habitat critical to the survival of the species[2]

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[1] The term "relevant impact" is defined in section 82 of the EPBC Act. Note that the action has been found to be likely to have a significant impact on listed species and communities, under sections 18 and 18A of the EPBC Act, the World and National Heritage values of a World Heritage property and National Heritage place under sections 12, 15A, 15B and 15C and water resources, under sections 24D and 24E of the Act.

[2] "habitat critical to the survival of a species or ecological community" refers to areas that are necessary:

- for activities such as foraging, breeding, roosting, or dispersal;

d. breeding cycle of the population, and

e. availability or quality of habitat for the species.

If the conclusion is made that a threatened species or ecological community present or likely to be present onsite will not be impacted by the proposed action, sufficient justification must be provided.

6. In addition to requirements 4 and 5, additional information about potential impacts to the *Pultenaea sp. Genowlan Point* should include a detailed description of the potential and likely hydrological and subsidence related changes that may occur as a result from the proposed action. Direct and indirect impacts must be included. Cumulative and facilitative impacts should also be included. Please include impacts to the:
   a. ecological, geological and hydrological conditions specific to habitat critical to the survival of the species (Genowlan Point *Allocasuarina nana* Heathland)
   b. quality or integrity of the *Pultenaea sp. Genowlan Point* population including, but not limited to, assisting invasive species that are harmful to the ecological community to become established, and
   c. abiotic (non-living) factors (such as water, nutrients or soil) necessary for the survival of the species. For example, subsidence related impacts (such as surface and subsurface cracking, slumping, tilt, strain), altering groundwater levels, soil disturbance or substantial alteration of surface water drainage patterns (such as dewatering, ponding).

These impacts should be described for the construction, operational and decommissioning phases of the controlled action.

7. In addition to requirements 4 and 5, additional information about potential impacts to the Large-eared Pied Bat (*Chalinolobus dwyeri*) should include a detailed description of the potential and likely subsidence related changes that may occur as a result from the proposed action. Direct and indirect impacts must be included. Cumulative and facilitative impacts should also be included. Please include impacts to the:
   a. ecological and geological conditions specific to habitat critical to the survival of the species, and
   b. abiotic (non-living) factors (such as geological formations, water) necessary for the survival of the species, for example subsidence related impacts to habitat, interference with maternity and other roosts, or substantial alteration of hydrology.

These impacts should be described for the construction, operational and decommissioning phases of the controlled action.

8. An assessment of all relevant impacts to the World and Nationally listed Greater Blue Mountains World Heritage Area (GBMWHA), including but not limited to riparian, stream/waterbody and aquatic flora and faunal values of Airly and Coco Creeks and The Capertee River inter alia. The assessment must include, but not be limited to:
   a. a detailed description of the potential and likely hydrological modification, including changes to water and sediment quality and quantity entering the heritage area, that may occur as a result of the proposed action. Direct and indirect impacts must be included. Cumulative and facilitative impacts should also be included

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- for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators);
- to maintain genetic diversity and long term evolutionary development; or
- for the reintroduction of population or recovery of the species or ecological community.

Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the register of Critical Habitat maintained by the Minister under the EPBC Act.

b. a detailed assessment of any other potential and likely impacts on World and National Heritage.

9. The documentation provided must include information addressing all relevant impacts on water resources and water related values. This must include, but not be limited to, potential impacts to Matters of National Environmental Significance. The information must be consistent with the most recent version of the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development's *Information Guidelines for Proposals Relating to the Development of Coal Seam Gas and Large Coal Mines where there is a Significant Impact on Water* Resources, which is available at http://www.environment.gov.au/coal-seam-gas-mining/.

Proposed avoidance, safeguards and mitigation measures

10. A description of feasible mitigation measures, changes to the action or procedures, which have been proposed by the proponent or suggested in public submissions, and which are intended to prevent or minimise relevant impacts on matters of national environmental significance. Information must include:

    a. a description of how the action has been designed to avoid impacts to, threatened species and ecological communities, world and national heritage values and water resources;

    b. a description of the mitigation measures that will be undertaken to prevent or minimise the relevant impacts of the action. These mitigation measures should be justified and based on best available practices

    c. an assessment of the expected or predicted effectiveness of the mitigation measures including the effect on abundance and condition of species, suitable habitat and ecological communities, world and national heritage values and water resources

    d. any statutory or policy basis for the mitigation measures

    e. the cost of the mitigation measures

    f. an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs (including any relevant thresholds for corrective actions) for the relevant impacts of the action. Include the person or agency responsible for implementing these programs and the effectiveness of all mitigation measures, including any provisions for independent environmental auditing

    g. the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program

    h. identification of mitigation measures proposed to be undertaken by State governments, local governments or the proponent, and

    i. any changes to the action which prevent or minimise relevant impacts on listed threatened species and communities.

Offsets

11. Where impacts cannot be avoided or mitigated, an offset package to compensate for any predicted or potential residual significant impacts on matters of national environmental significance. Offsets should demonstrate consistency with the Commonwealth EPBC Act Environmental Offsets Policy (October 2012, or subsequent versions), available at: www.environment.gov.au/epbc/publications/environmental-offsets-policy.html. Information must include:

    a. how the offset compensates for the residual impacts, when the offset will be delivered and how the offset will be managed

    b. an assessment of the impact of the offsets on other matters of environmental, economic, or social significance

c. an analysis of cost, both financial and other, related to offsets, and

d. The information requirements provided at Appendix B.

Other approvals and conditions

12. Any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action. Information must include:

a. details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including:

i. what environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy, and

ii. how the scheme provides for the prevention, minimisation and management of any relevant impacts

b. a description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the EPBC Act), including any conditions that apply to the action

c. a statement identifying any additional approval that is required, and

d. a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

Economic and social matters

13. A description of the short-term and long-term social and economic implications and/or impacts of the project.

14. A description of the capital investment and ongoing employment and economic value of the project.

Environmental record of person proposing to take the action

15. Details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:

a. the proponent, and

b. for an action for which a person has applied for a permit, the person making the application.

16. Details of the proponent's environmental policy and planning framework.

Information sources

17. For information given in an environment assessment, the draft must state:

a. the source of the information

b. how recent the information is

c. how the reliability of the information was tested, and

d. what uncertainties (if any) are in the information.

Consultation

18. Any consultation about the action, including:

a. any consultation that has already taken place

b. proposed consultation about relevant impacts of the action, and

c. if there has been consultation about the proposed action — any documented response to, or result of, the consultation

19. Identification of affected parties, including a statement mentioning any communities that may be affected and a description of their views.

Appendix A[3]

Threatened fauna

Large-eared Pied Bat (*Chalinolobus dwyeri*, V)
Swift Parrot (*Lathamus discolour*, E & M)

Regent Honeyeater (*Xanthomyza phrygia*, E)

Booroolong Frog (*Litoria booroolongensis*, E)

Brush-tailed Rock-wallaby (*Petrogale penicillata*, V)

New Holland Mouse (*Pseudomys novaehollandiae*, V)

Pink-tailed Wormlizard (*Aprasia parapulchella*, V)

Spotted-tail Quoll (*Dasyurus maculatus maculatus*, E)

Bathurst Copper Butterfly (*Paralucia spinifera*, V)

Threatened flora

Pultenaea sp. Genowlan Point (CE)
Mount Vincent Mintbush (*Prostanthera stricta*, V)

Grey Grevillia (*Grevillia obustiflora*, E)

Clandulla Geebung (*Persoonia marginata*, V)

Prasophyllum sp.Wybong (C. Phelps ORG 5269, CE)

Wollemi Mint Bush (*Prostanthera cryptandroides subsp. cryptandroides*, V)

Austral Toadflax (*Thesium austral*, V)

Philotheca ericifolia (V)

Flockton Wattle (*Acacia flocktoniae*, V)

Evans Grevillia (*Grevillia evansiana*, V)

Rufous Pomaderris (*Pomaderris brunnea*, V)

Threatened ecological communities

White-box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland (CE)

World Heritage properties

Greater Blue Mountains World Heritage Area (GBMWHA)

National Heritage places

Greater Blue Mountains World Heritage Area (GBMWHA)

[3] Listed as CE - Critically Endangered, E – Endangered, V - Vulnerable

Appendix B

Information requirements for EPBC Act offset proposals

Details in relation to the proposed offsets package, including:

- the location and size, in hectares, of any offset site(s)
- maps clearly showing for each offset site:
  - the relevant ecological features
  - the landscape context, and
  - the cadastre boundary
- the current tenure arrangements (including zoning and ownership) of any proposed offset sites
- confirmed records of presence (or otherwise) of relevant protected matter(s) on the offset site(s), and
- detailed information regarding the presence and quality of habitat for relevant protected matter(s) on the offset site. The quality of habitat should be assessed in a manner consistent with the approach outlined in the document titled *How to use the offset assessment guide* available at: www.environment.gov.au/epbc/publications/environmental-offsets-policy.html.

Provide information and justification regarding how the offsets package will deliver a conservation outcome that will maintain or improve the viability of the protected matter(s) consistent with the *EPBC Act environmental offsets policy* (October 2012) including:

- management actions that will be undertaken that improve or maintain the quality of the proposed offset site(s) for the relevant protected matter(s). Management actions must be clearly described, planned and resourced as to justify any proposed improvements in quality for the protected matter(s) over time
- the time over which management actions will deliver any proposed improvement or maintenance of habitat quality for the relevant protected matter(s)
- the risk of damage, degradation or destruction to any proposed offset site(s) in the absence of any formal protection and/or management over a foreseeable time period (20 years). Such risk assessments may be based on:
  - presence of pending development applications, mining leases or other activities on or near the proposed offset site(s) that indicate development intent
  - average risk of loss for similar sites, and
  - presence and strength of formal protection mechanisms currently in place, and
- the legal mechanism(s) that are proposed to protect offset site(s) into the future and avert any risk of damage, degradation or destruction

Provide information regarding how the proposed offsets package is additional to what is already required, as determined by law or planning regulations, agreed to under other schemes or programs or required under an existing duty-of-care

The overall cost of the proposed offsets package; including costs associated with, but not limited to:

- acquisition and transfer of lands/property
- implementation of all related management actions, and
- monitoring, reporting and auditing of offset performance.