



BHP Mitsubishi Alliance

Appendix B

**Information Requirements for the Preliminary
Documentation – Cross Reference Table**

Further Information Required	Preliminary Documentation	Supporting Documentation
1. DESCRIPTION OF THE ACTION		
1.1 Provide all information presented in the referral on the description of the action in the preliminary documentation.	Section 2	–
1.2 The location, boundaries and size (in hectares) of the study area, project area, and disturbance footprint, including any adjoining areas which may be indirectly impacted by the proposal, including nearby vegetation, as well as water resources. Include mapping and coordinates.	Section 2.1 Section 2.3	–
1.3 A description of all components of the action, including the anticipated timing and duration (including start and completion dates) of each component of the project including decommissioning. In addition, any components which were included in the referral material, but are no longer part of the proposed action, must be clarified. This includes any changes that have been made to the project since the referral documentation was submitted.	Section 2	–
1.4 A description of the operational requirements of the action including any anticipated maintenance works.	Section 2.4 Section 2.5 Section 2.6	–
1.5 A description of the land uses surrounding the project area that may be directly or indirectly impacted by the proposed action.	Section 2.1 Section 2.3	–
1.6 An indicative layout plan for the proposed action area, including the location and type of land use, key infrastructure, and the number and location of roads and buildings. Include mapping and coordinates for each of the above.	Section 2.3 Section 2.4	–
1.7 To the extent reasonably practicable, provide any alternatives to the proposed action and project design, including taking no action, with a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action.	Section 2.3.1	–

Further Information Required	Preliminary Documentation	Supporting Documentation
1.8 Provide a description of any approval that has been obtained from a State or Commonwealth agency or authority, including any conditions that apply to the action. Include a statement identifying any additional approval that is required.	<i>Section 2.2.1</i>	–
1.9 Provide a map of the proposed action and the surrounding BM Alliance mine operations and their extensions including, but not limited to the Saraji mine initial Grevillea Pit – ML 1782.	<i>Figure 2-1</i> <i>Figure 2-2</i>	–
2. HABITAT ASSESSMENT		
2.1 Species and ecological communities general information		
2.1.1 Provide a habitat assessment for relevant listed threatened species and ecological communities, including any habitat located outside and adjacent to the project area or downstream of the project area where they have the potential to be impacted. Update maps of potential species habitat and threatened ecological communities to indicate potential habitat and TEC information adjacent to the project area over a larger area than what has been shown in the maps provided in the referral. The scale of maps should allow the department to understand the size of any relevant habitat patches that the proposed action forms part of and be of a scale relevant to the potential impacts of the proposed action and the distance that listed fauna is likely to move.	<i>Section 3</i>	<i>Appendix D</i>
2.1.2 Identify and describe known historical records of the listed threatened species and ecological communities in the broader region. All known records must be supported by an appropriate source (i.e. Commonwealth and State databases, published research, publicly available survey reports, etc.), the year of the record and a description of the habitat in which the record was identified, if available.	<i>Section 3.1.1</i> <i>Section 3.2</i>	<i>Appendix D</i>
2.1.3 Provide detailed mapping of suitable habitat (within, adjacent to and downstream of the project area, where relevant) for all listed threatened species and ecological communities, which: <ul style="list-style-type: none"> • is specific to the habitat assessment undertaken for each listed threatened species and ecological community (i.e. does not only illustrate relevant Queensland Regional Ecosystems) • includes an overlay of the project disturbance footprint • includes an overlay of the survey effort undertaken • includes known records of individuals derived from desktop analysis and field surveys • is provided separately as attachments in JPEG format. 	<i>Section 3.1.2</i> <i>Section 3.2</i>	<i>Appendix D</i>

Further Information Required	Preliminary Documentation	Supporting Documentation
2.1.4 Include an assessment of the adequacy of any surveys undertaken (including survey effort and timing). Assess the extent to which these surveys were appropriate and undertaken in accordance with relevant departmental survey guidelines for the listed species or ecological community.	Section 3.1.2.6	Appendix D
2.1.5 Include the total area of habitat (in hectares) for each relevant protected matter, including: <ul style="list-style-type: none"> • total habitat within the project area • where relevant, total habitat in the project area and surrounds. 	Section 3.2.6	Appendix D
2.2 Specific information for Listed threatened species and ecological communities		
Ornamental snake (<i>Denisonia maculata</i>) - Vulnerable		
2.2.1 Discussion of vegetation composition and structure on relevant land zones (i.e. riparian vegetation, gilgai mounds and depressions, Brigalow TEC, cracking clay soils and microhabitat features). In the species' habitat assessment, include consideration of riparian vegetation and dispersal habitat between habitat patches.	Section 3.2.1 Section 3.2.6.5	Appendix D
2.2.2 Details and locations (including a map) of water bodies that may provide known food sources (i.e. frog species).	Section 3.2.6.5	Appendix D
2.2.3 A discussion of habitat use requirements (e.g. shelter/refuge, foraging, dispersal, etc.), including consideration of known important habitat and suitable habitats.	Section 3.2.6.5	Appendix D
2.2.4 The total area (in hectares) of each identified habitat type (e.g. shelter/refuge, foraging, dispersal, etc.).	Section 3.2.6.5	Appendix D
Greater glider (southern and central) (<i>Petauroides volans</i>) – Endangered		
2.2.5 The <i>Conservation Advice for Petauroides volans</i> (greater glider (southern and central)) (greater glider conservation advice) states that all populations of greater glider are considered to be important populations. Include consideration of this within the preliminary documentation.	Section 3.3.1 Section 3.2.6.2	Appendix D

Further Information Required	Preliminary Documentation	Supporting Documentation
<p>2.2.6 The department does not consider that the habitat definitions for denning, foraging and dispersal provided in the referral documentation are consistent with the greater glider conservation advice or the <i>Guide to greater glider habitat in Queensland</i>.</p> <p>The department considers that habitat definitions for denning and foraging/dispersal should be updated as follows:</p> <ul style="list-style-type: none"> • Foraging/Dispersal Habitat: All areas containing locally important dominant/co-dominant trees for foraging, such as (but not limited to) <i>Corymbia citriodora</i>, <i>Eucalyptus moluccana</i>, <i>E. tereticornis</i>, <i>E. crebra</i>, <i>C. intermedia</i> and <i>E. portuensis</i>. • Potential/Future Denning Habitat: All areas containing appropriate trees with a diameter at breast height greater than 30 cm, but less than the relevant Regional Ecosystem threshold for large trees. • Likely/Current Denning Habitat: All areas containing appropriate trees with a diameter at breast height greater than the relevant Regional Ecosystem threshold for large trees. 	<p>Section 3.1.4 Section 3.2.6.2</p>	<p>Appendix D</p>
<p>2.2.7 Provide a map indicating habitat for the species within and adjacent to the project area to indicate the extent of the species' habitat and the context of the project area.</p>	<p>Section 3.2.6.2</p>	<p>Appendix D</p>
<p>2.2.8 Present an analysis of the availability and density of tree hollows suitable for use by the greater glider (southern and central) within the project area and project footprint.</p>	<p>Section 3.2.6.2</p>	<p>Appendix D</p>
<p>2.2.9 The department notes that ground-based surveys for hollows are not considered adequate to determine hollow size or presence (per the greater glider conservation advice).</p> <p>Ensure that adequate surveys are undertaken to determine the presence and density of large trees within the development footprint, or undertake tree-climbing based hollow surveys), to inform hollow presence within the study area.</p>	<p>Section 3.2.6.2</p>	<p>Appendix D</p>
<p>Squatter pigeon (southern) (<i>Geophaps scripta scripta</i>) – Vulnerable</p>		
<p>2.2.10 A discussion of vegetation composition and structure on relevant land zones (i.e. specific tree and grass species). A discussion of non-native grasslands that the species may utilise as it moves between habitat patches, noting that it is known to occur in disturbed areas.</p>	<p>Section 3.2.1</p>	<p>Appendix D</p>
<p>2.2.11 A discussion of breeding, foraging and dispersal habitat requirements. Include information of the presence or lack thereof of any stony rises in the study area and adjacent areas that may provide breeding habitat.</p>	<p>Section 3.2.6.4</p>	<p>Appendix D</p>

Further Information Required	Preliminary Documentation	Supporting Documentation
2.2.12 Identification of permanent water bodies or watercourses within one (1) kilometre of the disturbance footprint to support breeding habitat.	Section 3.2.6.4	Appendix D
2.2.13 Identification of permanent or seasonal water bodies or watercourses within three (3) kilometres of the disturbance footprint to support foraging habitat.	Section 3.2.6.4	Appendix D
2.2.14 The total area (in hectares) of each breeding, foraging and dispersal habitat type, including consideration of disturbed (non-remnant vegetation) areas.	Section 3.2.6.4	Appendix D
Koala (<i>Phascolarctos cinereus</i>) (combined populations of Qld, NSW and the ACT) – Endangered		
2.2.15 A discussion of vegetation composition and structure (i.e. known food trees). Provide a map indicating habitat for the species within the project area and adjacent to the project area to indicate the extent of the habitat patch that the project area encompasses.	Section 3.2.6.3	Appendix D
2.2.16 A discussion of habitat use requirements (e.g. foraging, dispersal, shelter, etc.).	Section 3.2.6.3	Appendix D
2.2.17 Update mapping and the habitat assessment to include all areas of koala dispersal habitat, including open grassland areas, and areas of non-remnant habitat that contain habitat patches or paddock trees that facilitate the koala's movement and use of habitat in the landscape.	Section 3.2.6.3	Appendix D
2.2.18 Provide an update to the total area (in hectares) of each identified habitat type (e.g. foraging, dispersal, shelter, etc.)	Section 3.2.6.3	Appendix D
2.2.19 The referral states that the koala habitat in the project area is unlikely to provide habitat critical to the survival of the species. Provide justification for this statement.	Section 3.2.6.3	Appendix D
Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant) threatened ecological community – Endangered		
2.2.20 An assessment (in a cross-reference table) of vegetation composition against the key diagnostic characteristics and condition thresholds for Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant) threatened ecological community (Brigalow TEC), including consideration of remnant and regrowth Brigalow TEC.	Section 3.2.6.1	Appendix D

Further Information Required	Preliminary Documentation	Supporting Documentation
2.2.21 Provide information (from within the last 5 years) on the extent of weed cover for the potential Brigalow TEC present in the project area.	<i>Section 3.2</i>	<i>Appendix D</i>
2.2.22 The total area (in hectares) of identified remnant and regrowth Brigalow TEC.	<i>Section 3.2.6.1</i>	<i>Appendix D</i>
2.2.23 The department notes that the referral states that surveys for the Brigalow TEC were undertaken in 2016. Provide an updated assessment of potential Brigalow TEC present within and surrounding the project area with the inclusion of data from the past few years.	<i>Section 3.1.2</i>	<i>Appendix D</i>
Bluegrass (<i>Dichanthium setosum</i>) – Vulnerable		
2.2.24 A discussion of habitat composition (i.e. soil composition, cleared woodland, grassy roadside remnants etc) relevant to the persistence of bluegrass in the proposed action area and surrounding region. The department does not accept only information on REs as a habitat description.	<i>Section 3.2.2</i> <i>Section 3.2.6.6</i>	<i>Appendix D</i>
2.2.25 Provide a map of species records and potential habitat including potential habitat outside and adjacent to the project area.	<i>Section 3.2.6.6</i>	<i>Appendix D</i>
King bluegrass (<i>Dichanthium queenslandicum</i>) – Endangered		
2.2.26 A discussion of habitat composition (i.e. soil composition, cleared woodland, grassy roadside remnants etc) relevant to the persistence of King Bluegrass in the proposed action area and surrounding region.	<i>Section 3.2.2</i> <i>Section 3.2.6.6</i>	<i>Appendix D</i>
2.2.27 The species has been associated with basalt (Fensham, 1999). Include this information in the habitat assessment for the species.	<i>Section 3.2.2</i> <i>Section 3.2.6.6</i>	<i>Appendix D</i>
2.3 Summary of habitat assessment information required		
2.3.1 Provide a summary table stating: <ul style="list-style-type: none"> the relevant departmental documents used for the listed species or community 	<i>Section 3.1.2.6</i>	<i>Appendix D</i>

Further Information Required	Preliminary Documentation	Supporting Documentation
<ul style="list-style-type: none"> the survey requirements for the listed species or community within these documents the survey methods utilised the survey effort undertaken. 		
2.3.2 Provide a summary table of the area (in hectares) of habitat for each listed threatened species and ecological community within the project area and the disturbance footprint.	<i>Section 3.2.5</i>	<i>Appendix D</i>
2.4 WATER RESOURCES		
General		
2.4.1 Provide an assessment of water resources within the project area and broader landscape that is relevant to the proposed action.	<i>Section 4</i>	<i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i> <i>Appendix K</i>
2.4.2 Ensure that any data relied on in the preliminary documentation is recent, including but not limited to, the flood modelling analysis to better reflect realistic scenarios.	<i>Section 4.2.1</i> <i>Section 4.3.1</i> <i>Section 4.4.1</i>	<i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i> <i>Appendix K</i>
2.4.3 Provide the following information: <ul style="list-style-type: none"> Regional overview of the proposed action area and water resources within and adjacent to the proposed action area. Include description of geological basin, coal resource, surface water catchments, groundwater systems and water- dependent assets. Provide a hydrology report in relation to surface water and groundwater impacts and mitigation measures to water resources within and adjacent to the proposed action area. Describe any third-party users of water resources within and adjacent to the proposed action area (including municipal, agricultural, industrial, recreational and environmental uses of water). 	<i>Section 4.2</i> <i>Section 4.3</i> <i>Section 4.4</i>	<i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i> <i>Appendix K</i>

Further Information Required	Preliminary Documentation	Supporting Documentation
<ul style="list-style-type: none"> • Ensure reference to the checklist within the <u>Independent Expert Scientific Committee (IESC) guidelines</u>. • Undertake appropriate risk analysis of proposed action including but not limited to flood modelling, drawdown, groundwater and surface water impacts. 		
Surface Water		
<p>2.4.4 Provide an assessment of waterways in the locality of the proposed action including:</p> <ul style="list-style-type: none"> • A discussion on water quality and local receiving environment, including water quality monitoring data and baseline data and where samples were obtained. • Quantify current surface water flow regimes, both within and adjacent to the proposed action area. Ensure there is sufficient baseline information to assess how location, volume, velocity and timing of flows may change as a result of the proposed action. • Discussion on flooding potential and consideration for effects of climate change. • Discussion on nearby water-dependent assets (e.g. wetlands, rivers, lakes, etc.) • and how they may be affected by the proposed action. 	<i>Section 4.2</i>	<i>Appendix E</i>
<p>2.4.5 Provide information on water quality monitoring data including upstream and downstream of any waterways within or adjacent to the proposed action area.</p>	<i>Section 4.2.2.4</i>	<i>Appendix E</i>
<p>2.4.6 Provide information and modelling on impacts of controlled and uncontrolled releases of water within catchments and waterways as a result of the proposed action within and adjacent to the proposed action area.</p>	<i>Section 4.2.4</i>	<i>Appendix E</i>
Ground Water		
<p>2.4.7 Provide habitat assessment for any known or likely terrestrial, aquatic, and subterranean Groundwater Dependent Ecosystems (GDEs) on site.</p>	<i>Section 4.4.1.1</i>	<i>Appendix H</i>
<p>2.4.8 Identify and describe known historical records of known and likely terrestrial, aquatic, and subterranean GDEs in the project area and broader region. All known records must be supporting by:</p>	<i>Section 4.4.1.1</i>	<i>Appendix H</i>

Further Information Required	Preliminary Documentation	Supporting Documentation
<ul style="list-style-type: none"> • an appropriate source (i.e. Commonwealth and State databases, published research, publicly available survey reports, etc.); • the year of the record; and • a description of the habitat in which the record was identified 		
<p>2.4.9 Identify and discuss the uncertainties in your predictions surrounding groundwater according to the <i>Information Guidelines Explanatory Note – Uncertainty analysis– Guidance for groundwater modelling within a risk management framework (2018)</i>.</p>	<p>Section 4.3.1.3</p>	<p>Appendix F Appendix K</p>
<p>3. IMPACT ASSESSMENT</p>		
<p>3.1 Listed threatened species and ecological communities</p>		
<p>3.1.1 An assessment of the likely impacts associated with the proposed action. At a minimum, assess the following potential impacts from the proposed action on protected matters within the project area and surrounds:</p> <ul style="list-style-type: none"> • vegetation clearance and loss of habitat • habitat fragmentation and patch isolation, with consideration of species movement patterns • habitat degrading processes, including edge effects and weed invasion • increased risk of vehicle strike • increased vibration and light and noise pollution • sedimentation and erosion • flooding and fire events habitat avoidance. 	<p>Section 3.3</p>	<p>Appendix D</p>
<p>3.1.2 Include the direct and indirect loss and/or disturbance of protected matters and their habitat as a result of the proposed action. This must include the area (in hectares) and quality of the habitat to be impacted and quantification of the individuals to be impacted (where applicable).</p>	<p>Section 3.3</p>	<p>Appendix D</p>
<p>3.1.3 An assessment of the likely duration of impacts to protected matters as a result of the proposed action.</p>	<p>Section 3.3</p>	<p>Appendix D</p>
<p>3.1.4 A discussion of whether the impacts are likely to be repeated, for example as part of maintenance.</p>	<p>Section 3.3</p>	<p>Appendix D</p>

Further Information Required	Preliminary Documentation	Supporting Documentation
3.1.5 A discussion of whether any impacts are likely to be unknown, unpredictable or irreversible.	<i>Section 3.3</i>	<i>Appendix D</i>
3.1.6 Justify, with supporting evidence, how the proposed action will not be inconsistent with: <ul style="list-style-type: none"> • Australia's obligations under the Biodiversity Convention, the Convention on Conservation of Nature in the South Pacific (Apia Convention), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) a recovery plan or threat abatement plan. 	<i>Section 9.1</i>	–
3.1.7 Provide an assessment and discussion of potential sedimentation impacts to waterways and habitat for protected matters within and adjacent to the project area.	<i>Section 3.3</i> <i>Section 4.2.3</i> <i>Section 4.2.4.4</i>	<i>Appendix D</i>
3.1.8 Provide an assessment on impacts to ornamental snake habitat and frog abundance (primary food source for the ornamental snake).	<i>Section 3.2.6.5</i> <i>Section 3.3.4.3</i>	<i>Appendix D</i>
3.1.9 Provide a risk analysis for fire regimes and potential impacts to the above listed threatened species and ecological communities from an uncontrolled burn in the project area and adjacent areas prior to the proposed action and following the proposed action.	<i>Section 5.1</i>	<i>Appendix D</i>
3.2 A water resource, relation to coal seam gas development and large coal mining development		
General		
3.2.1 Provide the following information: <ul style="list-style-type: none"> • Describe cumulative impacts on water resources within and adjacent to the proposed action area as well as in relation to other projects in the area. This includes current and previous mine projects including but not limited to the Saraji mine initial Grevillea Pit – ML 1782. • Ensure duration of impacts are considered and properly addressed and whether they are likely to be repeated (e.g. as part of maintenance) and whether any impacts are likely to be unknown, unpredictable, or irreversible. 	<i>Section 4</i>	<i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i> <i>Appendix K</i>

Further Information Required	Preliminary Documentation	Supporting Documentation
<p>3.2.2 Specifically, provide an assessment of the impacts on groundwater drawdown, groundwater contamination and surface water contamination of the following aspects as a result of the proposed action within and surrounding the project area:</p> <ul style="list-style-type: none"> • Changes to hydrological regimes from diversion of drainage features, creation of new temporary and permanent landforms affecting flood waters, and potential releases of water to the surrounding environment affecting water quality. • Changes to geomorphology and flow characteristics of Phillips Creek through flood barriers/berms. • Reduction in Phillips Creek alluvial drainage system and potential to impact vegetation along creek. • Reduced flows in local drainage lines and potential for erosion and sedimentation in downstream environment • Potential increases in depth and energy conditions for flood behaviour in Spring and Phillips Creek • Hydrogeological flood impacts resulting from residual void maintained as a groundwater sink. • Reduction in groundwater and availability of use for GDEs • Long term impacts to groundwater from ongoing final pit void water evaporation • Reduced groundwater levels and alterations to the groundwater regime post closure 	<p><i>Section 4.3.3</i> <i>Section 4.4.1.2</i></p>	<p><i>Appendix F</i> <i>Appendix H</i> <i>Appendix K</i></p>
<p>3.2.3 Provide supporting information for the following claims as mentioned in the referral:</p> <p>“It was determined that a minor change in the overall mine affected water was modelled using the Central Region Water Balance Model” (p.40, Referral).</p> <p>“The removal of thin unsaturated alluvium during the open cut mining is not considered to markedly impact on the alluvium groundwater or the Phillips Creek” (p.41, Referral).</p>	<p><i>Section 4.3</i></p>	<p><i>Appendix E</i> <i>Appendix F</i></p>
<p>Surface Water</p>		
<p>3.2.7 Provide information on sedimentation and erosion impacts on waterways within and adjacent to the proposed action area as a result of the proposed action.</p>	<p><i>Section 4.2.4.4</i></p>	<p><i>Appendix E</i></p>
<p>3.2.8 An assessment of the likely impacts to surface water resources associated with the proposed action, including from vegetation clearance, construction, operation, maintenance, and decommissioning components of the proposed action.</p>	<p><i>Section 4.2.4</i></p>	<p><i>Appendix E</i></p>

Further Information Required	Preliminary Documentation	Supporting Documentation
Groundwater		
3.2.9 Provide an assessment of groundwater drawdown and direct, indirect, and cumulative impacts to water quality and groundwater contamination as a result of the proposed action.	<i>Section 4.3.3</i>	<i>Appendix F</i> <i>Appendix K</i>
3.3.10 Provide a map of monitoring bore locations within the project area and surrounding area.	<i>Section 4.3.2</i>	<i>Appendix F</i>
3.3.11 Construct and provide appropriate groundwater models including predictive scenarios and uncertainty analysis. Review the risk analysis and uncertainty analysis considering the model predictions and revise and rerun groundwater models (if required).	<i>Section 4.3.1</i>	<i>Appendix F</i> <i>Appendix K</i>
3.3.12 Provide information on relevant GDEs within and adjacent to the proposed action area.	<i>Section 4.4</i>	<i>Appendix H</i>
3.3.13 Provide information on final voids including: <ul style="list-style-type: none"> • Precise location of final void • Assessment of design of final void and how the design will minimise impacts as well as an assessment of water quality within the final void. This assessment must consider any changes that will be made to current voids as an extent of the extension. • Provide details and reasoning on predicted water levels in the final void/s along with expected groundwater level at which the voids will cease to be sinks and begin recharging local groundwater. • Discuss whether through-flow groundwater conditions could be established. As void water is predicted to become hyper-saline, provide discussion on whether this water has any potential to leave pit lakes. 	<i>Section 6.1.2</i> <i>Section 4.3.3.2</i> <i>Section 4.3.3.4</i>	<i>Appendix F</i> <i>Appendix L</i> <i>Appendix M</i>
3.3.14 Provide details of field investigations undertaken (and any relevant previous published and/or unpublished studies) to determine presence and composition of stygofauna communities in the region and proposed action area. Include results of any groundwater bores sampled (e.g. levels and water quality) and justification regarding representativeness of samples taken.	<i>Section 4.4.1.1</i>	<i>Appendix H</i>

Further Information Required	Preliminary Documentation	Supporting Documentation
<p>Ensure assessment of the suitability of local habitat and subterranean aquatic fauna is provided and that the assessment is based on local geological, hydrological and other relevant information (e.g. alluvium presence in proposed action area, likely hydrological connectivity with geological formations, etc.).</p> <p>Stygofauna assessment guidance is available through the <u><i>Queensland Government Background information on sampling bores and stygofauna</i></u> and <u><i>Guideline for the environmental assessment of subterranean aquatic fauna</i></u>.</p>		
4. AVOIDANCE, MITIGATION AND MANAGEMENT MEASURES		
<p>4.1 Include the plans specified above (in approved or draft format) as appendices to the preliminary documentation.</p>	<i>Section 5</i>	<i>Appendix D</i> <i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i> <i>Appendix J</i>
<p>4.2 Provide a detailed summary of measures proposed to be undertaken by the proponent to avoid, mitigate and manage relevant impacts of the proposed action on relevant protected matters (including any measures required through other Commonwealth, State and/or local government approvals).</p> <p>Proposed measures must be based on best available practices, appropriate standards, evidence of success for other similar actions and supported by published scientific evidence. All commitments must be drafted using committal language (e.g. 'will' and 'must') when describing the proposed measures.</p> <p>All proposed measures must also be drafted to meet the 'S.M.A.R.T' principle:</p> <ul style="list-style-type: none"> • S – Specific (what and how) • M – Measurable (baseline information, number/value, auditable) • A – Achievable (timeframe, money, personnel) • R – Relevant (conservation advices, recovery plans, threat abatement plans) • T – Time-bound (specific timeframe to complete). 	<i>Section 5</i> <i>Section 5.1</i> <i>Section 5.2</i>	<i>Appendix D</i> <i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i>
<p>4.3 Describe how habitat fragmentation and patch isolation will be avoided, with consideration of whether avoidance areas will enable species mobility across the project area and still be connected to habitat in the broader landscape.</p>	<i>Section 2.3.1</i> <i>Section 5</i> <i>Section 5.1</i>	<i>Appendix D</i>

Further Information Required	Preliminary Documentation	Supporting Documentation
4.4 Information on the timing, frequency and duration of the proposed avoidance, mitigation and management measures to be implemented.	<i>Section 5</i>	<i>Appendix D</i> <i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i>
4.5 Details of specific and measurable environmental outcomes to be achieved for relevant protected matters, including an assessment of the expected or predicted effectiveness of the proposed measures.	<i>Section 5.1</i> <i>Section 5.2</i>	<i>Appendix D</i> <i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i>
4.6 Any statutory or policy basis for the proposed measures, including reference to the SPRAT Database and relevant approved conservation advice, recovery plan or threat abatement plan, and a discussion on how the proposed measures are consistent with relevant plans	<i>Section 3.3</i> <i>Section 5.1</i> <i>Section 5.2</i>	<i>Appendix C</i> <i>Appendix D</i> <i>Appendix E</i> <i>Appendix F</i> <i>Appendix H</i>
4.7 Details of ongoing management and monitoring programs, including timing, to validate the effectiveness of proposed measures and demonstrate that environmental outcomes will be, or have been, achieved.	<i>Section 5</i> <i>Section 6</i>	<i>Appendix C</i>
4.8 Details of tangible, on-ground corrective actions that will be implemented, including timing, in the event that monitoring programs indicate that the environmental outcomes have not been, or will not be, achieved.	<i>Section 5</i> <i>Section 6</i>	<i>Appendix C</i>
4.9 Provide information relating to mitigating potential direct, indirect, and cumulative impacts relating to groundwater and surface water, including a water management plan, modelling of groundwater drawdown associate with the project and potential impacts from dewatering, water quality data from different strata.	<i>Section 5.2</i> <i>Section 7</i>	<i>Appendix E</i> <i>Appendix F</i>
5. REHABILITATION REQUIREMENTS		

Further Information Required	Preliminary Documentation	Supporting Documentation
<p>5.1 The details of any rehabilitation activities proposed to be undertaken and how they meet best practice standards, including for the restoration of habitat for relevant protected matters and avoidance of sedimentation/erosion.</p>	<p>Section 6</p>	<p><i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i></p>
<p>5.2 The details of any rehabilitation activities proposed to be undertaken as required by any Commonwealth, state, and/or local government approvals.</p>	<p>Section 6 Section 6.1</p>	<p><i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i></p>
<p>5.3 A summary of the vegetation community/habitat that is being rehabilitated and the dominant species that will be included in the rehabilitation site.</p> <p>Note: climate suitable local seed mix should be included in the rehabilitation methodology where appropriate.</p>	<p>Section 6.1 Section 6.3</p>	<p><i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i></p>
<p>5.4 The proposed final landform, including rehabilitation completion criteria, and its relation to the pre-disturbance vegetation community. Include an assessment of the expected or predicted effectiveness of the proposed rehabilitation activities.</p>	<p>Section 6.1 Section 6.2</p>	<p><i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i></p>
<p>5.5 Provide detailed mapping of the project area that clearly identifies areas to be rehabilitated.</p>	<p>Section 6.1.2</p>	<p><i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i></p>
<p>5.6 Information on the timing, frequency and duration of proposed rehabilitation activities to be implemented, including anticipated time to completion (refer to 'S.M.A.R.T' principle above). All commitments must be drafted using committal language (e.g. 'will' and 'must') when describing the proposed activities.</p>	<p>Section 6</p>	<p><i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i></p>
<p>5.7 Details of ongoing management and monitoring programs, including timing, to validate the effectiveness of proposed rehabilitation activities and demonstrate that completion criteria will be, or have been, achieved.</p>	<p>Section 6 Section 6.2</p>	<p><i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i></p>

Further Information Required	Preliminary Documentation	Supporting Documentation
5.8 Details of tangible, on-ground corrective actions that will be implemented, including timing, in the event that monitoring programs indicate that the completion criteria have not been, or will not be, achieved.	Section 6.2	<i>Appendix C</i> <i>Appendix L</i> <i>Appendix M</i>
6. OFFSETS		
6.1 An assessment of the likelihood of residual significant impacts occurring on relevant protected matters, after avoidance, mitigation and management measures have been applied.	<i>Section 7</i>	<i>Appendix D</i>
6.2 If a residual significant impact is likely, provide a summary of the proposed environmental offset and key commitments to achieve a conservation gain for each protected matter in accordance with the Offsets Policy.	<i>Section 7</i> <i>Section 8.2.2</i> <i>Section 8.3</i>	<i>Appendix I</i>
6.3 If the nominated offset area/s is not secured prior to the submission of the PD, include a discussion regarding the risk that the nominated offset area/s may fail to be secured.	<i>Section 8.3</i>	<i>Appendix I</i>
6.4 The OMP must meet the information requirements set out in <u>Appendix A</u> , and must be prepared by a suitably qualified ecologist and in accordance with the department's <i>Environmental Management Plan Guidelines</i> (2014), available at: https://www.dcceew.gov.au/environment/epbc/publications/environmental-management-plan-guidelines .	<i>Section 8</i>	<i>Appendix I</i>
6.5 The department expects offset proposals to engage specifically with the ecological requirements of the protected matters being offset. For greater gliders, management measures such as weeding and fencing will not generally be accepted as suitable compensation for the loss of denning habitat, which is a limiting habitat requirement for the species. Where denning resources are proposed to be impacted, offset proposals should demonstrate an increase in the quality and / or availability of denning resources at an offset site, relative to the quantum of impact. Offsets proposals based on creation of hollows (or artificial denning resources) must realistically address whether they will be used by greater gliders, whether they will attract predator or competitor species and their durability, accompanied by suitable monitoring and performance measures. Deviations from these principles will need to be explained and justified.	<i>Section 8.2</i>	<i>Appendix I</i>
7. ECOLOGICALLY SUSTAINABLE DEVELOPMENT		

Further Information Required	Preliminary Documentation	Supporting Documentation
<p>7.1 A description of how the proposed action meets the principles of ESD, as defined in section 3A of the EPBC Act. The following principles are <i>principles of ecologically sustainable development</i>:</p> <ul style="list-style-type: none"> • decision making processes should effectively integrate both long term and short term economic, environmental, social and equitable considerations • if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation • the principle of inter-generational equity—that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations • the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision making improved valuation, pricing and incentive mechanisms should be promoted. 	<p><i>Section 9</i></p>	<p>–</p>
<p>8. ECONOMIC AND SOCIAL MATTERS</p>		
<p>8.1 An analysis of the economic and social impacts of the action, both positive and negative.</p>	<p><i>Section 10.1</i></p>	<p>–</p>
<p>8.2 Details of any public consultation activities undertaken and their outcomes.</p>	<p><i>Section 10.1.1</i></p>	<p>–</p>
<p>8.3 Details of any consultation with Indigenous stakeholders.</p> <p>Indigenous engagement</p> <p>Identify existing or potential native title rights and interests, including any areas and objects that are of particular significance to Indigenous peoples and communities, possibly impacted by the proposed action and the potential for managing those impacts. Describe any Indigenous consultation that has been undertaken, or will be undertaken, in relation to the proposed action and their outcomes.</p> <p>The department considers that best practice consultation, in accordance with the <u><i>Guidance for proponents on best practice Indigenous engagement for environmental assessments under the EPBC Act (2016)</i></u> includes:</p> <ul style="list-style-type: none"> • identifying and acknowledging all relevant affected Indigenous peoples and communities • committing to early engagement • building trust through early and ongoing communication for the duration of the project, including approvals, implementation and future management 	<p><i>Section 10.2</i></p>	<p>–</p>

Further Information Required	Preliminary Documentation	Supporting Documentation
<ul style="list-style-type: none"> • setting appropriate timeframes for consultation • demonstrating cultural awareness. <p>Describe any state requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action with regards to Indigenous peoples and communities.</p>		
8.4 Projected economic costs and benefits of the project, including the basis for their estimate through cost/benefit analysis or similar studies.	<i>Section 10.1</i>	–
8.5 Employment opportunities expected to be generated by the project (including construction and operational phases).	<i>Section 10.1.2</i>	–
9. ENVIRONMENTAL RECORD OF THE PERSON PROPOSING TO TAKE THE ACTION		
<p>9.1 Include details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:</p> <ul style="list-style-type: none"> • the person proposing to take the action • for an action for which a person has applied for a permit, the person making the application • if the person is a body corporate—the history of its executive officers in relation to environmental matters • if the person is a body corporate that is a subsidiary of another body or company (the parent body)—the history in relation to environmental matters of the parent body and its executive officers. 	<i>Section 11</i>	–