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Our ref: 12537606

21 October 2022

Damien O'Connor
Department of Climate Change, Energy, the Environment and Water

Haughton Pipeline, Stage 2 Project, Queensland (EPBC 2021/9133)

Dear Damien

This letter has been prepared to provide a summary of responses to the Department's adequacy review comments on the draft Preliminary Documentation (PD) for the Haughton Pipeline, Stage 2 Project, Queensland (EPBC 2021/9133), received 9 September 2022.

The Department's response comments have been reviewed, with amendments changed in the draft PD. The Department's comments and GHD's response comments are summarised in Attachment 1 below.

Kind regards

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Lead Engineer

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Copy to: Townsville City Council

Attachment 1

RFI Section	Draft PD issue	Department's response	GHD's response
General Content, Format Style	• The Department notes that Table 1.1 on page 8 does not include Item 7.3 'Minimum requirements for a draft Offset Area Management Plan' as referenced in Contents page iv and page 245.	• Section reference in Table 1.1 should exist for Item 7.3 to demonstrate if it has been considered and addressed.	Table 1.1 Section reference has been added for Item 7.3 of the IR Report to demonstrate it is being considered. An Offset Area Management Strategy (OAMS) has been included in the Preliminary Documentation which proposes land-based offsets for MNES species that will be subject to significant residual impacts due to the Project. Following completion of data analysis from recent condition surveys of the proposed offset site, an Offset Area Management Plan (OAMP) will be developed for the Project and submitted to DCCEEW for approval prior to commencement of the proposed action. The OAMP will be development in accordance with the requirements set out in Section 7.3 of the RFI and will be prepared by a suitably qualified ecologist in accordance with the Departments Environmental Management Plan Guidelines (DoE 2014).
Project Description	• **Table 2.4 HPS2 construction program** indicates site establishment for pipeline between March 2023 to May 2023, commencement of pipeline June 2023, and revegetation from July 2023 (concurrent with construction works). This indicates the pipeline will be laid in sections to allow concurrent revegetation to begin 1 month after initial site establishment.	Please provide clarification on site establishment timeline as it relates to commencement of revegetation activities in July 2023, to provide more detail on the timeline for disturbance in the project area (time between clearing and revegetation activities commencement).	Table 2.4 of the IR Report and Section 2.2.1 'Timing and duration' has been updated to provide further details on site establishment timelines, revegetation activity timelines and disturbance in the project area. A more detailed construction program has been provided in Appendix Y. Site mobilisation and site establishment will commence in April 2023 to May 2023, followed by clearing of the project area and construction of temporary access tracks and stockpile yards through to October 2023. Rehabilitation activities will commence in September 2023 (around four months after commencement of clearing) and will lag the pipeline construction work front by one month with rehabilitation works to be progressively completed as the pipeline is constructed. On completion of pipeline construction and pressure testing, the temporary stockpile yards and temporary access roads will be removed and rehabilitated. Construction of the pump station will be undertaken in parallel with the pipeline construction with mobilisation and site establishment commencing in April 2023 through to May 2023. Construction of in-river civil works, bank stabilisation and rehabilitation will be undertaken from May 2023 to November 2023 to limit construction during the wet season. Rehabilitation will occur in two phases being the in-river bank works (August to November 2023) and high level bank works near end of construction (February to April 2025) as the relevant construction areas are completed. Disturbance in the project area will be for a period of 27 months, with the disturbance area reducing progressively as the work areas are completed, stabilised and rehabilitated.
	Timing and duration detailed on page 29 indicates HPS2 Project to be completed by the end of March 2025, however Table 2.4 indicates completion of action by November 2024, indicating additional activities in the project area after construction is completed (clean up etc).	Clarification is needed on the purpose, location an impacts of additional activities between November 2024 and March 2025 in the project area. Alternatively a more detailed construction timeline that provides the additional information is acceptable.	Section 2.2.1 'Timing and duration' has been updated to provide further details on the project activities and timelines, and more detailed construction program has been provided in Appendix Y of the IR Report. Construction of the HPS2 is scheduled to take place over a period of approximately three years, with the works to commence in April 2023 through to final project completion in July 2026. The project will comprise of two phases: – Construction (build) phase to be completed by the end of July 2025 (27 months construction period) – Post construction phase, being a 12 month period for monitoring and maintaining the rehabilitation and rectification of any construction defective works

			Activities during the post construction twelve months defects liability period will include quarterly monitoring of rehabilitation and revegetation works against the acceptance criteria, periodic watering of established vegetation, undertaking of any required corrective actions, and rectification of any identified construction defective works.
	Item 2.8 on page 42 requests state-based water plans and requirements that are to be adhered to. Item 2.7.1 details ESCP methodology to monitor erosion and sediment inputs into Burdekin River Catchment.	Please provide further information with regards to monitoring sites and parameters, particularly with regards to how erosion/sediment control success will be measured/monitored in relation to potential impacts to downstream habitat for listed threatened species (e.g. against water quality objectives and/or the *Reef 2050 Water Quality Improvement Plan*). Please note that the department is likely to recommend to the delegate that a condition of approval be the implementation of an erosion and sediment control plan. Thus, further details will be required in the plan provided to ensure a full assessment can be undertaken as to its suitability.	Further details have been added to Item 2.7.1 of the IR Report, identifying the references for water quality standards together with the commitment to develop a water quality monitoring program. During the construction phase of the Project, off-site surface water releases must comply with the design objectives outlined in Table 8.2.1 of the Queensland Water Quality Guidelines (QWQG) 2009, which details stormwater quality design objectives for development in Queensland. The ESCP and IR Report have been updated to include the monitoring sites and parameters for water quality monitoring to be undertaken during construction, and the discharge objectives, which shall be included in the Contractors Water Quality Monitoring Program. The ESCP has been developed to comply with the Queensland Water Quality Guidelines (QWQG) 2009. In meeting this guideline, the project is following industry standard practice to mitigate impacts to waterways and the species within. The QWGG were developed by the state government to achieve ongoing water quality assessment and objectives under Australian and New Zealand Guidelines for Fresh and Marine Water Quality (the ANZECC 2000 Guidelines). The ANZECC 2000 Guidelines provide guideline values (numbers) or descriptive statements for different indicators to protect aquatic ecosystems and human uses of waters. The QWQG are also integrated with the 'Water Quality Guidelines for the Great Barrier Reef Marine Park' and in turn the 'Reef 2050 Water Quality Improvement Plan'. The Water Quality Guidelines for the Great Barrier Reef Marine Park describe the concentrations and trigger values for sediment, nutrients and pesticides that have been established as necessary for the protection and maintenance of marine species and ecosystem health of the Great Barrier Reef. The Reef 2050 WQIP is included as an action within the water quality theme of the Reef 2050 Plan. Its specific purpose is to identify management and monitoring requirements for all land-based pollution to improve the quality of water flowing from catchments adjacent to the Reef. By way of project compliance with the QWQG guidelines the project will meet the guideline objectives of the 'Reef 2050 Water Quality Improvement Plan' by reducing the impact to downstream habitat for threatened species. Further information has also been inserted into Item 2.8.1 identifying state-based requirements relating to water authorisation for take of water for construction.
Habitat Assessment	The PD refers to the following categories of habitat for the Squatter Pigeon: Breeding habitat Foraging habitat Drinking and dispersal habitat.	Please note that, in accordance with the SPRAT Profile, the department considers the following habitat categories for the species: Breeding habitat: Any remnant or regrowth open-forest to sparse, open-woodland or scrub dominated by *Eucalyptus*, *Corymbia*, *Acacia* or *Callitris* species, on sandy or gravelly soils (including, but not limited to, areas mapped as Queensland land zones 3, 5 or 7) and where groundcover vegetation is less than 33% of the ground area, within 1 km of a suitable, permanent or seasonal waterbody. Foraging habitat: Any remnant or regrowth open-forest to sparse, open-woodland or scrub dominated by *Eucalyptus*,	The definition of foraging and breeding habitat for squatter pigeon (southern) in Item 7.2.4 of the IR Report has been updated to include land zone 3. The addition of land zone 3, which is present in the Project area has resulted in a reclassification of the habitat types that the proposed action will impact, from drinking and dispersal habitat only, to suitable foraging, breeding, drinking and dispersal habitat for the squatter pigeon (southern). Corresponding changes across the remainder of the document have been made, including updates to the habitat calculations in Table 4.1 (Item 4.1.1), Table 4.5 (Item 4.2.1), Table 4.13 (Item 4.7.1) and Table 5.26 (Item 5.8.1), and updated mapping in Figure 3.6 of the IR Report. These changes have also been carried to Section 6.4 and Figure 6.4 of the MNES Assessment Report. Updated habitat calculations were incorporated into the draft PD, including the significant impact assessment for the squatter pigeon (southern). While suitable breeding and foraging is impacted, the impact is still considered unlikely to result in a significant residual impact on the subspecies, based on the Project area being located outside of an 'important population' of the subspecies (i.e. south of the Carnarvon Ranges), the small quantum of

		Corymbia, *Acacia* or *Callitris* species, on sandy or gravelly soils (including, but not limited to, areas mapped as Queensland land zones 3, 5 or 7) and where groundcover vegetation is less than 33% of the ground area, within 3 km of a suitable, permanent or seasonal waterbody. Dispersal habitat: Any forest or woodland occurring between patches of foraging or breeding habitat that facilitates movement between patches of foraging habitat, breeding habitat and/or waterbodies, and areas of cleared land less than 100 m wide linking areas of suitable breeding and/or foraging habitat. Please revise the PD to incorporate the above habitat descriptions and update the impact assessment accordingly.	and linear nature of the impact to habitat, and the availability of resources for the subspecies within the local and regional landscape. The disturbance will have negligible implications for movement, will not reduce the availability of any specific resources/microhabitats/habitats for particular elements of the bird's life history (e.g. breeding) that are limiting in the landscape in which the project traverses, and thus, the Project is not likely to lead to a decline in the local, let alone whole-of-range, population of the squatter pigeon (southern). Although suitable breeding and foraging habitat is mapped within the impact area, an 'important population' of the subspecies is not located within the Project area. As such, the Project will not impact habitat critical to the survival of an important population. Accordingly, the Project is considered unlikely to result in a significant impact on the squatter pigeon (southern).
	Item response 3.2.1 Table 3.2 indicates Critically Endangered *Numenius madagascariensis* (Eastern Curlew/Far Eastern Curlew) most recent records in proximity of the project area are from 1972 and 1981, assessed as unlikely to occur. The Department notes there are more recent recorded sightings for this species.	Public records in ALA indicate recent records approximately 15 km north of the northern edge of the project area in the region of Giru, with records as recent as 2021, 2011 and 2008. Suggest sightings data is verified and likelihood of occurrence for this species is reassessed if required.	The likelihood of occurrence assessment provided in IR Report Table 3.2 (Section 3.2.1) has been updated to include additional records for *Numenius madagascariensis* (eastern curlew). No change to the likelihood of occurrence was made in relation to the additional record(s). The additional records have also been included in the likelihood of occurrence assessment provided in Appendix A of the MNES Assessment Report.
	Item response 3.2.1 Table 3.2 indicates Vulnerable *Macroderma gigas* (Ghost bat) most recent records in proximity of the project area are >70 km away with most recent sighting in 2016, assessed as May occur. The Department notes there are more recent recorded sightings for this species.	Public records in ALA indicate recent records approximately 25 km north of the northern edge of the project area in the region of Giru/Bowling Green Bay National Park, with a record dated 2019. Suggest sightings data is verified and likelihood of occurrence for this species is reassessed if required.	The likelihood of occurrence assessment provided in IR Report Table 3.2 (Section 3.2.1) has been updated to include additional records for *Macroderma gigas* (ghost bat). No change to the likelihood of occurrence was made in relation to the additional record(s). The additional records have also been included in the likelihood of occurrence assessment provided in Appendix A of the MNES Assessment Report.
• Item 3.2.1 Table 3.2 indicates Vulnerable *Marsdenia brevifolia* nearest historical record is approximately 120 km northwest of the project area, dated 2005. The Department notes there are records in ALA in closer proximity to the project area listed as *Leichhardtia brevifolia*.	Public records in ALA indicate this species is present approximately 50 km west/northwest of the project area dated 1996 listed as *Leichhardtia brevifolia*. *Leichhardtia brevifolia* superseded *Marsdenia previfolia* on 04/06/2021. Please amend and correct this information for the new species name.	The likelihood of occurrence assessment provided in IR Report Table 3.2 (Section 3.2.1) has been updated to include additional records for *Marsdenia brevifolia.* No change to the likelihood of occurrence was made in relation to the additional record(s). The additional records have also been included in the likelihood of occurrence assessment provided in Appendix A of the MNES Assessment Report.
	Item 3.2.1 Table 3.2 indicates Vulnerable, migratory *Pristis pristis* (Freshwater sawfish) nearest historical record is 470 km northwest of the pipeline alignment from Lynd river junction from 1845. The Department notes there are records in ALA in closer proximity to the project area.	Public records in ALA indicate sightings data approximately 40 km northeast of the project area dated 1936 in the Burdekin River. Suggest sightings data is verified and likelihood of occurrence for this species is reassessed if required.	The likelihood of occurrence assessment provided in IR Report Table 3.2 (Section 3.2.1) has been updated to include additional records for *Pristis pristis* (freshwater sawfish) No change to the likelihood of occurrence was made in relation to the additional record(s). The additional records have also been included in the likelihood of occurrence assessment provided in Appendix A of the MNES Assessment Report.
	Item 3.5.1 response likelihood of occurrence was conducted for the Poplar Box Grassy Woodland on Alluvial Plains and Semi-evergreen vine thickets of the Brigalow Belt	• Please provide information on whether the field surveys were conducted for the purpose of detecting the two TECs identified in the MNES Report. **Figure 6 in Appendix L** (HP@_EAR_R02) shows locations for field	Section 3.5.1 has been updated to specify that remnant patches of the SEVT TEC are mostly associated with coastal dunes and river deltas in the vicinity of Townsville and Ayr

	(North and South) TECs using desktop assessment and verified via quaternary field surveys. It is noted that neither of the two TECs were detected during these surveys.	surveys which were for verification of the desktop assessments for REs identified. Due to the highly fragmented nature of the Poplar Box Grassy Woodland and the likely occurrence of SEVT 3 km south of the southern edge of the project area, more information is needed to determine the presence of these TECs in the project area.	through the northern and central parts of the Brigalow Belt Bioregion (McDonald 2010). No such environs are within or immediately adjacent to the Project area. The Poplar Box TEC occurs south of Charters Towers and east of Longreach, with the nearest mapped patch to the Project area occurring at least 150 km to the south (i.e. north west of Collinsville) (DEE 2019). NRA and GHD undertook surveys for the purpose of regional ecosystem (RE) and threatened ecological community (TEC) verification during April and October 2021 across the length of the Project area. During October 2021, a senior botanist traversed the Project area and undertook vegetation surveys over five days. During this time, no TECs were observed. Additionally, field survey results indicated that no vegetation or REs indicative of either Poplar Box or semi-evergreen vine thicket (SEVT) TECs were present within or adjacent to the Project area. While Poplar Box TEC occurs in fragmented patches, and potential SEVT TEC may occur 3 km south of the Project area in suitable mapped REs, the Project area does not contain REs or vegetation that is diagnostic of either TECs. This has also been updated in Section 3.3 of the MNES Assessment Report.
	Item 3.8.1 details survey effort undertaken for the Vulnerable *Egernia rugosa* (Yakka Skink) involving active searches for 20 minutes at 24 locations likely representing suitable habitats, noting the secretive nature of this species, the time and conditions at the time of survey is of interest as well as the location and number / extent of the searches.	• Please provide additional details on the timing of the surveys undertaken, with reference to temperature and weather conditions, time of day in relation to optimum conditions for targeted survey guidelines (>25 degrees Celsius, 2 hours either side of dawn, and during the evening on warm nights).	Timing and weather conditions of reptile surveys have been specified in Item 3.8.1. Specifically, active searches were undertaken in >27°C temperatures (BOM 2022b) and were concentrated during the early morning and late afternoon where reptiles were likely to be sunning themselves and more easily detectable. Field survey effort met minimum survey effort required for diurnal searches as per the Commonwealth Draft Referral guidelines for the nationally listed Brigalow Belt reptiles (DSEWPaC 2011). Additionally, the definition of important habitat and justification of its absence has been inserted in Item 3.8.1. Important habitat for the yakka skink and Mount Cooper striped lerista is defined in the Draft Referral guidelines for the national listed Brigalow Belt reptiles as (1) habitat where the species has been identified during a survey; (2) near the limit of the species' known range; (3) large patches of contiguous, suitable habitat and viable landscape corridors (necessary for the purposes of breeding, dispersal or maintaining the genetic diversity of the species over successive generations); or (4) a habitat type where the species is identified during a survey, but which was previously thought not to support the species (DSEWPaC 2011). Habitat of limited suitability was observed in the Project area for the yakka skink and Mount Cooper striped lerista due to weed affected ground habitats, fragmentation and disturbance, and lack of structural complexity across much of the Project area. Accordingly, important habitat for the yakka skink and Mount Cooper striped lerista is considered to be absent within the Project area. The above changes have been carried to Sections 2.3.4 and 3.5.1 of the MNES Report.
	• The Department notes that while the Yakka Skink and Mount Cooper Striped Skink were not detected during active survey efforts in March 2022, no information is provided on replicate active surveys being undertaken, which is a requirement for minimum survey effort for these species. The impact assessment relies on species absence to rule out significant impacts but there is minimal justification in terms of the survey effort etc. used to support this conclusion.	• Please provide additional details regarding whether minimum survey effort was undertaken. At least one replicate active survey should be undertaken if the species has not already been detected (in accordance with the *EPBC Act draft referral guidelines for the nationally listed Brigalow Belt reptiles* (2011). The Department notes that impacts to this species will be able to be better assessed with further information about the surveys that have taken place to rule out species presence. In the absence of further survey effort, provide justification as to why the impact area does not contain habitat that is considered important to the species.	No replicate surveys were undertaken for the yakka skink and Mount Cooper striped lerista. Within the Project area, habitat of limited suitability was observed for the yakka skink and Mount Cooper striped lerista due to weed affected ground habitats, fragmentation and disturbance, and a lack of structural complexity across much of the Project area. Accordingly, important habitat, and especially microhabitats that are essential for shelter habitat for the yakka skink are largely absent within the Project area. The Mount Cooper striped lerista is currently only known (with confidence) to occur at one location – it is highly unlikely that it occurs at the Project area, given the survey effort undertaken and the composition, structure and condition of broad habitats and especially ground-layer microhabitats (also a limiting factor for occurrence of yakka skink). Accordingly, important habitat for the Mount Cooper striped lerista is considered to be absent within the Project area. This has been updated in Item 3.8.1 of the IR Report and Sections 2.3.4 and 3.5.1 of the MNES Report.
Impact Assessment	• Item 4.6.1 discusses whether any impacts are likely to be unknown, unpredictable or	• Please provide information on potential impacts on species not detected during site surveys, in particular	Section 4.6.1 of the IR Report has been updated to specify that, for MNES considered 'unlikely to occur', potential for impacts are considered negligible. This is applicable for

	irreversible. Consideration is required on whether MNES not detected during site surveys are at risk of unknown, unpredictable or irreversible impacts.	detail any mitigation or response measures should MNES not previously detected in the impact area be found during construction or operation of the project.	species whose distribution is outside of the Project area, where suitable habitat is absent and where no historical records persist within the desktop search extent. Additionally, it has been stated in Section 4.6.1 of the IR Report, that for MNES considered 'may occur', potential impacts can be mitigated via the measures that have been outlined for confirmed and 'likely to occur' MNES. Specifically, 'may occur' species include (fauna only): ghost bat, large-eared horseshoe bat, yakka skink and Mount Cooper striped lerista. For these 'may occur' fauna species, the general mitigation measures relating to avoiding/minimising fauna mortality, minimising disturbance and preventing degradation to adjacent habitat (as listed in Table 4.10, Table 4.11 and Table 4.12 of the IR Report) which are to be implemented during construction, operation and/or maintenance of the Project area are applicable to reduce the potential for unknown, unpredictable or irreversible impacts for these species with lower likelihood of occurrence.
Avoidance, safeguards and mitigation measures	Table 5.29 indicates 'all nocturnal wildlife removed from trees….released at dusk into an area…located outside the Project footprint'. Information is needed on appropriate locations for release of wildlife removed from trees during clearing operations.	Please provide information on suitable release locations for each potential species that may require relocation during the clearing phase of the project, including references to subject matter expert advice, scientific literature and/or consultation with qualified personnel who will be responsible for these relocations.	Table 5.29 (Section 5.14.1) of the IR Report has been updated to detail release locations for fauna that require relocation, and scientific literature including DCCEEW documentation has been referenced where relevant. Specifically, the relocation procedure will conform with the Project's High-risk Species Management Program, approved under the *Nature Conservation Act 1992* dated 8 February 2022. Wildlife will be released in an area containing the species' habitat by a suitably experienced fauna spotter catcher (licensed under the Queensland *Nature Conservation Act 1992*). Potential relocation areas along the length of the pipeline and adjacent to ancillary infrastructure, will be identified in advance of disturbance/clearing taking place. Wildlife will be released, within a short distance of their capture where this is still within the animal's known home range extent, in areas with connectivity to other areas of suitable habitat and suitable ground level complexity, and in an area safe from construction (i.e. relocation in suitable habitat adjacent and behind construction to avoid individual migrating back into the construction/clearing area). The nocturnal species' home ranges are detailed below: – Koala – between 3-500 ha, females and juveniles have a smaller home range than males. Relocate koalas maximum 1 km from site (DAWE 2022a) – Bare-rumped sheathtail bat – no scientific literature, relocate at dusk in suitable habitat (i.e. presence of >15 cm hollow bearing *E. platyphylla* in eucalypt woodland within approximately 1 km of the relocation site). For all other native animals which do not, or are unable to disperse themselves, or are injured, animals will be captured using a safe and ethical technique, after efforts have been made to encourage the animal to depart the construction/clearing area of their own accord (without need for capture). Animals unable to depart on their own accord will be captured and uninjured individuals will be immediately released at the nearest suitable habitat away from clearing, per the protocol summarised above. Injured animals will be taken to the nearest appropriate veterinary clinic. Where fauna spotter catchers are not trained to handle snakes, an experienced handler will be brought to the site (licensed handlers will be notified in the local area prior to vegetation clearing if the fauna spotter catcher is not a licensed handler). Efforts will be made to prevent snakes entering the vegetation clearing area. Individuals will be released as predetermined by the fauna spotter catcher, e.g. nocturnal species will be released at dusk to avoid disorientation or attack from predators. Snakes will be released as close as possible to the clearing area (i.e. 200 m maximum) to increase chance of successful fauna relocation (Wolfe et al 2022). Several local veterinarian/wildlife carer resources in Ayr and Townsville occur within approximately 80 km.

Rehabilitation Requirements	Item 6.3.1.8 Fauna habitat return states that salvaged fauna habitat features (boulders, large logs, vegetation with hollows) shall be placed across the rehabilitation area. Item 6.6.1 indicates the proponent is no longer proposing to salvage and reinstate *E. platyphylla* hollows.	If proposed as part of site rehabilitation, please provide further information on the salvage and reinstatement of any hollows that will be cleared as a part of the action, including the methodology and likely success rates of any salvaged hollows being utilised by roosting species (expanding on information provided in Item 6.3.1.8.) The current location and species of hollow-bearing vegetation to be salvaged could be referenced and assessed in relation to MNES likely to make use of those hollows once faunal habitat return has been completed.	No salvage of fauna habitat features will be undertaken. All reference to salvage of fauna habitat has been removed from the IR Report, as well as the Rehabilitation Management Plan and Technical Specification for Rehabilitation Works.
	The PD refers to 'acceptance criteria' in relation to rehabilitation success (e.g. >80% of plantings survived). However, no detail is provided with regards to the timeframes at which these acceptance criteria are proposed to be measured. The PD refers to the 'rehabilitation maintenance period' and 'defects liability period'.	Please provide clarification as to when the proposed acceptance criteria are to be assessed to demonstrate rehabilitation success. What is the 'defects liability period' and is it at a suitable interval from planting (for example) to ensure survival rate is captured effectively?	The defects liability period is a contractual term, and is a 12 month period post construction in which the rehabilitation monitoring and corrective actions will be undertaken. This has been specified in Item 6.3.1.11 and Item 6.4.1 of the IR Report, as well as in the Rehabilitation Management Plan (Section 4.16.2 and Section 5) and the Technical Specification for Rehabilitation Works (Section 4.2.2 and Section 5). The rehabilitated vegetation is expected to be well-established by the end of this 12-month period, and will have been subjected to all seasonal conditions, such that this length of time is considered sufficient.
Environmental Offsets/Offset Management Strategy	Noting the OAMP is still in preparation, with field surveys underway, the department has not yet provided comments on any proposed management measures or offset scoring.	Please provide the completed OAMP.	Following completion of field surveys and data analysis, an Offset Area Management Plan (OAMP) will be prepared for the Project and will supersede the Offset Area Management Strategy (OAMS). The draft OAMP is scheduled to be submitted to DCCEEW for review 04 November 2022, and review comments addressed for submission to DCCEEW with the Final PD for approval prior to commencement of the proposed action.
	The department notes that the PD provides inconsistent conclusions on significant impacts for the Squatter Pigeon. For example, section 1.2 and tables 4.1 and 4.13 conclude no significant impacts but offsets are still proposed.	Please review the PD to ensure conclusions on significance are consistent for the Squatter Pigeon (with any necessary revisions in light of the department's habitat definitions above). Clarity is required regarding whether or not the action will significantly impact the species.	No significant residual impact to squatter pigeon is anticipated. Accordingly, this species has not been included in the OAMS. This assessment is based on the Project area being located outside of an 'important population' of the subspecies, the small quantum of impact to habitat, and the availability of resources for the subspecies within the local and regional landscape. The disturbance will have negligible implications for movement, will not reduce the availability of any specific resources/microhabitats/habitats for particular elements of the bird's life history (e.g. breeding) that are limiting in the landscape in which the project traverses, and thus, the Project is not likely to lead to a decline in the local, let alone whole-of-range, population of the squatter pigeon (southern). As such, the Project will not impact habitat critical to the survival of an important population. Accordingly, the Project is considered unlikely to result in a significant impact on the squatter pigeon (southern). Based on this assessment, offsets are not considered required for the squatter pigeon (southern), and will not be provisioned for in the OAMP.
	Item 7.1.2 indicates preliminary assessments of habitat condition for each of the MNES at the impact and offset areas is likely to be consistent. Clarification is needed as to whether this means the habitat scores for both the impact and offset sites are likely to be similar in value, and how this is assessed alongside future potential habitat scores for net conservation gain.	Table 7.7 indicates future potential habitat area is lower than existing habitat area values, with similar habitat assessment scores than the impact site (low to moderate). Attention should be paid to the habitat quality scores for MNES such as the Black Throated Finch, where net conservation gain is unlikely when losing high quality habitat at the impact site. Loss of poor habitat offset by improvements to poor habitat can provide net conservation gains which may be acceptable.	Current habitat condition is generally marginally better at the offset site for black throated-finch and bare-rumped sheathtail bat as compared to the impact site, and habitat condition is marginally better at the impact site for koala. Based on the extent and condition of habitat within the offset area, there are opportunities for habitat improvement at the offset site through replanting of non-remnant areas with canopy, sub-canopy and shrub-layer species to reinstate the pre-clear RE communities, natural rehabilitation of regrowth areas, regeneration of areas with native food grass species, extensive weed control including removal of chinee apple, rubber vine, lantana and other woody weeds and removal of invasive grassy weeds. These improvements have the potential to make a real contribution to MNES by increasing the availability of resources for foraging, shelter and breeding and

			increasing mobility through increased habitat connectivity. Accordingly, future condition of habitat at the offset area will be higher than current condition of the impact site.
	Item 7.2.8 indicates potential offset area providing connectivity with biodiversity corridors at the local and regional level.	Information is required on the likelihood of success of re-establishment of biodiversity corridors and habitat connectivity, given the remainder of the proposed offset area has not yet been assessed as suitable. Include any scientific literature or real-world examples of where this strategy has resulted in re-establishment of biodiversity corridors, and how this might benefit MNES identified for the project area. The department understands this information will likely be forthcoming in the Offsets Assessment Management Plan (OAMP).	As shown in Figure 7-7 of the IR Report, the proposed offset area is located between two State significant biodiversity corridors, mapped in Queensland's Biodiversity Planning Assessment mapping; one that covers Lake Ross, and another larger biodiversity corridor that runs east-west at the southern half of the offset area – linking Hervey's Range in the west to Toonpan in the east. A regionally significant biodiversity corridor also runs north-south through the proposed offset area, along Lansdowne Creek. By revegetating parts of the offset area that currently support non-remnant and regrowth vegetation, the offset has the potential to increase local and regional habitat connectivity at multiple scales.
	The department notes that habitat quality has been scored in accordance with the Queensland *Guide to Determining Terrestrial Habitat Quality* (DES 2020). For the 'absence of threats' component, risk of 'clearing and fragmentation' was incorporated into the calculation. For the Commonwealth, risk of habitat loss is already reflected in the Offsets Calculator as 'risk of loss'.	Please remove 'clearing and fragmentation' as an attribute of habitat quality scoring.	Scoring of threats has been amended to remove 'clearing and fragmentation' as an attribute of the habitat quality scoring.