

DRAFT GUIDELINES FOR THE CONTENT OF A DRAFT
PUBLIC ENVIRONMENT REPORT

Environment Protection and Biodiversity Conservation Act 1999

**Borumba to Halys Transmission Connection Project
Queensland Electricity Transmission Corporation Limited**

Date: 24 November 2025

EPBC 2025/10128

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PREAMBLE

The Queensland Electricity Transmission Corporation Limited (the Proponent) proposes to construct, operate and decommission 99 kilometres (km) of high-voltage overhead transmission lines, a substation, and ancillary infrastructure between the proposed Borumba Pumped Hydro Energy Storage (PHES) Project (EPBC 2023/09646), and the existing Halys Substation via the existing Tarong Substation in Queensland.

The proposed action comprises the following key components:

- establishment of a new substation, proximate to the proposed Borumba PHES Project
- construction of approximately 99km of new dual circuit 275 (kV) High-Temperature Conductor (HTC) overhead transmission and associated easements, connecting a new substation at Borumba to the existing Halys Substation via the existing Tarong Substation
- extension of the substation platform and re-arranging of the bays to allow for new connections at the Tarong Substation
- connection into the existing Halys Substation
- establishment of heavy vehicle access tracks to the transmission line and associated infrastructure to facilitate construction, operation and maintenance activities.

The proposed action also includes the following ancillary works:

- borrow pits for road base materials used primarily for access track construction
- site amenities such as construction site offices and wash-down facilities
- material laydown areas
- concrete batching plants
- brake and winch sites to facilitate conductor stringing.

The proposal was referred under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act) to the Minister for the Environment on 25 August 2025. The delegate for the Minister determined on 19 September 2025 that approval is required as the action has the potential to have a significant impact on the following matters of national environmental significance (MNES) that are protected under Part 3 of the EPBC Act:

- listed threatened species and communities (sections 18 & 18A)
- listed migratory species (sections 20 and 20A).

Following the provision of preliminary information, the delegate of the Minister determined on 19 September 2025 that the proposed activity be assessed by a Public Environment Report (**PER**).

Information about the action and its relevant impacts, as outlined below, is to be provided in the PER. This information should be sufficient to allow the Minister to make an informed decision on whether or not to approve, under Part 9 of the EPBC Act, the taking of the action for the purposes of each controlling provision.

1 GENERAL ADVICE ON GUIDELINES

1.1 General Content

The PER must be written so that any conclusions reached can be independently assessed and must:

- a. Contain sufficient information to allow the Minister (or delegate) to make an informed decision on whether to approve, under Part 9 of the EPBC Act, the taking of the action for the purposes of each controlling provision.
- b. Contain sufficient information to enable interested stakeholders to understand the environmental consequences of the proposed development on matters of national environmental significance (MNES).
- c. Ensure all work and conclusions:
 - i. are presented clearly, unambiguously, succinctly and objectively
 - ii. are evidence based, and the evidence is provided
 - iii. are supported by peer reviewed literature, with references provided where available, or expert opinion sought where appropriate
 - iv. use scientifically robust methodologies appropriate to the purpose, including a justification of why the methodology/s was selected
 - v. include details of the methodology described in a manner that allows independent suitably qualified practitioners to apply the method, and state any limitations of the chosen approach
 - vi. are supported by maps, plans, diagrams, baseline surveys or other descriptive detail. Any maps or spatial data provided must be consistent with the department's [Guide to providing maps and boundary data for EPBC Act projects](#). Appendix A of the Guide provides a check list of the requirements for maps
 - vii. maps must clearly identify development footprints, buffer zones, any conservation areas where impacts will be avoided, areas of adjacent habitat that would be subject to indirect impacts, and areas that are to be retained within and adjacent to the site
 - viii. use active language and state clear commitments (e.g., 'must' and 'will') where appropriate, particularly in describing avoidance, mitigation and management actions and outcomes
 - ix. demonstrate the use of the most up to date statutory documents including Approved Listing Advice(s), Conservation Advice(s), Recovery Plan(s), Threat Abatement Plan(s) or comparable policy guidelines, approved survey methods, where such documents are publicly available or have been provided to the proponent for use
 - x. demonstrate the use of up to date; policy guidelines, scientific methods, information, data and species-relevant survey methods
 - xi. appropriately reference all sources using the Harvard standard. The reference list must include the address of any internet pages used as data sources and the date/s they were accessed.

- d. Relevant documents include, but are not limited to, the resources found in the [Species Profile and Threats Database](#) (SPRAT database) and [EPBC Act publications and resources](#). Section 139 of EPBC Act provides “the Minister must not act inconsistently with... a recovery plan or threat abatement plan” and “the Minister must, in deciding whether to so approve the taking of the action, have regard to any approved conservation advice for the species or community.” To this extent, the PER should consider and have regard to all relevant updated approved recovery plans, approved conservation advice and threat abatement plans, including those published after the time of the referral decision. This includes updates to definitions such as “habitat critical to the survival of the species”.
- e. The PER should take into consideration the [EPBC Act Significant Impact Guidelines](#)
- f. Please ensure that any additional supporting documentation and studies, reports or literature not normally available to the public from which information has been extracted be made available at appropriate locations during the period of public display of the PER.
- g. Be able to read as a stand-alone document and must include summaries of all relevant information referenced or provided in appendices. Complex or detailed technical information, studies or investigations necessary to support the main text should be attached to the main document as appendices.
- h. The level of analysis and detail in the PER should reflect the level of significance of the expected impacts on the environment. Any and all unknown variables or assumptions made in the assessment must be clearly stated and discussed. The extent to which the limitations, if any, of available information may influence the conclusions of the environmental assessment should be discussed.
- i. Please note that the Proponent is required to make the draft PER available for a period of public comment. Specific instructions regarding publication requirements will be provided as part of the Minister’s direction to publish. If it is necessary to make use of material that is considered to be of a confidential nature, the proponent should consult with the department on the preferred presentation of that material, before submitting it to the Minister for approval for publication.
- j. The proponent should ensure that the PER assesses compliance of the action with principles of Ecological Sustainable Development as set out in the EPBC Act, and the objects of the Act at [Attachment 1](#). A copy of Schedule 4 of the EPBC Regulations - Matters to be addressed by draft public environment report and environmental impact statement is at [Attachment 2](#).

1.2 Format and Style

- a. The PER should comprise three elements, namely:
 - i. the executive summary
 - ii. the main text of the document
 - iii. appendices containing detailed technical information and other information that can be made publicly available.
- b. The guidelines have been set out in a manner that may be adopted as the format for the PER. This format need not be followed where the required information can be more effectively

presented in an alternative way. However, each of the elements must be addressed to meet the requirements of the EPBC Act and Regulations.

- c. Include a reference table indicating where to find information and links within the document to relevant sections.
- d. Where relevant information was provided in the referral, please incorporate this information as necessary in the PER. The PER should be written so that any conclusions reached can be independently assessed. To this end, all sources must be appropriately referenced using the Harvard standard. The reference list should include the address of any Internet “web” pages used as data sources.
- e. The main text of the PER should include a list of abbreviations, a glossary of terms and appendices containing:
 - i. a copy of these guidelines
 - ii. a list of persons and agencies consulted during the PER process
 - iii. contact details for the proponent
 - iv. the names of the persons involved in preparing the PER and work done by each of these persons.
- f. Maps, diagrams and other illustrative material should be included in the PER. The PER should be produced on A4 size paper capable of being photocopied, with maps and diagrams on A4 or A3 size and in colour where possible.
- g. The Proponent should consider the format and style of the document appropriate for publication on the Internet. The capacity of the website to store data and display the material may have some bearing on how the document is constructed.

2 INFORMATION TO BE PROVIDED IN THE DRAFT PER

The content below has been determined in accordance with the requirements under schedule 4 of the EPBC Regulations – Matters to be assessed by draft public environment report and environment impact statement (see [Attachment 2](#)).

Some of the information required below may have been provided as part of the EPBC referral. However, the PER is a standalone document and must address the requirements of the EPBC regulations. Specific content requirements have been included under each section.

In order to adequately assess the nature, severity and extent of likely impacts, and the adequacy of any proposed avoidance, mitigation and/or compensatory (offset) measures, relevant to the matters listed in the preamble, the following information is required.

2.1 Description of the Action

The PER must provide the background and context of the action including (but not limited to):

- 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
- h. the consequences of not proceeding with the action.

2.2 Project Details

This should provide the background and context of the action including the following:

- a. All phases of the proposed action including early works, pre-construction and construction, operation of the transmission lines and substations, ongoing maintenance, and decommissioning should be described in detail. This is to include the most precise locations as practicable (including coordinates) of all works to be undertaken, structures to be built, upgrades to existing infrastructure on site (e.g. access tracks or easements) or elements of the action that may have impacts on MNES. The information must present all the key aspects including the transmission line, easements, access tracks, establishment of the Borumba substation, expansion of Tarong substation, the Halys substation connection, borrow pits, site amenities, material lay down areas, concrete batching plants and, brake and winch sites.
- b. The various elements of the proposed action must be illustrated with maps, diagrams and plans (at a suitable scale) as applicable and also be provided in digital format (e.g. shapefile *.kml or *.kmz). Where an indicative layout is provided, clearly identify which areas or components are subject to change. This section must include details of any environmental design features of project components. Mapping, and coordinates (where available), for each of the above, consistent with the [DCCEEW map guidance](#) must also be provided.
- c. A description of the anticipated start and completion dates of all actions such as the extent, staging and timing of clearing undertaken over the pre-construction and construction period.
- d. The description of the action must also include details on how the works are to be undertaken (including stages of development and their timing) and design parameters (including schematic diagrams) for those aspects of the structures or elements of the action that may have relevant impacts, including any temporary works or disturbances.
- e. The location, extent, and size (in hectares) of the total proposed action footprint, disturbance/impact footprint, and of any adjoining areas (beyond the impact area) that may be subject to indirect or facilitated impacts, including (but not limited to) edge effects, noise, light spill, vehicle access, changes to surface and groundwater quality from sedimentation, litter, runoff, hazardous substance spills, and other associated activities.
- f. Further description of the operational requirements of the action, including any anticipated maintenance works. For any works that come under this point, provide detail of potential impacts to protected matters as a result of operational and maintenance works.
- g. A description of the operational life of the proposed action and its components as well as any

proposed options for end of asset life such as replacement/refurbishment or decommissioning, and what activities are associated with these options. Please ensure that for these end of asset life activities, indicative timing and duration of the activities is provided, along with any vegetation clearing and rehabilitation works that may be required to facilitate the removal or replacement of infrastructure.

- h. A description, with supporting spatial information, detailing any shared infrastructure with adjacent projects/areas to be constructed to facilitate the proposed action, please include information regarding the pre-construction works.
- i. A description of the intended land uses proposed as part of the completed development, including of any proposed open space and/or conservation areas and associated ongoing activities, and details of the intended party that would be responsible for future management activities.
- j. Details of any local or State Government planning scheme, or plan or policy under any local or State Government planning system that applies or is likely to apply to the proposed action. Details should include (but are not limited to):
 - i. what environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy
 - ii. application/approval numbers for existing applications where relevant
 - iii. obtained approvals or additional approvals that are required.
- k. A description of any changes to the project or referral area that may have occurred since the original valid referral, including supporting imagery and spatial files. Please note these changes may require a formal variation request.

2.3 Feasible Alternatives

- a. Any feasible alternatives to the action to the extent reasonably practicable, including:
 - i. the alternative of taking no action
 - ii. a comparative description of the impacts of each alternative on the MNES protected by controlling provisions of Part 3 of the EPBC Act for the action
 - iii. sufficient detail to make clear why any alternative is preferred to another
 - iv. discussion of the short, medium and long-term advantages and disadvantages of the options should be discussed.
- b. This section should also consider whether the proposed action will facilitate further development and growth and indirectly cause increased pressure on MNES and whether identified indirect or facilitative impacts on MNES could be reduced by any feasible alternatives to the proposed action.
- c. Wherever possible, mapping and figures should be included to describe any alternative measures/routes.

2.4 Description of the Environment

The PER must provide a description of the environment affected by and surrounding the referral area (this may also include areas outside of the referral area i.e. the proposed transport route of materials), over both the short and long term, including:

- a. Details of previous and current land use within and surrounding the referral area, including any proximate EPBC referrals.
- b. Hydrology (surface and groundwater), including flood extents, relevant hydrogeology and local water quality.
- c. Soil and geological characteristics, physical, chemical and biological characterisation of any soils that will be disturbed as a result of the action. Include site investigations conducted to date and their results.
- d. Assessment of vegetation, not only limited to MNES (including raw data sheets, and species lists in attachments).
- e. Identification of conservation and special use areas, state and regional biodiversity corridors, key biodiversity areas and any outstanding natural features.

Please ensure that a recent Protected Matters Search Tool report is generated and used during the assessment before finalising the draft public environment report to identify any additional species (listed at the time of the controlled action decision) that may be affected by the action.

3 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

This section must provide the quantification of the extent of the MNES present both within and surrounding the referral area and details of the resources used to identify and assess the below MNES. The description of MNES should focus on the following controlling provisions:

- a. listed threatened species and communities (section 18 and 18A)
- b. listed migratory species (section 20 and 20A).

Output from the [protected matters search tool](#) must also be included as an appendix.

This section must address all listed threatened species and ecological communities and listed migratory species below, and any other threatened species or ecological community or listed migratory species listed under the EPBC Act at the time of the controlled action decision that may be impacted by the proposed action. Any listing events (e.g., the listing or up-listing of a species) that occur after the controlled action decision do not affect the assessment and approval process. However, updated statutory documents such as recovery plans and conservation advices for uplisted species must still be considered.

Listed threatened species and communities (section 18 & 18A):

- Australian Lungfish (*Neoceratodus forsteri*) – Vulnerable

- Black-breasted Button-quail (*Turnix melanogaster*) – Vulnerable
- Brush Sophora (*Sophora fraseri*) – Vulnerable
- *Coleus omissus* syn. *Plectranthus omissus* - Endangered
- *Coleus torrenticola* syn. *Plectranthus torrenticola* – Endangered
- Collared Delma (*Delma torquata*) – Vulnerable
- Conondale Spiny Crayfish (*Euastacus hystricosus*) – Endangered
- Corben’s Long-eared Bat (*Nyctophilus corbeni*) – Vulnerable
- Diamond Firetail (*Stagonopleura guttata*) - Vulnerable
- Dunmall’s Snake (*Furina dunmalli*) – Vulnerable
- Giant Barred Frog (*Mixophyes iteratus*) – Vulnerable
- Glossy Black-Cockatoo (south-eastern) (*Calyptorhynchus lathami lathami*) – Vulnerable
- Greater Glider (southern and central) (*Petauroides volans*) – Endangered
- Grey-headed Flying-fox (*Pteropus poliocephalus*) – Vulnerable
- Koala (*Phascolarctos cinereus*) combined populations of Queensland, New South Wales and the Australian Capital Territory – Endangered
- Latham’s Snipe (*Gallinago hardwickii*) – Vulnerable and Migratory
- Long-nosed Potoroo (northern) (*Potorous tridactylus tridactylus*) – Vulnerable
- Lowland Rainforest of Subtropical Australia – Critically Endangered
- Mary River Turtle (*Elusor macrurus*) – Critically Endangered
- Northern Quoll (*Dasyurus hallucatus*) - Endangered
- Painted Honeyeater (*Grantiella picta*) – Vulnerable
- Regent Honeyeater (*Anthochaera phrygia*) – Critically Endangered
- Scrub Turpentine (*Rhodamnia rubescens*) – Critically Endangered
- Southern Snapping Turtle (*Elseya albagula*) – Critically Endangered
- Spotted-tail Quoll (South-eastern mainland population) (*Dasyurus maculatus maculatus*) – Endangered
- Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregion – Endangered

- Squatter Pigeon (southern) (*Geophaps scripta scripta*) - Vulnerable
- Tall Velvet Sea-berry (*Haloragis exalata* subsp. *velutina*) – Vulnerable
- Three-leaved Bosistoa (*Bosistoa transversa*) – Vulnerable
- White Box-Yellow Box-Blakely’s Red Gum Grassy Woodland and Derived Native Grassland – Critically Endangered
- White-throated Needletail (*Hirundapus caudacutus*) – Vulnerable and Migratory
- Yellow-bellied Glider (south-eastern) (*Petaurus australis australis*) – Vulnerable.

Listed migratory species (section 20 & 20A):

- White-throated Needletail (*Hirundapus caudacutus*)
- Fork-tailed Swift (*Apus pacificus*)
- Latham’s Snipe (*Gallinago hardwickii*)

Note:

The above list may not be a complete list of listed threatened species, ecological communities and migratory species that will be or are likely to be impacted by the action. It is the proponent’s responsibility to ensure that any species and ecological communities listed as threatened or migratory at the time of the controlled action decision, which will or are likely to be impacted by the action are assessed.

Some of the listed threatened species requiring assessment are also listed as migratory under the EPBC Act. These species should be considered in accordance with their status as a threatened species. Assessment of these species does not need to be duplicated in the migratory species section.

This section must include the following:

3.1 Description

- Describe each listed threatened species, ecological community, and listed migratory species noted above (including EPBC Act listing status, abundance, condition, distribution, ecology and habitat preferences of the species or communities, etc).

3.2 Desktop Analysis

- Describe the desktop assessment methodology used to inform the field surveys in and within the vicinity of the referral area.
- This section must provide context to the referral area by discussing known historical records of listed threatened species and ecological communities and listed migratory species within the referral area and in the broader region. All known records must be supported by an appropriate source (i.e., Commonwealth and State databases, Queensland Government’s WildNet, Atlas of Living Australia, published research, publicly available survey reports etc.), and where possible, include the year of the record and a description of the habitat in which the record was identified.

3.3 Survey Effort and Outcomes

- a. Provide details of the scope, methodology, timing and effort of field surveys (undertaken by qualified species experts with demonstrated experience in detecting the above species and ecological communities) in and within the vicinity of the referral area. Provide details of:
 - i. how surveys were undertaken in accordance with relevant Commonwealth and State guidelines or best practice survey guidelines at the time of the surveys
 - ii. if relevant, the justification for divergence from relevant Commonwealth and State guidelines or best practice survey guidelines at the time of the surveys
 - iii. the total number of records (individuals and evidence of presence) of listed threatened species and ecological communities and listed migratory species in and within the vicinity of the referral area. Provide maps identifying verified sightings of MNES during studies or surveys.
- b. This section should include an assessment of the adequacy of any surveys undertaken (including survey effort and timing). In particular, the extent to which these surveys were appropriate for the species and undertaken in accordance with the department's relevant survey and policy guidelines available at [On-ground surveys and data for referred actions under the EPBC Act](#) and [SPRAT](#).
- c. This section must provide context to the referral area by discussing known historical records of listed threatened species and ecological communities and listed migratory species within the referral area and in the broader region.
- d. When providing survey details, please provide up to date baseline survey data in the referral area (impact area), and if relevant, the proposed offset site(s) including:
 - i. information on the survey methodology or technique used (e.g., BioCondition and MHQA assessments, thermal detection, camera trapping, tree hollow searches, SAT surveys etc)
 - ii. when surveys were conducted (e.g., dates, time of day, season, etc.) and survey effort (e.g., two hours for every one hectare within a 5-hectare area). Provide this information summarised in the PER and detailed in raw data sheets in attachments
 - iii. map/s of survey points or transects and how the survey points or transects were selected. Include points of surveyed areas
 - iv. data sheets, complete flora and fauna species lists and imagery of assessment locations.

3.4 Survey Timings

- a. Please note that some surveys can take more than a year to complete to ensure they are undertaken in the correct season. The department generally cannot accept survey data that is more than 5 years old because:
 - i. populations of species can change due to fires, drought, flooding and land management changes
 - ii. some species' ranges can shift due to climate change or other external factors.

- b. If data is older than four years at the commencement of project planning, the department recommends further up to date surveys are undertaken. For information on survey methodologies approved by the Australian Government, please refer to [On-ground surveys and data for referred actions under the EPBC Act](#).
- c. This section must include a discussion of any extreme weather events that have occurred in the vicinity, prior to, and during, the survey period and any potential impacts of these events on survey methodology, site access or survey results. Discuss how these have been addressed or accounted for, including through repeating surveys as appropriate.

3.5 Precautionary Principle

- a. Failing to survey appropriately for MNES present at a site could result in the department applying the precautionary principle with regard to residual significant impact determinations. That is, if no supporting evidence (such as survey results) is presented to support the claim of MNES absence, then the department may assume that the MNES is in fact present. The department will not accept claimed MNES absence without effective validation such as through the application of survey guidelines, other survey techniques (for example, a state guideline or an accepted industry guideline), or statements from relevant subject matter experts. Where a claim of absence is made, proposals must provide robust evaluation of MNES absence.

3.6 Habitat Assessment

- a. The PER must provide a robust assessment of the potential habitat available in and within the vicinity of the referral area for listed threatened species, ecological communities and listed migratory species. Habitat assessments must be derived from information obtained from:
 - i. field surveys and vegetation assessments
 - ii. the [Species Profile and Threats \(SPRAT\) Database](#)
 - iii. relevant departmental documents (e.g., approved conservation advices, recovery plans, listing advices, referral guidelines, etc)
 - iv. published research and other relevant sources (where relevant).
- b. The habitat assessments must consider the information in the SPRAT Database and relevant departmental documents. Where habitat assessments depart from departmental information, adequate justification must be provided to substantiate its suitability to the assessment.

Note:

Where potential habitat for listed threatened species and communities and migratory species is identified in the referral area, an assessment must be undertaken regardless of whether or not the species was recorded. As such, the potential for occurrence of listed threatened species and communities and listed migratory species must also be considered and assessed.

- c. At a minimum, the habitat assessment for each listed threatened species, ecological community and listed migratory species must:
 - i. identify any specific habitat requirement/s (e.g. breeding, foraging, dispersal, known

- important habitat, suitable habitats, roosting, etc)
- ii. define, identify and map climate refugia if present
- iii. describe and provide an assessment of the quality and importance of known or potential habitat for the species or communities within the referral area and surrounding areas
- iv. discuss existing threats (e.g. feral predators, traffic etc.) with reference to threats posed by the proposed action (where existing threats may compromise quality or viability of potential habitat, discussion should be substantiated by evidence (i.e. academic literature, case studies))
- v. consider the regional context, describing the connectivity of habitat in the broader landscape, providing annotated maps wherever possible
- vi. provide the total amount of each type of habitat (in hectares) in the referral area. Show this where relevant on each map provided.

Note:

The department does not accept the consideration of only Queensland Regional Ecosystem (RE) mapping to determine habitat for protected matters. Further, habitat assessments must not only consider remnant vegetation, but also non-remnant and regrowth vegetation where relevant to the protected matter, with reference to the relevant departmental documents.

- d. The total amount of each type of habitat must also be presented on a map (consistent with the [Guide to providing maps and boundary data for EPBC Act projects](#)) for each listed threatened species, ecological community and migratory species. Each map must:
 - i. include an appropriate base map that provides the geographical context of the referral area in the surrounding environment (i.e. aerial imagery)
 - ii. be specific to the habitat assessment undertaken for each listed threatened species, ecological community and migratory species
 - iii. include an overlay of the disturbance footprint within the referral area
 - iv. include known records of listed threatened species, ecological communities and listed migratory species derived from desktop analysis and/or field surveys, including clear polygons or point data
 - v. present a legend listing mapped features sized in hectares
 - vi. be of a suitable scale to allow interpretation and representation of mapped features.

3.6.1 Listed threatened species, communities and listed migratory species habitat assessment – specific considerations

The PER must include relevant information listed in Section 3.6 in addition to the following information listed in Table 1 for specific listed threatened species, ecological communities and listed migratory species. The following matters have been identified from the referral information as requiring further specific information in addition to the information required under Section 3.6, however, are not the only protected matters that must be addressed. Further, for these protected matters, further information required is not limited to the following comments.

Table 1: Listed threatened species and ecological communities and listed migratory species habitat assessment	
Additional information required	
Koala (<i>Phascolarctos cinereus</i>) (combined populations of Qld, NSW, and the ACT) – Endangered	
1.1	<p>Habitat descriptions should consider habitat use requirements (e.g., foraging, breeding, dispersal, shelter, climate refugia) within the referral area and align with the SPRAT database and relevant departmental documents including:</p> <ul style="list-style-type: none"> • Identifying habitat for the endangered Koala 2022 • the Draft Guide to nationally protected species significantly impacted by paddock tree removal • the Conservation Advice for Phascolarctos cinereus (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory 2022 • A review of koala habitat assessment criteria and methods • the National Recovery Plan for the Koala <i>Phascolarctos cinereus</i> (combined populations of Queensland, New South Wales and the Australian Capital Territory) 2022. <p>Please note that habitat critical to the survival of the species is not limited to state mapped remnant vegetation, rather it encompasses any habitat (remnant, high-value regrowth and non-remnant) with characteristics required to meet the species needs (as per the Koala Conservation Advice). Additionally, breeding/foraging habitat for the species is not limited to remnant vegetation and may also include regrowth vegetation.</p>
White-throated Needle-tail (<i>Hirundapus caduactus</i>) - Vulnerable and Migratory	
1.2	<p>Please identify, map and quantify potential foraging and roosting habitat for this species within the referral area, in accordance with:</p> <ul style="list-style-type: none"> • Conservation Advice <i>Hirundapus caudacutus</i> White-throated Needle-tail • the Draft referral guideline for 14 birds listed as migratory species under the EPBC Act. <p>With particular consideration of the description of roosting habitat as per the White-throated Needle-tail Conservation Advice which states that “the species roosts in trees amongst dense foliage in the canopy or in hollows” and the Draft referral guideline which states “the species has been found to roost in tree hollows in tall trees on ridge-tops, on bark or rock faces.”</p>
Greater Glider (southern and central) (<i>Petauroides volans</i>) – Endangered	

1.3	<p>Please identify and quantify key denning (likely/current and future) and foraging habitat, including the presence and density of tree hollows across the referral area. Habitat definitions must be consistent with the Conservation Advice for <i>Petauroides volans</i> (greater glider (southern and central)) 2022 and the Guide to greater glider habitat in Queensland 2022. Please provide supporting mapping.</p> <p>The department notes that ground-based surveys for hollows are not considered adequate to determine hollow size or presence (as per the Greater Glider conservation advice). Ensure that adequate surveys are undertaken to determine the presence and density of large trees within the development footprint, or employ other methods for direct observation of hollows such as undertaking tree-climbing based hollow surveys, or other appropriate survey methodologies (where justified and determined to be adequate in consultation with the Department), to inform hollow presence within the study area.</p>
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3.7 Impact Assessment

The PER must include an up-to-date assessment of potential impacts that may occur as a result of the proposed action. Wherever possible, this assessment must be substantiated by evidence (i.e. academic literature, case studies).

Consideration of impacts must not be confined to the immediate referral area but must also consider the potential of the proposed action to result in impacts in the vicinity of the referral area that are likely to contain populations and/or habitat for MNES.

Describe and assess the impacts (direct and indirect) to listed threatened species, communities and listed migratory species giving consideration to information provided in the SPRAT Database and relevant departmental policies and guidelines, including the [Significant Impact Guidelines 1.1](#).

- a. Include a clear description and maps of the total extent and quality of the following:
 - i. habitat present for each relevant protected matter within the disturbance footprint and the referral area
 - ii. direct and indirect impact areas (including the total extent of habitat for each relevant protected matter to be impacted)
 - iii. total areas proposed to be retained/avoided (including the total extent of habitat present for each relevant protected matter to be avoided).

- b. Provide an assessment of the indirect, facilitated, and cumulative impacts that may occur as a result of the proposed action at a site specific and regional scale. The assessment should include consideration of:
 - i. the nature, likelihood, significance, and extent of impacts and whether any relevant impacts are likely to be unknown, unpredictable or irreversible
 - ii. timing and whether the impact is temporary or permanent
 - iii. species specific habitat requirements such as hollow bearing trees, nest trees, refuge habitat, foraging and breeding habitat, sheltering or other microhabitat features relevant to the species within and surrounding the development footprint (if applicable)
 - iv. whether connectivity and movement opportunities in the surrounding area may be retained, removed, or functionally lost or compromised

- v. adjacent areas of habitat that may or will be subject to intensification of ongoing impacts (for example, through increased human and vehicle presence)
 - vi. indirect or facilitated impacts that may result from the proposed action.
- c. A habitat connectivity analysis detailing, for relevant listed matters:
- i. the existing conditions within the landscape context of the referral area, prior to any works being undertaken
 - ii. proposed habitat connectivity during defined stages of the proposed action, such as pre-construction, habitat and land clearance and modification, construction, operation, rehabilitation, and decommissioning
 - iii. a figure, with aerial imagery and linework showing habitat connectivity for each matter for the referral area and surrounding landscape.
- d. Relevant to the potential impacts, a risk assessment should be conducted and documented.
- e. Consider impacts to listed threatened species, ecological communities and listed migratory species and their habitats from (but not limited to) the following.
- i. habitat loss and degradation and individual mortality from vegetation clearing
 - ii. habitat fragmentation and patch isolation within the referral area and surrounds, including consideration of:
 - width of disturbance corridor (clearing footprint) and any implications on habitat connectivity and the dispersal ability of threatened species across the referral area and within the broader landscape
 - species' movement patterns and site utilisation (including consideration of likely launch heights and gliding distances for the Yellow-bellied Glider and Greater Glider, supported by scientific literature)
 - in areas that may potentially be fragmented by the proposed action, provide average tree height to inform an understanding of Greater Glider and Yellow-bellied Glider gliding distance
 - whether the proposed action results in dispersal pathways being functionally compromised or lost for certain listed threatened species. If connectivity cannot be maintained, the isolated habitat resulting from the proposed action should be added to the total habitat area impacted.
 - iii. reduced or impacted TEC buffer zones
 - iv. edge effects including the potential for the introduction of weed species, pathogens and altered fire regimes in and within the vicinity of the referral area which may impact matters and degrade the habitat condition
 - v. height of project transmission lines and towers and risk of obstruction and entanglement in and/or electrocution of listed threatened and migratory species
 - vi. height of fencing infrastructure and risk of obstruction and entanglement of threatened

- and migratory species
- vii. potential increased presence of vertebrate predators and herbivores (e.g., cats, dogs, foxes, deer, pigs) and the impacts to listed threatened species and communities and listed migratory species
 - viii. potential increased risk of vehicle strike to fauna species in the pre-construction, construction, and operational phase of the project
 - ix. potential to generate dust emissions (and impact on vegetation/TEC's and species habitat at and adjacent to the referral area) from the removal of vegetation and movement of soil in the pre-construction and construction phase of the project
 - x. species disturbance from increased noise and vibration during pre-construction, construction and operation of the proposed action. This must include an assessment of short- and long-term impacts, including background noise levels and take into account seasonal variations. The magnitude, duration and frequency of any vibration must be discussed. The potential for avoidance/abandonment of species habitat as a result of noise impacts must be discussed
 - xi. increased lighting associated with pre-construction, construction and operation of the action on relevant MNES. This assessment must provide details of the lighting used during all stages (including from any night operations/maintenance and increased vehicle traffic). The assessment of lighting impacts must have regard to the department's [National Light Pollution Guidelines for Wildlife](#) (2023). The potential for avoidance/abandonment of species habitat as a result of lighting impacts must be discussed
 - xii. in-situ, introduced, and remobilised contaminants, including but not limited to contaminated soils and imported fill material
 - xiii. an assessment of the risks and proposed management measures (including disposal) associated with hazardous chemicals and waste including any fuel to be transported, stored, and used during the pre-construction, construction and operational phases of the action; and / or chemicals such as herbicides and pesticides to be used during the pre-construction, construction and operational phases of the action
 - xiv. altered hydrology, including volume, timing, duration and frequency of ground and surface water flows (including flood flows) during the construction and operational phase (consider the intensity of slope angles), which may affect the physical structure and vegetation composition of habitat in the vicinity of the referral area
 - xv. water quality impacts from erosion and sediment run-off associated with vegetation clearing, earthworks, altered surface run-off and steep terrain as well as fertiliser, nutrients, litter, pesticides, and other contaminants of concern in runoff during the construction and operational phase which may impact species and ecological communities habitat in the vicinity of the proposed action
 - xvi. impacts to waterways through infrastructure and track water crossings including:
 - obstruction of movement to aquatic or semi-aquatic listed threatened species

- impacts to foraging, breeding and refuge habitat of aquatic or semi-aquatic listed threatened species
 - waterway realignment or diversion including consideration of scale, timing, duration, sedimentation, erosion, and nutrient run off as well as aquatic and terrestrial movement pathways.
- f. Please include current maps and coordinates/shapefiles showing the total referral area, total disturbance/direct and indirect impact areas, areas of habitat for MNES proposed to be retained
- g. Include details of any policy guidelines, relevant studies, surveys, or consultations with species experts/field specialists, which were not included in the referral or additional information provided in support of the referral.

Note:

Please review the following policy statement, providing guidance on what impacts constitute an 'indirect consequences(s)', [under paragraph 527E\(1\)\(b\) of the EPBC Act.](#)

3.8 Avoidance, Management and Mitigation Measures

The mitigation hierarchy is a process that is used to limit the amount of damage an action, such as a development, will have on the environment. There are three steps, and each step must be followed in order and to the greatest extent possible before moving on to the next. These steps are:

- 1) **Avoid** harm to the environment within and surrounding the referral area.
- 2) **Reduce** or mitigate environmental damage within and surrounding the referral area.
- 3) Identify **offsets** within the region that compensate for the significant residual impacts to listed species or ecological communities or listed migratory species.

Specific details on avoidance, minimisation, mitigation and management measures, along with relevant monitoring, must be provided for all stages of the project.

This section should provide:

- a. Demonstration that mitigation hierarchy has been applied and all options exhausted to avoid and mitigate harm to protected matters, before resorting to environmental offsets.
- b. In doing this, demonstrate that any avoidance or mitigation measures will provide ecological benefits to the species in the long-term. For example, on-site avoidance/conservation areas must be connected or provide connectivity opportunities for species in the broader landscape and must include enduring mitigation of impacts from adjacent development. A detailed description of the proposed measures to avoid, mitigate and manage potential impacts on listed threatened species and ecological communities, including the timing, frequency, and duration of the measures to be implemented.
- c. A description of avoidance and minimisation measures that have been considered and applied, including but not limited to:
 - i. project site selection to avoid valuable habitat
 - ii. micro-siting of infrastructure to avoid habitat fragmentation or patch isolation, with

- consideration of whether avoidance areas would still be connected to habitat in the broader landscape
- iii. avoidance of any activity that may indirectly impact on essential lifecycle processes for species
 - iv. co-locating infrastructure with existing easements and access tracks
 - v. minimising clearance widths for linear infrastructure including transmission corridors and access tracks
 - vi. adjusting powerline heights to avoid fauna obstruction/entanglement and maximise canopy retention.
- d. A description of proposed safeguards and mitigation measures to minimise and manage relevant impacts of the action, with reference to relevant statutory or policy documents at the Commonwealth and State level (e.g., Guideline: State Development Assessment Provisions (State Code 25)).
 - e. Pre-clearance and clearance procedures (including translocation procedures) to ensure that species are detected and managed to minimise mortality, stress, injury, or introduction of disease.
 - f. Ongoing management of direct and indirect impacts due to increased likelihood of human presence, and injury caused by negotiating various fence types and overhead transmission lines.
 - g. An assessment of areas where speed reduction can be implemented and, where applicable, details of how speed reduction is to be achieved (e.g. traffic calming devices) in those areas including plans showing the locations of each of these features and the manner in which they will be implemented.
 - h. Information on safe road design and placement, including installation of crossing warning signs, and/or wildlife threshold marking on roads (include maps and imagery).
 - i. Details of management measures to be implemented during the construction and operational phases to limit potential water quality impacts, such as erosion and sediment control measures, chemical spill control measures and stormwater management.
 - j. Identification of the estimated and approximate cost of mitigation measures and party responsible for undertaking proposed mitigation and measures, if different to the proponent.
 - k. Details of any proposed fauna movement solutions, fire breaks, no-go or buffer zones (including buffers between the disturbance footprint and remaining habitat in and within the vicinity of the referral area), and potential fencing, including:
 - i. location of any movement solutions, fire breaks, buffer zones, fauna-friendly fencing and anti-climbing barriers/exclusion fencing
 - ii. characteristics of the fauna movement solutions (including for aquatic species where applicable), fire breaks, buffer zones and fencing, including (i.e., height, length, wildlife proof measures etc)
 - iii. location and design of proposed fauna crossing infrastructure (including fish passage), as supported by scientific literature, noting the [Conservation Advice for *Petauroides volans*](#)

[\(greater glider \(southern and central\)\)](#) 2022 states artificial structures (nest boxes, glide poles) have limited effectiveness as mitigation actions for loss, degradation or fragmentation of Greater Glider habitat

- iv. whether the proposed measures, such as fencing will provide a wildlife barrier to/from/within the referral area
- v. details of any proposed buffer areas around remaining habitat as well as specific protected matters such as TEC's. Please note, any proposed buffers must be consistent with departmental documents where information is available (including, but not limited to, approved conservation advices, recovery plans, SPRAT Database) and must have adequate justification provided to substantiate suitability for that individual protected matter with consideration of the location, scale and severity of indirect impacts to that protected matter.
- l. Bushfire mitigation and management measures, including information on preventing the spread of bushfires that may start as a result of the proposed action to areas outside of the project area.
- m. A description of the environmental outcomes the measures are expected to achieve including details of any baseline data or proposed monitoring to demonstrate progress towards achieving these outcomes.
- n. Information on the timing, frequency, and duration of the measures to be implemented.
- o. An assessment of the predicted effectiveness of each proposed avoidance or mitigation measure, noting that the effectiveness of a particular measure is a reflection of confidence in the anticipated outcome. The assessment of effectiveness should be evidence based and include examples of demonstrated success of a particular measure to achieve the desired avoidance/mitigation outcome.
- p. For each measure proposed, indicate the:
 - i. impacts that are being avoided and/or the significance of impacts being reduced through mitigation
 - ii. scientific basis for conclusions being drawn
 - iii. an evidence-based likelihood of success/risk assessment
 - iv. responsible party
 - v. milestones / performance / completion criteria
 - vi. proposed monitoring and evaluation program
 - vii. corrective actions to be implemented should monitoring programs indicate that the environmental outcomes have not or will not be achieved, including when these corrective actions would be triggered (trigger values).

- q. Describe 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 not inconsistent with relevant plans. Please provide a discussion on how the proposed action is not inconsistent with relevant species' objectives or alternatively, how the proposed avoidance, mitigation/management and offsetting actions will compensate for any residual significant impacts, thereby ensuring consistency with the objective for relevant EPBC Act species.
- r. A detailed outline of an Environmental Management Plan (EMP) (or plans) that sets out the framework for management, mitigation and monitoring of relevant impacts of the action, including any provisions for independent environmental auditing. The EMP must:
 - i. address the project phases (pre-construction, construction, operation and decommissioning) separately
 - ii. state the environmental objectives, performance criteria, monitoring, reporting, corrective actions, responsibility and timing for each environmental issue
 - iii. describe contingencies for events such as heavy or prolonged rainfall or bushfire incidence, unexpected finds protocol for encountering unexpected contamination, the importation of inappropriate fill material, chemical spills, off-target impacts of chemical usage
 - iv. in the construction phase of the EMP, include (but not limited to) management measures such as dust suppression, sediment and erosion control, and enforcement of reduced construction zone vehicle speeds
 - v. the EMP should incorporate weed and pest management actions, including monitoring for the construction and operational phases
 - vi. the [Environmental Management Plan Guidelines](#) provides general guidance to stakeholders preparing environmental management plans for environmental impact assessments and approvals under Chapter 4 of the EPBC Act.

Note:

The draft PER must include detailed measures and use language that clearly identifies whether the measures will be implemented (e.g. 'will be undertaken' rather than 'may', 'where possible', 'if required').

The proposed measures must be based on best available practices, appropriate standards and supported by scientific evidence (e.g. outcomes of successful field trials, research papers, other projects, etc.).

All proposed measures for MNES must be specific, measurable, achievable, relevant and timebound (the 'S.M.A.R.T' principle).

3.9 Rehabilitation requirements

The PER should include the following information regarding any rehabilitation proposed during the construction, operational and decommissioning stages of the project:

- a. Details of any proposed rehabilitation, including location and timing. Please include maps showing the areas that will be rehabilitated within the referral area and the size in hectares of these areas.
- b. A summary of the vegetation community/habitat that is being rehabilitated and the dominant species that will be included in the rehabilitation site.
- c. Provide details of rehabilitation methods and how they meet best practice standards, including for the restoration of habitat for relevant protected matters and avoidance of sedimentation/erosion.
- d. The details of any rehabilitation activities proposed to be undertaken as required by the Commonwealth, State or Territory, and local government legislation.
- e. Information on the management of the rehabilitation site, including, but not limited to, weed and pest management.
- f. Rehabilitation acceptance criteria relevant to MNES and the procedures, including contingency measures, that will be undertaken to achieve them.
- g. Details of a monitoring program to determine the success of rehabilitation activities implemented by the proponent, including any contingency measures and when they would be triggered.
- h. Information on whether any post-construction rehabilitation sites will be subsequently cleared to facilitate maintenance during the operational stage or during the removal or replacement of infrastructure at end of asset life.

3.10 Residual Significant Impact

- a. After consideration of proposed avoidance, mitigation and management measures, provide an assessment of the likelihood of residual significant impacts on relevant listed threatened species and ecological communities and listed migratory species.
- b. The PER must provide a clear and definitive conclusion of residual significant impacts on relevant listed threatened species, ecological communities and migratory species to align with the [EPBC Act Environmental Offsets Policy \(2012\)](#).

3.10.1 Environmental Offsets

If it is determined that a residual significant impact is likely on listed threatened species and ecological communities and listed migratory species, see **Section 5** below.

3.10.2. Statutory Requirements

Provide a discussion that clarifies whether the action is consistent or inconsistent with relevant species recovery plans and threat abatement plans and Australia's obligations under the Biodiversity Convention, Apia Convention and CITES.

For listed migratory species, provide a discussion that clarifies whether the action is consistent or inconsistent with Australia's obligations under the Bonn Convention, CAMBA, JAMBA, ROKAMBA and any other international agreements approved under subsection 209(4) of the EPBC Act.

4 CUMULATIVE IMPACTS

- a. The PER should provide an assessment of cumulative impacts where potential project impacts on MNES are in addition to existing impacts of other activities (including current or future developments by the proponent and other proponents in the region and vicinity). Of particular note, with reasonably available information, consider the proposed actions cumulative impacts with regards to the following projects:
 - The Borumba Pumped Hydro Energy Storage (PHES) Project (consisting of the Exploratory Works - EPBC 2023/09461 and Main Works - EPBC 2023/09646). In this section, please clearly define the responsible party for each stage of construction of and operation of the proposed Borumba substation in addition to an assessment of the cumulative impacts of these projects.
 - The proposed second stage of the development, the Borumba to Woolooga Transmission Connection Project (noting this proposed action is yet to be referred to the department at the time of writing these guidelines).
- b. The PER should also address the potential cumulative impact of the proposed action on ecosystem resilience, including the cumulative effects of climate change impacts on MNES.
- c. The PER should also provide a detailed assessment of any likely impact that this proposed action may facilitate on relevant MNES at the local, regional, state and national scale.

5 PROPOSED OFFSETS

INFORMATION REQUIREMENTS FOR EPBC ACT OFFSET PROPOSALS AND OFFSET MANAGEMENT PLANS

An EPBC Act offset proposal must demonstrate that the relevant species or ecological communities significantly impacted by the proposed action is/are not worse-off when compared to a situation where neither the impact nor the offset occurred.

- a. Where residual significant impacts remain after application of all reasonable avoidance and mitigation measures, a compensatory environmental offset in accordance with the *Environment Protection and Biodiversity Conservation Act 1999* Environmental Offsets Policy (EPBC Offsets Policy) is required.
- b. Offsets must be specific to the species or ecological community being impacted, must address the attribute of the protected matter that is impacted, and must deliver an outcome for the protected matter that is demonstrably equal or better than if neither the impact nor the offset occurred. Offsets are not intended to make proposed actions with unacceptable impacts, acceptable.
- c. If an offset is required, the PER must include the following:
 - i. **Offset Proposal** – The Offset Proposal must provide detail about the proposed offset site(s) including baseline survey information, habitat or vegetation quality scores, how the offset will be managed, and evidence that the protected matter is present or uses the offset site(s). The Offset Proposal must demonstrate how the proposed offset is

suitable and meets the principles of the [EPBC Act Environmental Offsets Policy](#) and must include sufficient information (in a table with supporting evidence) for the department to assess it using the EPBC [Offsets Assessment Guide](#).

- ii. **Offset Management Plan (OMP)** – The OMP supports the Offset Proposal and must detail all the management activities to be undertaken at the offset site(s) including setting environmental objectives, milestones, monitoring and reporting measures. Management plans and activities must be targeted towards the specific plant, animal, ecological community, or place (protected matter) that is being offset. If there is more than one offset site, then a separate OMP must be prepared for each site.

5.1 Habitat Quality Assessment

- a. For each listed threatened species, threatened ecological community, or migratory species where there is a residual significant impact, a suitable methodology must be used to assess habitat quality (i.e., endorsed by the department or supported by relevant literature), noting the same scoring mechanism must be used at both impact and offset sites.
- b. For each methodology, provide justification for how that methodology is suitable for each listed threatened species, threatened ecological community or migratory species. This includes proposed scoring attributes and indicators, attribute and indicator weightings and, if relevant, proxy measures.

Note:

The department encourages proponents to consult and seek endorsement from the department on a proposed method prior to undertaking any habitat quality assessment at both impact and offset site(s).

The department currently prefers habitat quality scoring methods for each prescribed matters to be consistent with the Modified Habitat Quality Assessment (MHQA) method. The MHQA tool derives habitat quality scores using an adaptation of the Queensland Government's ['Guide to determining terrestrial habitat quality version 1.2'](#) (DEHP Guide).

The MHQA aligns, as far as possible, to the DEHP Guide with the requirements of the EPBC Act Environmental Offsets Policy for determining habitat quality scores. In aligning with this policy, all habitat quality scoring methods are required to generate future scores for 'with' and 'without' offset scenarios. Forecast gains or loss in habitat quality score must be substantiated by scientific information and via the endorsed MHQA (or alternative) method.

To support the habitat quality assessment; a link to the DEHP Guide is provided above and the MHQA scoring guide, and MHQA scoring spreadsheet template (.xlsx) are provided herein. When calculating offsets, please refer to the department's published guidance: [How to use the Offsets Assessment Guide](#).

- c. A precautionary approach to forecasting scores should be applied, with all limitations and uncertainties considered, documented and integrated within the 'Confidence in Result % (Quality)' value applied in the Offset Assessment Guide (offset calculator). Please also note the following:
 - i. If a habitat quality gain of more than 2 points is proposed, or an achieved future habitat

quality score 'with offset' of 9 or 10, it becomes less certain that the conservation outcome can be achieved. The justification of effectiveness of the proposed management measures and associated habitat quality score improvements and (reflected in the confidence in result) must be supported by substantial evidence.

- ii. Higher habitat quality gains will generally be associated with lower 'confidence in result' scores in the Offset Assessments Guide to reflect the difficulty associated with achieving the conservation outcomes. In these cases, it is likely that outcomes-based commitments will be required in the associated management plan for the site(s), including specifying binding metrics to be met to demonstrate quality improvement. For further information, please contact the department to discuss the metrics that will be used to demonstrate achievement of quality standards.
- d. If an alternative methodology is proposed for assessing and scoring habitat quality for any/all of the prescribed matters likely to experience significant residual impacts as a result of the proposed action, the alternative methodology must:
- i. directly relate to habitat requirements of the species and factors associated with the viability of the prescribed matter, and align with information contained in the SPRAT database and relevant statutory/departmental documents
 - ii. be substantiated with appropriate field surveys in accordance with the relevant survey guidelines or using a scientifically robust and repeatable methodology.
- e. Where there are any inconsistencies between the habitat assessment approach and information contained in the SPRAT database, the inconsistencies must be discussed with the department prior to the submission of the assessment documentation and must be supported by scientific evidence including published research, independent expert advice and information derived from field surveys.

5.2 Offset Proposal Requirements

- a. The offset proposal must include, but not be limited to, the following:
- i. a detailed project description, including a site description and how and to what extent the proposed action will impact on protected matters
 - ii. details of the protected matters being impacted by the proposed action, including the total number of individuals or extent of habitat being impacted.
- b. Details about the offset proposal/offset site, must include:
- i. a description of the proposed offset site(s) including location, size, and relevant ecological/species habitat features, landscape context and cadastre boundaries of the offset site(s) (supported by mapping)
 - ii. information about how the proposed offset/s area will provide connectivity with other relevant habitats and biodiversity corridors
 - iii. information about how the proposed offset site/s contribute to relevant State and/or regional plan/s or initiatives for the conservation of the protected matter
 - iv. evidence of the presence of, or usage by, relevant MNES on, or adjacent to the proposed

offset site(s)

- v. evidence that the location of the offset site is suitable and provides a conservation benefit to the impacted protected matter. Note: The EPBC Offsets Policy states that in most cases, the offset site should be as close to the impact as possible
 - vi. up to date surveys and baseline data confirming the current condition/quality of vegetation on the proposed offset site (including number of hollow bearing trees if relevant), the extent and presence of weeds, and the extent of threats
 - vii. information about the ecosystems present, current usage of the proposed offset site, its general condition and location in the landscape/region
 - viii. an assessment of how the offset and impacts sites are like-for-like, i.e., the environmental values for the MNES at the offset are of the same type or equivalent to that affected by the proposed action
 - ix. the methodology, with justification and supporting evidence, used to inform the inputs of the Offsets Assessment Guide in relation to the proposed offset site for each relevant MNES, including:
 - total area of habitat (in hectares)
 - habitat quality (as discussed in Section 5.1)
 - time over which loss is averted (max. 20 years)
 - time until ecological benefit
 - risk of loss (%) without offset
 - risk of loss (%) with offset
 - confidence in result (%)
- c. The offset proposal must demonstrate how the offset meets the principles of the EPBC Offsets Policy and EPBC Offsets Assessment Guide to inform the Minister's decision on whether or not the project should be approved under the EPBC Act.
 - d. The offset proposal must engage specifically with the ecological requirements of the protected matter. For example, for a species like the Greater Glider, management measures such as weeding and fencing will not generally be accepted as suitable compensation for the loss of hollows suitable for denning, which is a limiting habitat requirement for the species.
 - e. Where denning or nesting resources are proposed to be impacted, offset proposals should demonstrate an increase in the quality and/or availability of these resources at an offset site, relative to the quantum of impact. Offset proposals based on creation of hollows (or artificial denning/nesting resources) must realistically address whether they will be used by the target MNES, 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.
 - f. Details of the actual or estimated cost of the offset proposal including costs associated with proposed mitigation and management measures onsite.

- g. details and execution timing of the mechanism to legally secure the environmental offset/s (minimum covenant or otherwise accepted method) proposed to be applied at any offset site/s to provide enduring protection (for at least the duration of the impact) for the potential offset area/s against development incompatible with conservation, including a draft of the protective mechanism and its terms. Note that protective mechanisms should continue in perpetuity.

5.3 Offset Management Plan (OMP) Requirement

- a. An offset management plan is a practical document that outlines what must be done to manage an offset site. A plan must detail all the management activities at the offset site and how progress will be monitored and reported. An OMP provides confidence that the outcomes described in an offset proposal can and will be achieved. The OMP must include, but may not be limited to:
 - i. a description of the proposed offset site(s) including location, size, condition, existing and future tenure, and relevant ecological/species values present and surrounding land uses
 - ii. maps and shapefiles to clearly define the location and boundaries of the offset area/s, accompanied by the offset attributes (e.g., physical address of the offset area/s, coordinates of the boundary points in decimal degrees, the relevant MNES that the environmental offset/s compensates for, and the size of the environmental offset/s in hectares)
 - iii. baseline survey information showing MNES presence and the extent and quality of the respective habitat(s) at the proposed offset site(s) in accordance with the relevant survey guidelines or using a scientifically robust and repeatable methodology
 - iv. summarised details of the nature of the conservation gain to be achieved for relevant MNES, including the creation, restoration and revegetation of habitat in the proposed offset area/s
 - v. information about how the proposed offset area/s will provide connectivity with other habitats and biodiversity corridors and/or will contribute to a larger strategic offset for the relevant MNES, this should include information about how the proposed offset/s area contributes to any state and/or regional plan/s for the conservation of the protected matter
 - vi. mechanisms for protection, for at least the full duration of the impact, under a conservation covenant or otherwise accepted method, noting that protection mechanisms for permanent impacts should continue in perpetuity
 - vii. completion criteria and, if necessary, performance targets that evidence protection or improvement of EPBC Act listed communities, species and their habitat, for the purpose of the plan:
 - completion criteria are longer term time-bound values, specified for measurable parameters, that if attained and maintained ensure the plan's environmental objectives are achieved, for example 'by Year 20, the approval holder must reduce non-native plant cover to within 5% of the benchmark value associated with each Regional Ecosystem'
 - performance targets are time-bound short- and medium-term targets, for management interventions and environmental condition, that are used to monitor, evaluate, review

and improve the effectiveness of the plan to offset impacts, for example 'by Year 10, the approval holder must reduce non-native plant cover to within 10% of the benchmark value associated with each Regional Ecosystem.'

- b. The OMP must include management measures that will protect or improve EPBC Act listed threatened ecological communities, species or migratory species and their habitat. Each management measure must:
 - i. be specifically linked to the attribute of the protected matter for which the management measure applies
 - ii. have timeframes for implementation
 - iii. include information about responsible parties
 - iv. be described sufficiently to avoid ambiguity and to inform plan implementation
 - v. be related to attaining/maintaining completion criteria and/or performance targets
 - vi. be derived from recognised principles, practice, or guidelines, and is justified – technically, scientifically and legally (e.g. by recommendation in a national recovery plan) – as an effective and appropriate measure to attain and/or maintain the plan's completion criteria and/or performance targets.
- c. Management activities must be targeted towards the needs of the protected matter that is offset and must align with the recovery objectives for the species as identified in relevant national recovery plans or conservation advices.
- d. The plan must identify and manage uncertainty. To this end the plan must specify:
 - i. key data/information used to formulate the plan
 - ii. the limitations and/or uncertainty associated with the use of that data/information
 - iii. the risks that limitation and/or uncertainty represents for plan failure.
- e. how limitations and/or uncertainty, and associated risks, are mitigated during plan implementation. For example, where a margin of safety is applied to management measures until uncertainty is reduced to an acceptable level or performance targets/completion criteria are attained/maintained.
- f. The plan must assess the risk of failure to achieve the plan's performance targets and/or completion criteria. To this end the plan must:
 - i. state the plans' performance targets and/or completion criteria
 - ii. identify events or circumstances that prejudice attainment/maintenance of performance targets and/or completion criteria. The events or circumstances must address scientific/ecological uncertainty, stochastic events and legal/land use planning factors that may represent risks
 - iii. include a qualitative assessment of the likelihood and consequence of those events or circumstances, and the residual risk of failure to achieve those criteria due to identified events or circumstances (assuming management measures will be implemented)

- iv. characterise risk as low, medium, high or severe, derived from likelihood (highly likely, likely, possible, unlikely, rare) and consequence (minor, moderate, high, major and critical)
 - v. outline how consequence, likelihood and risk level for each risk has been determined.
- g. The plan must manage the risk of failure to achieve performance targets and/or completion criteria by:
- i. specifying management measures that will be implemented to attain/maintain the completion criteria and/or performance targets
 - ii. enhancing monitoring and management measures for high-risk events or circumstances, thereby providing a 'margin of safety' to detect, avoid or mitigate the likelihood and/or impacts of the event or circumstance
 - iii. specifying measurable events or circumstances (management triggers) that detect actual or potential issues in a timely manner to avoid, minimise or mitigate adverse impacts
 - iv. ensuring the monitoring program includes activities to detect management triggers, and explains how monitoring activities may inform the selection and implementation of corrective actions
 - v. specifying methods to be used to determine whether the management trigger is project attributable
 - vi. specifying effective and appropriate corrective actions that may be implemented if a management trigger is realised
 - vii. monitoring the effectiveness of corrective actions and implementing appropriate responses in the event corrective actions are not effective.
- h. The plan must describe the monitoring methods that will be implemented, and:
- i. demonstrate the relevance of the monitoring methods to the protection of the relevant aspect of the protected matter(s) for which the offset is implemented
 - ii. include quantitative (e.g. on-ground survey results) and qualitative baseline data (e.g. photo-point monitoring sites) that establish the start quality/condition of the environment, and which can be used to measure performance against
 - iii. describe the sampling strategy (including monitoring area, site selection and sampling intensity over space and time) and statistical analyses to be employed
 - v. justify the sampling strategy/monitoring methods, including through
 - vi. an assessment of effectiveness and constraints to use
 - vii. the capacity to detect change in environmental condition due to management interventions
 - viii. the capacity to demonstrate attainment of performance targets and/or completion criteria
 - ix. the statistical power of the strategy/method

- x. a commitment to engage appropriately qualified experts to design and conduct monitoring and survey activities, and analyse monitoring results
 - xi. accounting for seasonal/climatic variability
 - xii. the provision of details of the location, nature and number of monitoring sites, including benchmark/reference sites to evaluate management performance.
- i. The plan must include commitments to report on plan implementation and success as well as opportunities for improvement. This is achieved by:
- i. identifying relevant reporting obligations under the EPBC approval, or otherwise proposing appropriate regular reporting intervals, objectives and methods (if the project is approved)
 - ii. specifying how plan/strategy implementation will be reported in accordance with those obligations
 - iii. including a reporting template specifying key risk management, management measures, monitoring and adaptive implementation outcomes for the reporting period
 - iv. including a schedule and triggers for reporting types (e.g. annual compliance, incident, non-compliance, contingency).

6 ENVIRONMENTAL OUTCOMES

- a. The PER should provide information on the outcomes that the proponent will achieve for MNES. Outcomes need to be specific, measurable, and achievable, and must be based on robust baseline data. To allow application of outcomes-based conditions, the PER should include:
- i. consideration of [Outcomes-based conditions policy and guidance \(2016\)](#), with suitable justification for considerations identified in the policy and guidance
 - ii. the specific environmental outcomes to be achieved, and reasoning for these in reference to relevant recovery plans, conservation advices and threat abatement plans. Including, for each proposed outcome:
 - the risks associated with achieving the outcome
 - the measurability of the outcome, including all suitable performance measures
 - appropriate baseline data upon which the outcome has been defined and justified
 - the likely impacts that the proposed outcome will address
 - demonstrated willingness and capability of achieving the outcome
 - commitments to independent and periodic audits of performance towards achieving outcomes
 - details of proposed management to achieve the outcome including, but not limited to, performance indicators, periodic milestones, proposed monitoring and adaptive management, and record keeping, publication and reporting processes.

7 OTHER APPROVALS AND CONDITIONS

- a. The PER must include information on any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action. This must include 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
 - ii. how the scheme provides for the prevention, minimisation and management of any relevant impacts
 - iii. 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
 - iv. a statement identifying any additional approval that is required
 - v. a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action
 - vi. attachment of relevant Commonwealth, State or Territory, and local government approvals and permits as supporting documents to the PER.

8 CONSULTATION

- a. The PER must provide details of any consultation that has occurred concerning the action, including:
 - i. any consultation that has already taken place
 - ii. proposed consultation about relevant impacts of the action and plans for future consultation throughout the life of the proposed action
 - iii. if there has been consultation about the proposed action on environmental matters, any documented response to, or result of, the consultation and management measures to address community concerns
 - iv. identification of affected parties, including a statement mentioning any communities that may be affected and describing their views
 - v. any consultation activities with local community groups or subject matter experts regarding MNES and include the outcomes of those consultations and advice sought.

Indigenous Consultation

- b. The PER must identify existing or potential native title rights and interests, including any areas and objects that are of particular significance to Indigenous peoples and communities, where available, possibly impacted by the proposed action and the potential for managing those impacts.
- c. The PER must describe any Indigenous consultation that has been undertaken, or will be undertaken, in relation to the proposed action and their outcomes. This should include:

- i. details regarding the specific Indigenous groups and Traditional Owners consulted and an indication of the areas, both tangible and intangible, of cultural significance across the referral area
 - ii. a discussion about how impacts to areas and/or objects of Indigenous cultural significance (tangible and intangible) are avoided, mitigated or minimised.
- d. Descriptions of 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.
- e. The department considers that best practice consultation, in accordance with the [Interim Engaging with First Nations People and Communities on Assessments and Approvals under the EPBC Act \(2023\)](#).

9 ENVIRONMENTAL RECORD OF PERSON(S) PROPOSING TO TAKE THE ACTION

- a. The information provided in the PER must include 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:
 - i. the person proposing to take the action
 - ii. for an action for which a person has applied for a permit, the person making the application
 - iii. if the person is a body corporate—the history of its executive officers in relation to environmental matters
 - iv. if the person proposing to take the action is a corporation, details of the corporation’s environmental policy and planning framework must also be included
 - v. 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.

10 ECONOMIC AND SOCIAL MATTERS

- a. The economic and social impacts of the action, both positive and negative, must be analysed. Analysis must include:
 - i. projected economic costs and benefits of the project, including the basis for their estimation through cost/benefit analysis or similar studies. Where possible, please include the total economic capital investment and economic ongoing value of the project
 - ii. economic and employment opportunities expected to be generated by the project (including construction and operational phases)
 - iii. identification, assessment and mitigation measures to reduce any potential impacts to humans from the pre-construction, construction and operation of the proposed action. This may include (but is not limited to) vehicle collision, noise, light, dust, and visual amenity impact.

- b. Economic and social impacts should be considered at the local, regional and national levels. Details of the relevant cost and benefits of alternative options to the proposed action, as identified in **Section 2.3** above, should also be included.

11 PROMOTING ECOLOGICALLY SUSTAINABLE DEVELOPMENT

- a. The PER must describe how the action will conform to the principles of ecologically sustainable development (ESD), which are as follows:
 - i. decision making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations
 - ii. 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
 - iii. 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
 - iv. the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision making.

12 INFORMATION SOURCES PROVIDED IN THE PER

- a. For information given in a draft Public Environment Report, the draft must state:
 - i. the source of the information
 - ii. how recent the information is
 - iii. how the reliability of the information was tested
 - iv. what uncertainties (if any) are in the information.

Ecological data provision

The PER must include an appendix of occurrence records (both sightings and evidence of presence) for all listed threatened and migratory species identified during field surveys for the proposed action. This data may be used by the department to update the relevant species distribution models that underpin the publicly available Protected Matters Search Tool (PMST). Records should also be provided for common species not listed under the EPBC Act to inform assessment of survey adequacy.

The species occurrence records must be provided in accordance with the department's [Guidelines for biological survey and mapped data \(2018\)](#) using the species observation data template provided with this request for additional information. Sensitive ecological data must be identified and treated in accordance with the department's [Sensitive Ecological Data – Access and Management Policy V1.0 \(2016\)](#) or subsequent revision.

13 CONCLUSION

An overall conclusion as to the environmental acceptability of the action should be provided, including discussion on compliance with principles of ESD and the objects and requirements of the EPBC Act. Reasons justifying undertaking the action in the manner proposed should also be outlined.

Measures proposed or required by way of offset for any unavoidable impacts on MNES, and the relative degree of compensation, should be restated here.

ATTACHMENT 1 - THE OBJECTS AND PRINCIPLES OF THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 SECTIONS 3 AND 3A

3 Objects of the Act

- (a) to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance.
- (b) to promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources.
- (c) to promote the conservation of biodiversity.
- (d) to promote a co-operative approach to the protection and management of the environment involving governments, the community, landholders and indigenous peoples.
- (e) to assist in the co-operative implementation of Australia's international environmental responsibilities.
- (f) to recognise the role of indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity.
- (g) to promote the use of indigenous peoples' knowledge of biodiversity with the involvement of, and in co-operation with, the owners of the knowledge.

3A Principles of Ecologically Sustainable Development

The following principles are principles of ecologically sustainable development.

- (a) Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations.
- (b) 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.
- (c) 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.
- (d) The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making.
- (e) Improved valuation, pricing and incentive mechanisms should be promoted.

ATTACHMENT 2 - SCHEDULE 4 OF THE EPBC REGULATIONS 2000 - MATTERS THAT MUST BE ADDRESSED IN A PER AND EIS

1 General information

1.01 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
- (h) the consequences of not proceeding with the action.

2 Description

2.01 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) relevant impacts of the action
- (e) proposed safeguards and mitigation measures to deal with relevant impacts of the action
- (f) any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action
- (g) to the extent reasonably practicable, any feasible alternatives to the action, 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
 - (iii) sufficient detail to make clear why any alternative is preferred to another.
- (h) any consultation about the action, including:
 - (i) any consultation that has already taken place

- (ii) proposed consultation about relevant impacts of the action
 - (iii) if there has been consultation about the proposed action — any documented response to, or result of, the consultation.
- (i) identification of affected parties, including a statement mentioning any communities that may be affected and describing their views.

3 Relevant impacts

3.01 Information given under paragraph 2.01(d) must include:

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

4 Proposed safeguards and mitigation measures

4.01 Information given under paragraph 2.01(e) must include:

- (a) a description, and an assessment of the expected or predicted effectiveness of the mitigation measures
- (b) any statutory or policy basis for the mitigation measures
- (c) the cost of the mitigation measures
- (d) an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing
- (e) the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program
- (f) a consolidated list of mitigation measures proposed to be undertaken to prevent, minimise or compensate for the relevant impacts of the action, including mitigation measures proposed to be taken by State governments, local governments or the proponent.

5 Other Approvals and Conditions

5.01 Information given under paragraph 2.01(f) 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
- (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
- (d) a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

6 Environmental record of person proposing to take the action

6.01 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 person proposing to take the action
- (b) for an action for which a person has applied for a permit, the person making the application.

6.02 If the person proposing to take the action is a corporation — details of the corporation's environmental policy and planning framework.