



**Environmental
Protection
Authority**

Northern Goldfields Interconnect Pipeline

APA Northern Goldfields Interconnect Pty Ltd

Report 1713
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This assessment report has been prepared by the Environmental Protection Authority (EPA) under s. 44 of the *Environmental Protection Act 1986* (WA). It describes the outcomes of the EPA's assessment of the Northern Goldfields Interconnect Pipeline proposal by APA Northern Goldfields Interconnect Pty Ltd.

This assessment report is for the Western Australian Minister for Environment and sets out:

- what the EPA considers to be the key environmental factors identified in the course of the assessment
- the EPA's recommendations as to whether or not the proposal may be implemented and, if the EPA recommends that implementation be allowed, the conditions and procedures, if any, to which implementation should be subject
- other information, advice and recommendations as the Authority thinks fit.



Prof. Matthew Tonts

Chair

Environmental Protection Authority

14 October 2021

Summary

Proposal

The Northern Goldfields Interconnect Pipeline is a proposal for the construction and operation of a 300 millimetre diameter buried gas pipeline (NGI pipeline). The pipeline will commence at Ambania, 50 kilometres (km) east of Geraldton (Mid-West Region) and continue for 580 km, terminating 40 km south of Leinster (Northern Goldfields). The project will connect existing gas assets in the two regions with the aim of providing a reliable and increased supply of gas to industries in the area.

The proponent for the proposal is the APA Northern Goldfields Interconnect Pty Ltd.

Consultation

The EPA published the proponent's referral information for the proposal on its website for 7 days public comment. The EPA also published additional information from the proponent on its website for public review for 2 weeks (from 14 June 2021 to 28 June 2021). The EPA considered the comments received during these public consultation periods in its assessment.

Mitigation hierarchy

The mitigation hierarchy is a sequence of proposed actions to reduce adverse environmental impacts. The sequence commences with avoidance, then moves to minimisation/reduction/rehabilitation, and offsets are considered as the last step in the sequence.

The proponent considered the mitigation hierarchy in the development and assessment of its proposal, and as a result has:

- avoided impacts to significant flora species and vegetation communities, fauna and Aboriginal heritage sites by:
 - implementing horizontal directional drilling (HDD) construction methods to avoid direct clearing of threatened flora species *Eucalyptus beardiana*
 - refining areas to be disturbed to avoid clearing of majority of the priority flora species recorded
 - realigning the pipeline to avoid a number of Aboriginal heritage sites and culturally significant sites within the areas to be disturbed
- minimised impacts to significant flora species and vegetation communities, fauna and Aboriginal heritage sites by:
 - amending the areas to be disturbed resulting in a reduction of impact to vegetation/fauna habitat of 4 hectares (ha), from 1,934 ha to 1,930 ha
 - minimising the clearing required of the Priority 3 ecological community Eucalypt Woodlands of Western Australian Wheatbelt from 0.74 ha to 0.28 ha
 - mapping and demarcating areas of conservation significant flora to minimise clearing impacts

- narrowing the construction right of way (CROW) where Priority 4 flora species *Goodenia neogoodenia* have been recorded by minimum of 10 metres to minimise clearing impacts to this species
 - co-locating pipeline laydown areas and construction facilities preferentially in areas with limited vegetation or previously disturbed areas to minimise clearing of native vegetation
 - constructing access points to the CROW along existing tracks to the maximum extent practicable
 - inspecting open trenches to manage fauna entrapment
 - using of HDD pipeline installation where the pipeline intersects registered Aboriginal heritage sites and culturally significant areas which cannot be avoided, including major creeklines
 - establishing exclusion zone boundaries along the pipeline where ethnographic sites and places have been identified during construction and operation stages, as requested by the traditional owners
 - having cultural monitors on-site for all ground disturbing activities associated with the proposal to identify any potential unknown Aboriginal heritage sites or artefacts and ensure known sites are not disturbed
 - having ongoing consultation with the representative bodies for each of the traditional owner groups.
- proposed revegetation measures to re-establish vegetation across approximately 89% of the disturbed areas post construction.

Residual impacts are those that remain after the mitigation hierarchy has been applied. The residual impacts of the proposal for each of the key environmental factors are outlined below.

Assessment of key environmental factors

The EPA has identified the key environmental factors (listed below) in the course of the assessment and has assessed the proposal will likely result in the following:

Flora and vegetation

Residual impact		Assessment finding
1.	0.28 ha of Eucalypt woodlands of the Western Australian Wheatbelt (Priority 3 ecological community)	The EPA has assessed the residual impact to this community to be not significant due to the proponent's minimisation measures and that only two trees within the community will be cleared. The EPA has recommended condition 3 to avoid direct and indirect impacts and to ensure the environmental outcome is consistent with the EPA objective for flora and vegetation.
2.	Direct impacts to locally and regionally significant vegetation	The proposed pipeline will be buried, and revegetation will be undertaken across approximately 89% of the disturbed areas post construction. The EPA has assessed the residual impact to these vegetation units to be not significant due to the proponent's minimisation measures and that the vegetation units extend outside of the linear development envelope. The EPA advises that the residual impact to locally and regionally significant vegetation should be subject to implementation conditions (recommended condition 5) to ensure the

Residual impact		Assessment finding
		environmental outcome is consistent with the EPA objective for flora and vegetation.
3.	Risk of spread of weeds and disease	The EPA advises that the potential residual impact is manageable and not likely to be a material impact. The potential impact can be managed to be consistent with the EPA objective for flora and vegetation. It is also noted that this aspect can be subject to other statutory decision-making processes.

Terrestrial fauna

Residual impact		Assessment finding
1.	Direct impacts to 0.25 ha of Carnaby's cockatoo foraging habitat	The EPA notes the Carnaby's cockatoo habitat proposed to be cleared is predominately in degraded condition and is of a linear nature. However, due to the extensively cleared Wheatbelt region and limited available Carnaby's cockatoo foraging habitat, the EPA has assessed this residual impact to Carnaby's cockatoo as representing a significant residual impact. The EPA advises that the residual impact should be subject to implementation conditions (recommended condition 3) including a requirement for an offset (recommended condition 6), to ensure the environmental outcome of the proposal is consistent with the EPA objective for terrestrial fauna. The EPA notes the likely environmental outcomes to be expected from Carnaby's cockatoo offsets relate to maintaining and improving the health and condition of similar habitats on other lands, to a level that is better than the impacted areas.
2.	Fauna entrapment in open trenches during construction	The EPA advises that the residual impact is manageable and should be subject to implementation conditions (recommended condition 2) to ensure the environmental outcome of the proposal is consistent with the EPA objective for terrestrial fauna.

Social surroundings

Residual impact		Assessment finding
1.	Direct impacts to registered Aboriginal heritage sites	The EPA has assessed that there may be direct impacts to up to 11 Aboriginal heritage sites. The EPA notes that the proponent will continue to refine the construction methodology to further reduce impacts to the heritage sites within the development envelope. The EPA advises that the residual impact should be subject to implementation conditions (recommended condition 4) to ensure that the proposal avoids where possible, and otherwise minimises, project attributable direct and indirect impacts to social, cultural, heritage and archaeological values within and surrounding the development envelope. This ensures consistency with the EPA objective for social surroundings.
2.	Potential loss of access to areas to undertake traditional activities	The EPA notes there are concerns from traditional owners over the loss of access to culturally significant areas from construction activities which may prevent traditional activities from being undertaken. This includes the installation of barricades during construction and failure to observe areas of male lore. The EPA advises that the residual impact should be subject to implementation conditions (recommended condition 4)

Residual impact	Assessment finding
	to ensure that the proposal avoids where possible, and otherwise minimises, project attributable direct and indirect impacts to social, cultural, heritage and archaeological values within and surrounding the development envelope. This ensures consistency with the EPA objective for social surroundings.

Holistic assessment

The EPA considered connections and interactions between relevant environmental factors to inform a holistic view of impacts to the whole environment. The EPA formed the view that the holistic impacts would not alter the EPA's conclusions about consistency with the EPA's factor objectives.

Conclusion and recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values which may be significantly affected by the proposal
- residual impacts and effects in relation to the key environmental factors, separately and holistically
- likely environmental outcomes (and taking into account the EPA's recommended conditions), and the consistency of these outcomes with the EPA's objectives for the key environmental factors
- the EPA's confidence in the proponent's proposed mitigation measures
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment
- principles of the *Environmental Protection Act 1986*.

The EPA has recommended that the proposal may be implemented subject to conditions recommended in Appendix A.

Other advice

There is a requirement for aspects of the proposal to be regulated by other regulatory agencies. These are noted in section 6 (Other advice).

Greenhouse gas emissions was not considered as a key environmental factor due to predicted scope 1 emissions associated with the proposal (a total of 58,748 tpa CO₂-e). The proposal will be increasing the supply of gas to existing and future industries within the Mid-West region and the Goldfields. As such credible estimates of scope 3 emissions over the life of the proposal were obtained during assessment and are presented in Appendix D. While the NGI pipeline will be a part of the hydrocarbon industry, it is understood that it is designed to be capable of transporting hydrogen in the future. The proponent will not be extracting or utilising the gas that will be transported by the NGI pipeline.

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1 Proposal

The Northern Goldfields Interconnect Pipeline is a proposal to construct and operate a 300-millimetre (mm) diameter buried gas pipeline (NGI pipeline). The pipeline will commence at Ambania, 50 kilometres (km) east of Geraldton (Mid-West Region) and continue for 580 km, terminating 40 km south of Leinster (Northern Goldfields) (see Figure 1). The project will connect existing gas assets in the two regions with the aim of providing a reliable and increased supply of gas to industries in the area.

The proposal is linear in nature and includes associated aboveground infrastructure, including a compressor station at Ambania and other stations such as valve stations, scraper stations etc, at various locations along the pipeline.

The proponent for the proposal is APA Northern Goldfields Interconnect Pty Ltd (APA). The proponent referred the proposal to the Environmental Protection Authority (EPA) on 25 January 2021. The referral information was published on the EPA website for 7 days public comment. On 25 February 2021, the EPA decided to assess the proposal at the level Assess Referral Information with additional information required. The EPA also published the additional information (APA 2021a) on its website for public review for 2 weeks (from 14 June 2021 to 28 June 2021).

The elements of the proposal which have been subject to the EPA's assessment are included in Table 1.

Table 1: Location and proposed extent of proposal elements

Proposal element	Location	Maximum extent or range
<i>Physical elements</i>		
Buried gas pipeline	Linear infrastructure extending the length of the development envelope (Figure 1).	Clearing or disturbance within the development envelope of up to approximately 2,261.5 ha, comprised of approximately: <ul style="list-style-type: none"> • 1,930 ha of native vegetation • 331.5 ha of cleared land/pasture.
Aboveground facilities, including: <ul style="list-style-type: none"> • Rosewick offtake • Ambania compressor station • Yoweragabbie scraper station • Mainline valve stations • Wildara delivery station • Weebo Inlet station 	Located at various locations along the pipeline. The location of the Yoweragabbie scraper station will have suitable land available for the future option of the installation of an adjoining compressor station.	Within this, the aboveground facilities will require the following: <ul style="list-style-type: none"> • Rosewick offtake – disturbance of up to 0.1 ha • Ambania compressor station – disturbance of up to 4.1 ha • Yoweragabbie scraper station – disturbance of up to 1.1 ha (inclusive of allowance for a future compressor) • Mainline valve stations – total disturbance of up to 0.6 ha

Proposal element	Location	Maximum extent or range
		<ul style="list-style-type: none"> Wildara delivery station – disturbance of up to 0.5 ha Weebo inlet station – disturbance of up to 0.1 ha.
<i>Construction elements</i>		
Construction right of way (CROW), construction turnaround and passing bays and work areas, e.g. for underboring (i.e. horizontal directional drilling)	Located adjacent to the pipeline during construction.	<p>Clearing or disturbance within the development envelope of up to approximately 1,840.5 ha. The clearing or disturbance will be located within native vegetation (approximately 1,519.5 ha) and cleared land/pasture (approximately 321 ha).</p> <p>Generally a 30 m wide corridor with extra areas for turnarounds and work areas</p>
Pipeline laydown areas and construction facilities, including construction camps with mobile offices and ablutions, and equipment laydown areas	<p>Where practicable, the pipeline laydown areas and temporary construction areas will be located in areas of existing disturbance.</p> <p>Up to six construction camps are proposed to support the proposal. The construction camps will be located within the development envelope or broader surrounds. In those circumstances where the camps are located external to the development envelope, they will be in existing cleared areas. The mobile offices and equipment laydown areas will be situated within the construction camps.</p>	<p>Clearing or disturbance within the development envelope of up to 377 ha.</p> <p>The clearing or disturbance will be located within native vegetation (approximately 369.5 ha) and cleared land/pasture (approximately 7.5 ha).</p> <p>Up to six construction camps may be required, each with associated offices, ablutions and laydown areas.</p>
Turkey nests	Located adjacent to the pipeline during construction.	Up to approximately eight turkey nests may be required for the proposal. Each turkey nest is anticipated to be approximately 110 m x 90 m.
Construction access points/tracks	The access points/tracks will provide access to the CROW. Construction access will preferentially use existing tracks, where	<p>Clearing or disturbance of up to 44 ha may be cleared for construction access.</p> <p>The clearing or disturbance will be located within native vegetation</p>

Proposal element	Location	Maximum extent or range
	possible. Existing tracks may require improvement works, including widening, to facilitate access of larger vehicles (trucks) and machinery/equipment.	(approximately 41 ha) and cleared land/pasture (approximately 3 ha).
Groundwater bore(s)	If required, a groundwater bore would be within the vicinity of the Ambania compressor station. Any other additional groundwater bores, if required along the NGI pipeline, will be identified by the construction Contractor and subject to a water licence.	The groundwater bore would be constructed in an existing cleared area on agreement with the landholder. No clearing of remnant native vegetation is anticipated.
<i>Operational elements</i>		
Operation of the constructed NGI pipeline and associated above ground facilities		APA will operate the pipeline system in accordance with regulatory and APA standards, and standard management and maintenance practices.
Operations right of way (ROW)	Located adjacent to the as built NGI pipeline centreline.	The operational area for the pipeline will generally require a 4 m wide access track located adjacent the pipeline warning markers and a mulched/cleared section over the buried pipeline. The access track will be maintained as a ROW along the NGI pipeline to provide access for operational site maintenance, including servicing, equipment and integrity checks and general site maintenance. The ROW will be located within the Pipeline Licence area. The establishment of the operational ROW will be limited in the western section of the pipeline (between approximately KP0 to KP80) to minimise the alignment's intersection with agricultural properties. It is anticipated that the operational ROW will have a disturbance area of approximately 200 ha.

Units and abbreviations

CROW – Construction Right of Way

ha – hectare

KP – Kilometre Point

m – metres
NGI – Northern Goldfields Interconnect
ROW – Right of Way

Proposal amendments

The original proposal is set out in section 2.3 of the proponent's referral supporting document (APA 2021b), which is available on the EPA website.

During the assessment process the EPA encouraged the proponent to identify avoidance and mitigation measures for the proposal in addition to those included in the original proposal.

The proponent requested changes to the proposal during the assessment. The changes were unlikely to significantly increase any impacts of the proposal and resulted in a reduction in the amount of native vegetation clearing. The EPA Chair's notice, of 1 September 2021, consenting to the change is available on the EPA website.

The size of the development envelope remained unchanged to allow the proponent flexibility in refining the footprint, with avoidance and minimisation measures remaining as a key priority.

The consolidated and updated elements of the proposal which has been subject to the EPA's assessment is included in Table 1.

Proposal alternatives

The proponent identified up to six potential feasible alignments for the NGI pipeline prior to referring the proposal to EPA, shown in Figure 2-2 of the proponent's referral supporting document (APA 2021b). The feasible route options identified were assessed for environmental, heritage, engineering and landholder constraints, and the outcome of this informed the selection of the proposed NGI pipeline alignment. The key reasons for the selection of the proposed NGI pipeline alignment were the avoidance of an environmentally sensitive area, minimising the number of intersections with landholder interest and known sites of Aboriginal heritage importance (APA 2021b).

The EPA did not consider any proposal alternatives as none were provided during referral or assessment, and it is the EPA's obligation to assess the referred proposal based on information provided.



Figure 1: Development envelope

2 Assessment of key environmental factors

This section includes the EPA's assessment of the key environmental factors. The EPA also evaluated the impacts of the proposal on other environmental factors and concluded these were not key factors for the assessment. This evaluation is included in Appendix D.

2.1 Flora and vegetation

2.1.1 Environmental objective

The EPA's environmental objective for flora and vegetation is *to protect flora and vegetation so that biological diversity and ecological integrity are maintained* (EPA 2016a).

2.1.2 Investigations and surveys

The EPA advises the following investigations and surveys were used to inform the assessment of the potential impacts to flora and vegetation:

- Northern Goldfields Interconnect Pipeline Project, detailed flora and vegetation assessment (appendix A of the referral supporting document) (Focused Vision Consulting 2020)
- Infill flora and vegetation assessment – Northern Goldfields Interconnect Pipeline Project memorandum (appendix 1 of the additional information document) (Focused Vision Consulting 2021a)
- Northern Goldfields Interconnect Pipeline Project, supplementary targeted flora surveys (Eremaean regions) (Focused Vision Consulting 2021b).

The surveys were consistent with the *Technical Guidance – Flora and vegetation surveys for environmental impact assessment* (EPA 2016b).

2.1.3 Environmental context: existing environment

As defined in the Interim Biogeographical Regionalisation for Australia (IBRA), the proposal is situated within the Geraldton Sandplains, Avon Wheatbelt, Yalgoo, and Murchison bioregions.

The development envelope covers 12,404 ha. The proposal includes the clearing or disturbance of 1,930 ha considered representative of native vegetation. The vegetation condition of the development envelope ranged from 'Completely Degraded' to 'Excellent', with most areas found to be in 'Very Good' condition (37.8% of the development envelope).

The majority of the western portion of the development envelope is highly disturbed and characterised by cleared agricultural properties with degraded isolated remnants within cleared paddocks (Focused Vision 2020). Surveys determined the eastern portion of the development envelope to be 'Good' or better condition, with some

areas of lower quality vegetation occurring adjacent to, or near, areas of disturbance such as roads or historical mineral exploration areas (Focused Vision 2020).

Three Declared Pests under the *Biodiversity and Agriculture Management Act 2007* were recorded within the development envelope.

There is one Department of Biodiversity, Conservation and Attractions (DBCA) land of interest, the Ex Barnong Station, located directly adjacent to a portion of the development envelope between approximately Kilometre Point (KP) 113.5 to KP123.5. DBCA is proposing to list this land as a National Park. The proposal will remain within the Geraldton North Eastern Goldfields Infrastructure Corridor in this area, which avoids the requirement to create additional access into/through the Ex Barnong station.

2.1.4 Consultation

Matters raised during stakeholder consultation and the proponent's responses are provided in the response to submissions document (RtS) (APA 2021c).

The key issues raised during the public consultation on the proposal and how they have been considered in the assessment are described in sections 2.1.5, 2.1.6, 2.1.7 and 2.1.9.

2.1.5 Potential impacts from the proposal

The proposal has the potential to significantly impact on flora and vegetation from:

- clearing of Priority 3 ecological community 'Eucalypt Woodlands of the Western Australian Wheatbelt' and locally and regionally significant vegetation
- spread of weeds and disease

2.1.6 Avoidance measures

The proponent has designed the proposal to avoid impacts to flora and vegetation by:

1. implementing horizontal directional drilling (HDD) construction methods to avoid direct clearing of threatened flora species *Eucalyptus beardiana*
2. refining the areas to be disturbed to avoid clearing of the majority of the priority flora species recorded.

The issue raised during the public consultation in relation to potential impacts to conservation significant flora species has been addressed through avoidance measure 1 which implements construction methods to avoid impacts to threatened flora species *Eucalyptus beardiana*.

Avoidance measure 2 avoids impacts to three priority 3 flora species recorded within the development envelope, *Dicrastylis linearifolia*, *Gnephosis cassiniana* and *Ptilotus beardii*. The individuals recorded have been avoided through the refinement of the alignment (APA 2021c).

2.1.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following measures to minimise impacts to flora and vegetation:

1. amending the areas to be disturbed resulting in a reduction of impact to vegetation of 4 ha (from 1,934 ha to 1,930 ha)
2. minimising the clearing required of the Priority 3 ecological community Eucalypt Woodlands of Western Australian Wheatbelt from 0.74 ha to 0.28 ha
3. mapping and demarcating areas of conservation significant flora to minimise clearing impacts
4. narrowing the construction right of way (CROW) where Priority 4 flora species *Goodenia neogoodenia* have been recorded by a minimum of 10 m, to minimise clearing impacts to this species
5. co-locating pipeline laydown areas and construction facilities preferentially in areas with limited vegetation or previously disturbed areas to minimise clearing of native vegetation
6. constructing access points to the CROW along existing tracks to the maximum extent practicable
7. revegetation of temporary cleared areas.

The issue raised during the public consultation about potential impacts to conservation significant flora species has also been considered through minimisation measure 3 (mapping and demarcating conservation significant flora within the development envelope).

Two species of conservation significant flora were recorded within the areas to be disturbed, *Petrophile pauciflora* (Priority 3) and *Goodenia neogoodenia* (Priority 4).

Five individuals of *Petrophile pauciflora* were recorded from the survey, of which one is within an area to be disturbed and will be impacted by the proposal. Noting the limited impact to this species, the EPA's objective for this factor is likely to be met.

Goodenia neogoodenia was recorded at two locations along the pipeline alignment at approximately KP198 to KP199 and KP272 to KP273. At KP198 to KP199, 295 individuals were recorded outside of areas to be disturbed and will not be impacted. A total of 8,905 individuals were recorded at KP272 to KP273, of which 1,500 were within areas to be disturbed and will be impacted. Impacts to this species has been considered through minimisation measure 4 (narrowing CROW to minimise clearing impacts to this species).

There is a total of 20 known records of *Goodenia neogoodenia*, and this species is known to grow in red loam or clay and near water in the Yalgoo, Murchison, Carnarvon and Geraldton Sandplains bioregions (Western Australian Herbarium 1998). The habitat that supports this species is considered to be well-represented in the regions and given the distribution of this species, impact to this species is likely to meet the EPA's objective for this factor.

2.1.8 Rehabilitation measures

The proponent has proposed to revegetate areas cleared for construction purposes only. Of the total area proposed to be cleared, and accounting for pre-existing cleared areas, the proponent has proposed to revegetate approximately 1,727 ha (APA 2021a). For this proposal, revegetation means the re-establishment of native vegetation in degraded areas. No rehabilitation has been proposed.

2.1.9 Assessment of impacts to environmental values

The EPA considered that the key environmental values for flora and vegetation likely to be impacted by the proposal were vegetation communities and locally and regionally significant vegetation.

Eucalypt woodlands of the Western Australian Wheatbelt

The Eucalypt woodlands of the Western Australian Wheatbelt is listed as a Priority 3 ecological community. This community is composed of eucalypt woodlands that formerly were the most common type of vegetation across the Wheatbelt landscape of southwestern Western Australia.

Approximately 31 ha of the community was recorded within the development envelope, with the majority in Excellent condition (30 ha) and the remaining in Very Good condition. The proponent has committed to the following to minimise impact to the community by:

- undertaking HDD where the pipeline alignment intersects the community at approximately KP90.6
- re-aligning the pipeline alignment to avoid intersection of the community at approximately KP101.3 and further minimise impact to the community at approximately KP105.2.

The proponent has identified and recorded the locations of eucalypt trees within the mapped extent of the community and determined that two individual trees will be cleared within the community as a result of the proposal. With the implementation of the above minimisation measures, the direct impact to the community from the proposal was reduced by 0.46 ha.

Up to 0.28 ha of Eucalypt woodlands of the Western Australian Wheatbelt, ranging from Very Good to Excellent condition, will be directly impacted by the proposal.

Likely residual impacts

The EPA considers the likely residual impacts of the proposal on flora and vegetation to be:

1. clearing of 0.28 ha of Eucalypt Woodlands of the Western Australian Wheatbelt.

The EPA considered that the issue raised during the public consultation about impacts to this community is likely to be a residual impact for the proposal.

The occurrence of Eucalypt Woodlands of the Western Australian Wheatbelt that will be directly impacted by the proposal are narrow and linear, and adjacent to larger, intact areas.

The EPA notes that the proponent amended the proposal during the assessment and has minimised impact to the community by reducing the amount of clearing required from 0.74 ha to 0.28 ha.

The EPA has assessed the residual impact to this community to be not significant due to the proponent's minimisation measures and the fact that only two trees within the community will be cleared. The EPA has recommended condition 3 to avoid inadvertent direct and indirect impacts and to ensure the environmental outcome is consistent with the EPA objective for flora and vegetation.

Locally and regionally significant vegetation

The majority of the native vegetation within the areas to be disturbed is characterised as Acacia/Eremophila shrubland and Acacia shrubland. These vegetation types are considered locally significant as they support undescribed flora and flora exhibiting range extensions. There are 15 other vegetation types identified from the surveys to be locally or regionally significant. The regional significance of vegetation units was assessed based on presence of Threatened flora, extents restricted to specific and limited landforms, regionally uncommon or restricted plant community types and extent remaining in comparison to pre-European extent.

Two vegetation associations with less than 30% remaining of its pre-European extent, 687 and 676, were mapped at a local scale as occurring within the development envelope (Focused Vision 2020). Vegetation association 676 has 24.42% remaining in the Avon Wheatbelt bioregion, of which 4.3 ha will be directly impacted from the proposal. Vegetation association 687 has 27.34% remaining in the Avon Wheatbelt bioregion, of which 0.3 ha will be directly impacted from the proposal.

The proponent has proposed to revegetate approximately 1,727 ha (APA 2021a) of the area cleared from the proposal activities. The re-establishment of vegetation is expected to maintain or improve the vegetation condition within the areas cleared and increase ecological value of the local area. The EPA notes that the revegetation is likely to be successful based on the revegetation undertaken for the proponent's past pipeline projects, such as the Yamarna gas pipeline.

Likely residual impacts

The EPA considers the likely residual impacts of the proposal on flora and vegetation to be:

2. direct impacts to locally and regionally significant vegetation.

The vegetation units identified as locally and regionally significant are well represented outside of the areas to be disturbed and expected to be consistent with vegetation types that extend outside of the development envelope. The NGI pipeline

will be buried, and revegetation will be undertaken across approximately 89% of the disturbed areas.

The EPA has assessed the residual impact to these vegetation units to be not significant due to the proponent's minimisation measures and that the vegetation units are likely to extend outside of the development envelope. The EPA advises that the residual impact to locally and regionally significant vegetation should be subject to implementation conditions to revegetate areas disturbed by construction activities (recommended condition 5) to ensure the environmental outcome is consistent with the EPA objective for flora and vegetation.

Impacts to vegetation from spread of weeds and disease

Three Declared Pests under the *Biosecurity and Agriculture Management Act 2007* were recorded within the development envelope, **Echium plantagineum* (Paterson's Curse), **Rumex hypogaeus* (Doublegee) and **Citrullus amarus* (Paddy Melon).

The movement of vehicles, heavy machinery, soil and plant material, as well as ground disturbance during clearing and operations, associated with the proposal has the potential to introduce and spread weeds and disease. The proponent has committed to the following to manage the spread of weeds and disease:

- cleaning machinery and equipment of soil clumps and vegetative matter prior to accessing site
- acquiring weed and seed inspection certificate for all equipment, machinery and vehicles prior to mobilisation to site
- locally sourcing clean fill or gravel from approved borrow pits and/or registered supplier if required.

Likely residual impacts

The EPA considers the likely residual impacts of the proposal on flora and vegetation to be:

3. impacts associated with the spread of weeds and disease.

The EPA considered that the issue raised during the public consultation about potential indirect impacts to adjacent vegetation is likely to be a residual impact for the proposal.

The potential impacts to vegetation from the spread of weeds and disease needs to be actively managed, especially in areas of Good to Excellent condition vegetation, to ensure the biological diversity and ecological integrity of the vegetation in the local area is not adversely impacted by implementation of the proposal.

The proponent will need to comply with regulations to manage declared weeds in accordance with the *Biosecurity and Agricultural Management Act 2007*.

The EPA has assessed that the risk of spread of weeds and disease is unlikely to be a material impact and likely to be consistent with the EPA's objective for this factor.

The EPA also notes that the Department of Mines, Industry Regulation and Safety (DMIRS) can regulate weed hygiene practices through the Environment Plan required under the Petroleum Pipelines (Environment) Regulations 2012.

2.1.10 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal. In doing so, the EPA has considered whether reasonable conditions could be imposed, or other decision-making processes can ensure consistency with the EPA factor objective. The EPA assessment findings are presented in Table 2.

The EPA has also considered the principles of the *Environmental Protection Act 1986* in assessing whether the residual impacts will be consistent with its environmental factor objective and whether reasonable conditions can be imposed (see Appendix A).

Table 2: Summary of assessment for flora and vegetation

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1.	Clearing of 0.28 ha of Eucalypt woodlands of the Western Australian Wheatbelt.	Residual impact from direct and indirect impacts should be subject to implementation conditions to ensure the environmental outcome is consistent with the EPA objective for flora and vegetation.	Regulated through recommended conditions: 1 (limit on the extent of the proposal (area)) 3 (Eucalypt woodlands of the Western Australian Wheatbelt).
2.	Direct impacts to locally and regionally significant vegetation.	Residual impact to locally and regionally significant vegetation should be subject to implementation conditions to ensure the environmental outcome is consistent with the EPA objective for flora and vegetation.	Regulated through recommended conditions: 1 (limit on the extent of the proposal (area)) 5 (revegetation).
3.	Impacts associated with the spread of weeds and disease.	Not likely to be a material impact, and likely to be consistent with the EPA factor objective. It is noted that impacts are subject to regulation by DMIRS under the Petroleum Pipelines (Environment) Regulations 2012 and the proponent will need to comply with regulations to manage declared weeds in accordance with the <i>Biosecurity and Agricultural Management Act 2007</i> .	It is noted that DMIRS can regulate the risk of weeds and dieback under the requirements of Environment Plan as per Petroleum Pipelines (Environment) Regulations 2012.

2.2 Terrestrial fauna

2.2.1 Environmental objective

The EPA's environmental objective for terrestrial fauna is *to protect terrestrial fauna so that biological diversity and ecological integrity are maintained* (EPA 2016c).

2.2.2 Investigations and surveys

The EPA advises the following survey met the EPA's requirements and was used to inform the assessment of the potential impacts to terrestrial fauna:

- Northern Goldfields Interconnect Pipeline fauna assessment (appendix 2 of the referral document) (December 2020).

2.2.3 Assessment context: existing environment

Twenty fauna habitats were identified within the development envelope (Kingfisher 2020). Fauna habitats mostly comprised Acacia, include Mulga shrublands (approximately 43%), open Acacia or mixed shrublands (approximately 15%) and mixed Acacia shrublands (approximately 10%). Disturbed areas characterised by cleared areas or isolated trees/shrubs in pasture accounted for approximately 13% of the development envelope.

Conservation significant terrestrial fauna recorded during the fauna survey within the development envelope include malleefowl, brush-tailed mulgara and Peregrine falcon. There are 26 other conservation significant species that were identified as having varying potential to occur within the development envelope. The likelihood of these species occurring in the development envelope ranges through vagrant, potential or likely resident and foraging visitor. Table 4-13 of the proponent's referral supporting document (APA 2021b) provides a detailed list of the species and likelihood of occurrence.

The northern shield-backed trapdoor spider was identified as a conservation significant short range endemic species to be a likely resident within the development envelope (APA 2021b).

2.2.4 Consultation

During the public consultation on the proposal, concerns were raised regarding the degradation and loss of fauna habitat, particularly for conservation significant fauna species such as the Carnaby's cockatoo.

The key issues raised during the public consultation on the proposal and how they have been considered in the assessment are described in sections 2.2.5, 2.2.6, 2.2.7 and 2.2.9.

2.2.5 Potential impacts from the proposal

The proposal has the potential to significantly impact on terrestrial fauna from:

- clearing of 1,930 ha of fauna habitat in varying condition

- fauna entrapment in trenches during construction.

2.2.6 Avoidance measures

The proponent has designed the proposal to avoid impacts to terrestrial fauna by refining the areas to be disturbed to avoid disturbance to malleefowl mounds and brush-tailed mulgara burrows. The concerns raised during the public consultation regarding the degradation and loss of fauna habitat, particularly for conservation significant fauna species has been considered through this avoidance measure.

2.2.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following measures to minimise impacts to terrestrial fauna:

1. amending the areas to be disturbed resulting in a reduction of impact to fauna habitats of 4 ha (from 1,934 ha to 1,930 ha)
2. open trenches will be inspected twice daily, and any trapped fauna removed by a suitably trained and licensed fauna handler, egress points and fauna refuges will be provided at intervals not exceeding 50 m
3. revegetation of temporary cleared areas.

Any trapping and relocation, or inadvertent take, of listed fauna will need to be undertaken in accordance with a licence issued by DBCA required under the *Biodiversity Conservation Act 2016*.

The concerns raised during the public consultation regarding the degradation and loss of fauna habitat, particularly for conservation significant fauna species has been considered through minimisation measures 1 and 3.

2.2.8 Rehabilitation measures

The proponent has proposed to revegetate areas cleared for construction purposes only. Of the total area proposed to be cleared and accounting for pre-existing cleared areas the proponent has proposed to revegetate approximately 1,727 ha (APA 2021a). No rehabilitation has been proposed.

2.2.9 Assessment of impacts to environmental values

The EPA considered that the key environmental values for terrestrial fauna likely to be impacted by the proposal are conservation significant fauna and fauna entrapment in the open trenches.

Conservation significant fauna

Carnaby's cockatoo

The development envelope intersects the conservation significant Carnaby's cockatoo's predicted range between Ambania to Mullewa. There is pre-existing widescale clearing for agriculture within this part of the development envelope, resulting in limited breeding and foraging habitat for Carnaby's cockatoo. The eucalypt woodlands in the Wheatbelt region and Banksia shrublands provide

potential suitable habitat within the development envelope. No suitable breeding trees were recorded in the development envelope, therefore the proposal may only impact foraging habitat. Carnaby's cockatoo was not recorded during the fauna survey (Kingfisher 2020).

The proposal requires a 30 m wide corridor for a CROW. The EPA considers the linear corridor is unlikely to fragment Carnaby's cockatoo populations and will not fragment existing native vegetation to an extent that creates a barrier to movement of Carnaby's cockatoos which are highly mobile. However, due to the limited foraging habitat for Carnaby's cockatoo within the extensively cleared Wheatbelt region, the presence of foraging habitat within the development envelope is considered to be significant.

Malleefowl

Malleefowl are found in arid and semi-arid areas dominated by mallee eucalypts on sandy soils and require abundant leaf litter and a sandy substrate for the successful construction of nest mounds (DPaW 2016). Suitable habitat for this species in the development envelope occurs within the expansive Acacia shrublands west of Pindar (Kingfisher 2020). The majority of habitat suitable for malleefowl breeding within the development envelope occurs between Pindar (approximately KP69) and Wurarga (approximately KP120). The dominant system present in this area is characterised by undulating sandplains supporting dense mixed shrublands with patchy mallees. Malleefowl is unlikely to breed within the eucalypt woodlands fauna habitat within the development envelope due to the open understorey typically present (Kingfisher 2020).

The fauna survey recorded a total of five inactive mounds and tracks were observed from three locations. The mounds were recorded from the Joseph land system, which encompasses approximately 397 ha of the development envelope.

Noting the extensive habitat available and the proponent's commitment to avoid malleefowl mounds, the EPA considers the EPA's factor objective can be met.

Brush-tailed mulgara

The brush-tailed mulgara was recorded within the development envelope with several active burrows recorded. The active burrows were recorded from sandplains dominated by *Triodia basedowii* with mixed Acacia shrubs (Kingfisher 2020). There is approximately 195 ha of suitable habitat for the brush-tailed mulgara within the development envelope, situated within the Kalli and Tyrrell land systems which are extensive in the local and regional area. Noting the extensive habitat available and the proponent's commitment to avoid brush-tailed mulgara burrows, the EPA considers that the EPA's factor objective can be met.

Likely residual impacts

The EPA has assessed the likely residual impacts of the proposal on conservation significant fauna to be:

1. direct impacts to 0.25 ha of Carnaby's cockatoo foraging habitat within the Wheatbelt region

2. unlikely to be material impacts to other conservation significant fauna recorded or potentially occurring within the development envelope.

The EPA considers that the concerns raised during the public consultation regarding Carnaby's cockatoo habitat is likely to be a residual impact for the proposal.

The EPA notes the 30 m wide corridor and linearity of the areas to be disturbed, and that the disturbance will mostly occur near existing infrastructure. The EPA determines that the fauna habitats within the areas to be disturbed are not likely to provide significant fauna habitat with the exception of Carnaby's cockatoo.

The EPA notes the Carnaby's cockatoo habitat proposed to be cleared is predominately in Degraded condition and is of a linear nature. However, due to the extensively cleared Wheatbelt region and limited available Carnaby's cockatoo foraging habitat, the EPA has assessed this residual impact to Carnaby's cockatoo as representing a significant residual impact.

The EPA advises that the significant residual impact to Carnaby's cockatoo should be subject to implementation conditions to avoid and limit impact to foraging habitat (recommended condition 3) and to offset the residual impact to Carnaby's cockatoo (recommended condition 6) to ensure the environmental outcome is consistent with the EPA objective for terrestrial fauna.

The EPA notes the likely environmental outcomes to be expected from Carnaby's cockatoo offsets relate to maintaining and improving the health and condition of similar habitats on other lands, to a level that is better than the impacted areas. Without the proposed offsets it is likely that the condition and health of these fauna habitats would decline over time from existing threats and pressures.

This is a significant residual impact that can be regulated through reasonable conditions and counter-balanced by offsets so that the environmental outcome is consistent with the EPA's objective for terrestrial fauna.

Fauna entrapment

The proposal includes excavation for a trench to a depth that allows adequate cover for the pipeline. The trench will be approximately 1 m deep to provide cover of at least 750 mm, however depth will vary depending on factors such as location, land uses and ground conditions. The maximum depth of the trench will be approximately 2 m, however where HDD construction methods are employed the depth will be approximately 5 m (APA 2021a).

The fauna survey recorded a total of 119 species, comprising 9 reptiles, 87 birds, 16 mammals and 7 introduced mammals (Kingfisher 2020). Fauna may be at risk of entrapment within open trenches during construction. The proponent has committed to mitigation measures to manage potential fauna entrapment, including daily trench inspections and gaps retained in the pipeline trench with ramps to allow fauna egress points. Construction activities will be undertaken in accordance with these measures which will be identified in the Environment Plan, a requirement under the Petroleum Pipelines (Environment) Regulations 2012 and regulated by DMIRS.

Likely residual impacts

The EPA has assessed the likely residual impacts of the proposal on terrestrial fauna to be:

3. fauna entrapment in open trenches during construction.

The EPA notes the proponent's commitment to fauna management associated with trenching activities.

The EPA advises that the residual impact to fauna from open trenches should be subject to implementation conditions to manage fauna trapped in the trenches (recommended condition 2) to ensure the environmental outcome is consistent with the EPA objective for terrestrial fauna.

This is a residual impact that can be regulated through reasonable conditions so that the environmental outcome is consistent with the EPA's objective for terrestrial fauna.

2.2.10 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal. In doing so, the EPA has considered whether reasonable conditions could be imposed or other decision-making processes can ensure consistency with the EPA factor objective. The EPA assessment findings are presented in Table 3.

The EPA has also considered the principles of the *Environmental Protection Act 1986* in assessing whether the residual impacts will be consistent with its environmental factor objective and whether reasonable conditions can be imposed (see Appendix A).

Table 3: Summary of assessment for terrestrial fauna

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1.	Direct impacts to 0.25 ha of Carnaby's cockatoo foraging habitat.	Significant residual impact is likely to be able to be regulated through reasonable conditions and counter-balanced by offsets so the environmental outcome is consistent with the EPA's objective for terrestrial fauna.	Regulated through recommended conditions: <ul style="list-style-type: none"> • 3 (Carnaby's cockatoo) • 6 (Offsets).
2.	Impacts to malleefowl and brush-tailed mulgara habitat.	Not likely to be a material impact due to the extensive habitat available and the proponent's avoidance measures. The environmental outcome is consistent with the EPA's objective for terrestrial fauna.	Regulated through recommended condition: <ul style="list-style-type: none"> • 1 (limit on the extent of the proposal (area)).

Residual impact		Assessment finding	Recommended conditions and DMA regulation
3.	Fauna entrapment in open trenches during construction.	Residual impact should be subject to implementation conditions to ensure the environmental outcome is consistent with the EPA's objective for terrestrial fauna.	Regulated through recommended condition: <ul style="list-style-type: none">• 2 (Terrestrial fauna).

2.3 Social surroundings

2.3.1 Environmental objective

The EPA's environmental objective for social surroundings is *to protect social surroundings from significant harm* (EPA 2016d).

2.3.2 Investigations and surveys

The EPA advises that the following information was used to inform the assessment of the potential impacts to social surroundings:

- Northern Goldfields Interconnect Pipeline. EPA Environmental Referral. Supporting Document. Report No. 20199-RP-HSE-0001 (APA 2021c)
- Northern Goldfields Interconnect Pipeline. EPA Referral, Additional Information. Report No. 20199-RP-HSE-0004 (Appendix 3: Aboriginal Heritage Survey Details and Participants). (APA 2021a)
- Northern Goldfields Interconnect Pipeline. Response to Submissions – EPA Assessment No. 2284. Report 20199-RP-HSE-0007 (APA 2021c).

The ethnographic surveys were undertaken by heritage consultants and anthropologists Terra Rosa Consulting, Horizon Heritage Management and Brad Goode & Associates Pty Ltd. All were approved by the traditional owner groups following a consultation process prior to the surveys. Aboriginal Elders, recognised knowledge-holders, and representatives from each traditional owner group participated in the surveys undertaken on their respective country. They also provided input to the preliminary advice report and the final site avoidance surveys for the pipeline alignment.

2.3.3 Assessment context: existing environment

The proposal starts 50 km east of Geraldton and extends for 580 km into the northern Goldfields, terminating near Leinster. The pipeline will cross several intermittent watercourses and drainage lines, characteristic of the Murchison region. The area is remote, the proposal does not intersect any towns. There are a few individual residences located within the surrounds of the pipeline, the closest being 120 m. Activities are primarily pastoral (wheat farming and grazing) and mining. Other land use is unallocated Crown Reserves.

Historic heritage

The pipeline development envelope will intersect the Rabbit Proof Fence No. 2 (Place No. 5022) 7 km west of Yalgoo. The fence runs in a north-south direction for 1,165 km. The other historic site identified from the desktop survey is the Old Geraldton Road (Place No. 6170), which the final alignment now avoids.

Aboriginal heritage

The proposal intersects land over which eight traditional owner groups have cultural ties. These groups are the:

- Southern Yamatji

- Mullewa Wadjari
- Wajarri Yamatji
- Widi Mob
- Badimia
- Badimya Barna Guda People
- Wutha
- Darlot.

The pipeline route traverses two existing Native Title Determined claims, the Yamatji Nation and the Badimia People. The proponent identified four registered Native Title Claims which intersect the proposal:

- the Southern Yamatji (WC2017/002)
- Mullewa Wadjari Community (WC1996/093)
- Widi Mob (WC1997/072)
- the Wajarri Yamatji (WAD28/2019).

A separate native title claim has been lodged by the Badimya Barna Guda People (WC2020/001) over lands within the Yamatji Nation and the Badimia People claims.

The location of the registered sites and known Aboriginal heritage places were confirmed during the surveys and logged, as well as new heritage sites. The significance of some of these sites are yet to be confirmed. Where Aboriginal heritage sites were identified, several supplementary areas were also surveyed to allow for deviations of the proposed pipeline.

Five registered Department of Planning, Lands and Heritage (DPLH) sites were identified during the surveys:

- DPLH 18905 - Tenindewa Creek (Southern Yamatji)
- DPLH 18907 - Irwin River (Southern Yamatji)
- DPLH 17904 - Kerbar Cliffs (Badimia People) – rock shelter containing rock wall engravings and paintings. The cliffs are linear and run in a north-south direction
- DPLH 17083 - Boolgarbarrdoo (Badimia People)
- DPLH 1507 - Warlawuru (Darlot Country).

The following sites have been lodged and are awaiting confirmation of their significance:

- Kockatea Creek Artefact Scatter
- Woderarrung Creek Artefact Scatter (DPLH 19479)
- Wurarga Rockshelters (DPLH 20468)
- Wangara Creek and Salt River (DPLH 18906)

- Wurarga Rockhole 2 (DPLH 19483)
- Noorgung Hill (DPLH 19480)
- Yalgoo Creek (DPLH 20469)
- Granite Outcrop (DPLH 19520)
- Congoo Tanks (DPLH 19523) and Congoo Dam (DPLH 19543)
- Yoweragabbie Station Isolated Artefact 01 (DPLH 32907)
- Lake Noondie Dreaming Track (DPLH 19541)
- Emu Dreaming site (DPLH 19540).

Major creek crossings have been identified as having important cultural values by the traditional owners. Watercourses with ethnographic sensitivity include Wooderarrung River, 14 Mile Creek, Poison Creek and Lawler's Creek. While not all sites have or will be registered, their cultural importance is recognised by the proponent and will be subject to further avoidance and minimisation.

2.3.4 Consultation

The proponent has engaged with several of the traditional owner groups and their representatives prior to referral and during the surveys. A summary of key consultations with Traditional owner groups as of 2 August 2021 was provided in the RtS document (APA 2021b). Following the outcome of the heritage surveys, the Traditional Owner groups have recommended actions for the proponent undertake to minimise impacts to heritage sites (APA 2021a). They have also identified areas with significant cultural value which will be included in the Site Avoidance Heritage Survey Reports.

Consultation was also undertaken with stakeholders including landowners of pastoral properties regarding land access. Concerns were raised in regard to biosecurity, impacts during harvest, cattle access during construction, ground disturbing activities, including blasting, and possible erosion from the proposal activities. Consultation outcomes are presented in the supporting document (APA 2021b).

2.3.5 Potential impacts from the proposal

The proposal has the potential to have direct and indirect impacts of social surroundings during construction and operation from:

Historical heritage

- disturbance of the Rabbit Proof Fence No. 2 located 7 km west-south-west of Yalgoo (section KP154 of pipeline).

Aboriginal heritage

- clearing of vegetation and ground disturbance activities across registered and unregistered Aboriginal heritage sites, including claypans
- disturbance of artefacts from ground disturbing activities

- loss of cultural value to Aboriginal heritage sites due to vibrations caused by localised blasting.
- changes to hydrological regime of major creek crossings and disturbance to the ground from installation of the pipeline.

2.3.6 Avoidance measures

The proponent has avoided direct impacts to social surroundings by:

- Realigning the pipeline to avoid Aboriginal heritage sites and culturally significant sites within the areas to be disturbed (pipeline and the CROW). Specifically, sites APASY-002, APAMW20-001, Yoweragabbie Station Isolated Artefact DPLH 32907, APABA21-004, APAWU-001, and the new site at KP578.8 will be avoided.

2.3.7 Minimisation measures (including regulation by other DMAs)

The proponent has proposed the following minimisation measures to minimise impacts to social surroundings:

1. use of HDD pipeline installation where the pipeline intersects registered Aboriginal heritage sites and culturally significant areas which cannot be avoided, including major creeklines
2. ensure the entry and exit points of the HDD are of a distance requested by traditional owners to reduce impacts to culturally significant areas
3. narrowing the CROW at culturally significant areas
4. minimise the use of blasting near culturally significant areas
5. establish exclusion zone boundaries along the pipeline where ethnographic sites and places have been identified during construction and operation stages, as requested by the traditional owners
6. cultural monitors for the respective countries of each Aboriginal group to be on-site for all ground disturbing activities associated with the proposal will be present during all disturbance activities identify any potential unknown Aboriginal heritage sites or artefacts and ensure known sites are not disturbed
7. preparation of a draft Cultural Heritage Management Plan which details the proposed management of specific sites
8. have ongoing consultation with the representative bodies for each of the traditional owner groups
9. continue to review the construction methodology to reduce impacts to 11 heritage sites within the areas to be disturbed
10. permission for access to the Rabbit Proof Fence No. 2 will require a permit and discussion with Department of Primary Industries and Regional Development (DPIRD) prior to disturbance.

The issues raised during consultation with traditional owners about the potential impacts to the Aboriginal heritage sites have been considered through minimisation

measure 1 through to 6. The measures include adapting pipeline installation methods and refinement of the alignment.

The proponent has identified 11 Aboriginal heritage sites which remain within the areas to be disturbed following minimisation measures. This has been reduced from 36 sites identified at referral. With minimisation measures 7, 8 and 9, impacts to these sites can be further reduced. As of the 16 September 2021, the proponent has identified four of the 11 Aboriginal heritage sites within the areas to be disturbed which will be directly impacted by the proposal.

2.3.8 Rehabilitation measures

Sections of the pipeline intersect water courses such as creeklines, which have cultural significance to traditional owners. Written consent was provided for the use of HDD to install the pipeline under the main channels of Poison Creek, Fourteen Mile Creek and Kunta Creek, on the condition that proper rehabilitation of all ground disturbance be undertaken at completion of the project. This includes the removal of temporary vehicle crossings installed during construction.

The Rabbit Proof Fence No. 2 cannot be avoided as it runs north-south for 1,165 km. Implementation of the proposal will disturb 30 m of the fence for the CROW and operational ROW. Once construction activities are completed the fence will be reinstated, subject to agreement with DPIRD as the agency responsible for the fence.

2.3.9 Assessment of impacts to environmental values

The EPA considered that the key social surroundings values likely to be significantly impacted by the proposal are Aboriginal heritage sites.

Aboriginal heritage

The proposal has the potential to impact up to 11 Aboriginal heritage sites from the installation of the pipeline. The proposed pipeline will be buried. The basis of the construction works for installation will be trenching while HDD will be applied at discrete locations. Both methods require excavation and clearing of vegetation. Excavation has the potential to disturb areas where scattered artefacts remain.

Where the trench cannot be excavated with conventional rock-breaking equipment, small-scale controlled blasting will be required. This has the potential to impact on the cultural value of Aboriginal heritage sites from vibrations. The proponent has committed to reducing the amount of blasting at the Kerbar Cliffs registered site. The duration of blasting works will be limited at any site and restricted to daylight hours.

The EPA notes that representatives for the traditional owner groups have requested that Aboriginal monitors to be present on-site in their respective country during ground disturbing activities.

The proposal has the potential to impact on the ability for traditional owners to undertake cultural activities and access culturally significant areas, particularly during the construction phase. These include the erection of fences around culturally

significant areas during construction without prior consent from the traditional owners, such as the Congoo Tanks and Congoo Dam sites. The proponent was also asked to consider the cultural sensitivity of sections of the pipeline route identified as male lore sites. Failure to do so may prevent the undertaking of cultural activities.

The proponent must submit a Cultural Heritage Management Plan which outlines the proposed management of each site. The proponent will be required to revegetate areas once the construction is completed and will do this as a staged process.

The EPA notes that disturbance of some registered Aboriginal sites cannot be avoided. At the time of assessment, Relationship Agreements were under negotiation with the traditional owner groups. The aim of these agreements is to establish a formal process for consultation with Aboriginal communities. It also enables the groups a process to provide their informed consent for the proposal during both the construction and operations phases. Consent to disturb these sites from the relevant traditional owner group is also a requirement under the *Aboriginal Heritage Act 1972*.

Likely residual impacts

The EPA considers the likely residual impacts of the proposal on Aboriginal heritage to be:

1. impact to up to 11 Aboriginal heritage sites.
2. potential loss of access to areas to undertake traditional activities.

The EPA notes that the proponent will continue to refine the construction methodology to further reduce impacts to the 11 Aboriginal heritage sites within the areas to be disturbed. The process will be undertaken in ongoing consultation with the traditional owners and outlined in the Cultural Heritage Management Plan (recommended condition 4).

The EPA notes there are concerns from traditional owners over loss of access to culturally significant areas from construction activities which may prevent traditional activities from being undertaken. This includes the installation of barricades during construction and failure to observe areas of male lore.

The EPA has assessed the residual impacts to the Aboriginal heritage sites within the areas to be disturbed and the potential for loss of access to undertake traditional activities as representing a significant residual impact.

The EPA also advises that the residual impact to the potential loss of access to areas to undertake traditional activities should be subject to implementation conditions (recommended condition 4-1(1)).

The EPA advises that the residual impact to Aboriginal heritage sites should be subject to implementation conditions (recommended condition 4) to ensure the environmental outcome is consistent with the EPA objective for social surroundings. The EPA also notes that the disturbance to Aboriginal heritage sites will require consent from the traditional owner groups, including consent under the *Aboriginal Heritage Act 1972* and conditions may apply as part of that process.

2.3.10 Summary of key factor assessment and recommended regulation

The EPA has considered the likely residual impacts of the proposal. In doing so, the EPA has considered whether reasonable conditions could be imposed, or other decision-making processes can mitigate potential inconsistency with the EPA factor objective. The EPA assessment findings are presented in Table 4.

The EPA has also considered the principles of the *Environmental Protection Act 1986* in assessing whether the residual impacts will be consistent with its environmental factor objective and whether reasonable conditions can be imposed (see Appendix A).

Table 4: Summary of assessment for social surroundings (Aboriginal heritage)

Residual impact		Assessment finding	Recommended conditions and DMA regulation
1.	Direct impacts to registered Aboriginal heritage sites	Residual impact to registered Aboriginal heritage sites should be subject to implementation conditions to ensure consistency with the EPA objective for social surroundings. It is also noted that disturbance of sites can be subject to other statutory decision-making processes.	Regulated through recommended conditions: <ul style="list-style-type: none"> • 1 (limit on the extent of the proposal (area)) • 4 (Cultural Heritage Management Plan)
2.	Potential loss of access to areas to undertake traditional activities.	Residual impact to loss of access to areas to undertake traditional activities should be subject to implementation conditions to ensure consistency with the EPA's objective for social surroundings	Regulated through recommended condition: <ul style="list-style-type: none"> • 1 (limit on the extent of the proposal (area)) • 4 (Cultural Heritage Management Plan)

3 Holistic assessment

While the EPA assessed the impacts of the proposal against the key environmental factors individually, given the link between flora and vegetation, terrestrial fauna and social surroundings, the EPA also considered connections and interactions between parts of the environment to inform a holistic view of impacts to the whole environment.

The EPA's evaluation of other environmental factors (that is, those which were not considered key factors for assessment) is included Appendix C

The below diagram summarises the key relationships and links between the key environmental factors and the other environmental factors, to inform the EPA's holistic assessment.

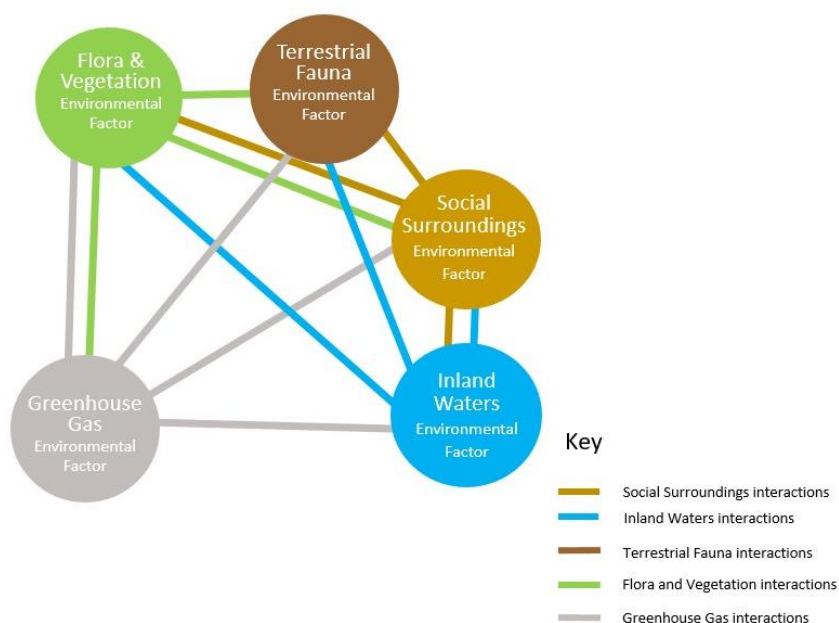


Figure 2: Intrinsic interactions between environmental factors

The locally and regionally significant flora and vegetation provides habitat for Carnaby's cockatoo and other conservation significant fauna species. Minimising the direct and indirect impacts to flora and vegetation will also minimise impacts to habitat for conservation significant fauna. The EPA considers that the proposed mitigation and management measures, and recommended conditions for impacts and offsetting of significant residual impacts to Carnaby's cockatoo will also mean the inter-related impacts to the health of other factors of the environment including the values associated with flora and vegetation will be consistent with the EPA's environmental factor objectives.

The EPA also considered the connectivity between maintaining inland waters, flora and vegetation and the condition of the watercourses which are culturally important to the traditional owners. The EPA considers that the proposed mitigation and

management measures and recommended conditions for impacts to Aboriginal heritage and flora and vegetation will also mean the inter-related impacts to the health of other factors of the environment including the values associated with terrestrial fauna and inland waters will be consistent with the EPA's environmental factor objectives.

Greenhouse gas emissions

There is an established link between GHG emissions and the risk of climate change. The EPA recognises that climate change will impact on Western Australia's environment and environmental values.

The residual impact associated with GHG emissions from the proposal is 58,748 tonnes of CO₂-e generated over the life of the proposal. The proponent aims to achieve net-zero GHG emissions (scope 1 and 2) by 2050.

GHG emissions have the potential to impact on other environmental factors through the effects of climate change.

When the separate environmental factors of the proposal were considered together in a holistic assessment, the EPA formed the view that the impacts from the proposal would not alter the EPA's views about consistency with the EPA's factor objectives.

4 Offsets

Environmental offsets are actions that provide environmental benefits which counterbalance the significant residual impacts of a proposal.

Consistent with the *WA Environmental Offsets Guidelines* (Government of Western Australia 2014), the EPA may consider the application of environmental offsets to a proposal where it determines that the residual impacts of a proposal are significant, after avoidance, minimisation and rehabilitation have been pursued.

In the case of this proposal, the likely (and potential) significant impact is 0.25 ha of Carnaby's cockatoo foraging habitat within the Wheatbelt region.

Environmental offsets are not appropriate in all cases. In this case the EPA considers offsets are appropriate because after the implementation of avoidance and minimisation measures, the impact to Carnaby's cockatoo foraging habitat from this proposal is considered significant due to the limited available Carnaby's cockatoo foraging habitat within the extensively cleared Wheatbelt region.

The proponent is currently exploring several options to offset the significant residual impact to Carnaby's cockatoo foraging habitat:

- acquiring land that supports similar vegetation and provides suitable foraging habitat for Carnaby's cockatoo; and
- working with DBCA and the Yamatji Nation on securing conservation areas and undertaking revegetation and rehabilitation within those areas.

Investigating several offset options provides flexibility to ensure the best outcome on holistic grounds, such as strengthening engagement with traditional owners. The EPA expects the offset ratios to be adequate, meaning the extent of the offset actions are appropriately larger than the extent of residual impacts and proportionate to the significant of the environmental value being impacted.

The EPA has recommended condition 6 to ensure the offsets are likely to counterbalance the likely significant impacts and are implemented.

5 Recommendations

The EPA has taken the following into account in its assessment of the proposal:

- environmental values likely to be significantly affected by the proposal
- assessment of key environmental factors, separately and holistically (this has included considering cumulative impacts of the proposal where relevant)
- EPA's confidence in the proponent's proposed mitigation measures
- likely environmental outcomes which can be achieved with the imposition of conditions
- consistency of environmental outcomes with the EPA's objectives for the key environmental factors
- whether other statutory decision-making processes can mitigate the potential impacts of the proposal on the environment and
- principles of the *Environmental Protection Act 1986*.

The EPA recommends that the proposal may be implemented subject to the conditions recommended in Appendix A.

6 Other advice

The EPA may, if it sees fit, include other information, advice or recommendations relevant to the environment in its assessment reports, even if that information has not been taken into account by the EPA in its assessment of a proposal.

The EPA provides the following information for consideration by the Minister.

Greenhouse gas emissions

Greenhouse gas emissions was not considered as a key environmental factor due to predicted scope 1 emissions associated with the proposal (a total of 58,748 tonnes per annum (tpa) carbon dioxide equivalence (CO₂-e)). The *Environmental Factor Guideline – Greenhouse Gas Emissions* (EPA 2020b) details that greenhouse gas emissions from a proposal will be assessed where it exceeds 100,000 tonnes of scope 1 emissions each year measured in CO₂-e.

The proposal will be increasing the supply of gas to existing and future industries within the Mid-West region and the Goldfields, as such credible estimates of scope 3 emissions over the life of the proposal were obtained during assessment and are presented in Appendix D. As noted in Appendix C, greenhouse gas emissions from when the gas is consumed by customers and third parties are not related to the proposal.

While the NGI pipeline will be a part of the hydrocarbon industry, it is understood that it may be capable of transporting hydrogen in the future. The proponent will not be extracting or utilising the gas that will be transported by the NGI pipeline.

Other statutory decision making processes

The EPA notes there is a requirement for:

- associated approvals such as section 18 under the *Aboriginal Heritage Act 1972* to be sought by the proponent.
- approval of an Environment Plan under the Petroleum Pipelines (Environment) Regulations 2012 and regulation by DMIRS, which will include consideration that all potential risks and impacts to the environment, as defined in the Regulations, will be managed to as low as reasonably practicable and to an acceptable level.

Appendix A: Recommended conditions

Section 44(2) of *Environmental Protection Act 1986* specifies that the EPA's report must set out (if it recommends that implementation be allowed) the conditions and procedures, if any, to which implementation should be subject. This appendix contains the EPA's recommended conditions and procedures.

STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED (*Environmental Protection Act 1986*)

NORTHERN GOLDFIELDS INTERCONNECT PIPELINE

Proposal: The proposal is to construct and operate a 580 kilometre pipeline, starting from Ambania (50 km east of Geraldton) to 40 km south of Leinster where it will connect into the existing Goldfields Gas Pipeline. The proposal includes associated aboveground infrastructure, such as a compressor station at Ambania and other stations such as valve stations, scraper stations, at various locations along the pipeline.

Proponent: APA Northern Goldfields Interconnect Pty Ltd
Australian Business Number 33 646 298 142

Proponent Address: Level 5/223 Adelaide Terrace
PERTH WA 6000

Assessment Number: 2284

Report of the Environmental Protection Authority: 1713

Pursuant to section 45 of the *Environmental Protection Act 1986*, it has been agreed that the proposal described in section 2.3 of the proponent's referral (January 2021), as amended by the change to proposal approved under section 43A on 1 September 2021 may be implemented and that the implementation of the proposal is subject to the following implementation conditions and procedures:

1 Limitations and Extent of Proposal

When implementing the proposal, the proponent shall ensure the proposal does not exceed the following extents:

Element	Location	Limitation or maximum extent
Physical elements		
Development envelope	Figure 1	12,404 hectares
Direct disturbance of native vegetation	Figure 1	Up to 1,930 hectares

2 Terrestrial Fauna

- 2-1 Trapped fauna within open trenches shall be cleared and recorded by a suitably trained and licensed **fauna handler** no later than three (3) hours after sunrise each day, and the clearing and recording shall be repeated before sunset each day.
- 2-2 Trapped fauna within open trenches shall be cleared and recorded by a suitably trained and licensed **fauna handler** within one (1) hour prior to backfilling of trenches.
- 2-3 Open trench lengths shall not exceed a length capable of being inspected and cleared by a suitably trained and licensed **fauna handler** within the required times set out in conditions 2-1 and 2-2.
- 2-4 In the event of rainfall, the proponent shall, following the clearing of fauna from the trench, pump out any pooled water in the open trench (with the exception of groundwater) and discharge it to adjacent vegetated areas in a manner that does not cause erosion.
- 2-5 Fauna shelters are to be placed in the trench at intervals not exceeding fifty (50) metres.
- 2-6 The proponent shall produce and provide a report on fauna management within the pipeline corridor no later than twenty-one (21) days after the completion of **construction activities** to the **CEO**. The report shall include the following:
 - (1) details of fauna inspections;
 - (2) the number and type of fauna cleared from trenches and actions taken; and
 - (3) vertebrate fauna mortalities.

3 Eucalypt Woodlands of the Western Australian Wheatbelt and Carnaby's Cockatoo Habitat

- 3-1 The proponent shall ensure the following outcomes are achieved:
 - (1) no more than 0.28 ha of direct impacts to the Eucalypt woodlands of the Western Australian Wheatbelt community, as mapped by Focused Vision Consulting and shown in Figure 2; and
 - (2) no more than 0.25 ha of direct impacts to foraging habitat for Carnaby's cockatoo (*Calyptoryhnchus latirostris*), as shown in Figure 3.
- 3-2 During the construction of the proposal, the proponent shall avoid project attributable indirect impacts to:

- (1) the Eucalypt woodlands of the Western Australian Wheatbelt community, as shown in Figure 2, except to the areas authorised to be cleared in condition 3-1(1); and
- (2) foraging habitat for Carnaby's cockatoo (*Calyptoryhynchus latirostris*), as shown in Figure 3, except to the areas authorised to be cleared in condition 3-1(2).

4 Cultural Heritage Management Plan

4-1 The proponent must implement the proposal to meet the following objective:

- (1) avoid, where possible, and otherwise minimise, project attributable direct and indirect impacts to social, cultural, heritage and archaeological values within and surrounding the **development envelope**, including from, but not limited to:
 - (a) disturbance of the ground that may impact registered Aboriginal heritage sites;
 - (b) potential loss of access to areas to undertake traditional activities; and
 - (c) indirect impacts to social and cultural places, and activities.

4-2 Prior to **construction activities**, the proponent shall finalise and submit a Cultural Heritage Management Plan, in consultation with relevant traditional owner groups and appropriate knowledge-holders, to meet the objective specified in condition 4-1.

4-3 The Cultural Heritage Management Plan required by condition 4-2 must:

- (1) specify the objective to be achieved, as specified in condition 4-1;
- (2) specify risk-based management actions that will be implemented to demonstrate compliance with the objective specified in condition 4-1;
- (3) include a framework for ongoing consultation with the relevant traditional owners and other relevant stakeholders during the life of the proposal;
- (4) include a procedure, in the instance of any previously unrecorded heritage places being identified within the **development envelope**, to avoid the area and must contact the relevant traditional owners and the Department of Planning, Lands and Heritage within ten (10) days of discovery, prior to implementing mitigation actions required;
- (5) include a procedure to ensure that management, staff and contracting personnel are made fully aware of their obligations in the Cultural Heritage

Management Plan approved by the **CEO**, and under the *Aboriginal Heritage Act 1972*;

- (6) specify measurable management target(s) to determine the effectiveness of the risk-based management actions in condition 4-3(2);
 - (7) specify monitoring to measure the effectiveness of management actions against management targets;
 - (8) specify a process for revision of management actions and changes to proposal activities, in the event that the management targets are not achieved. The process must include an investigation to determine the cause of the management target(s) not being met;
 - (9) provide the format and timing to demonstrate that condition 4-1 has been met for the reporting period in the Compliance Assessment Report required by condition 9-6 including, but not limited to:
 - (a) verification of the implementation of management actions; and
 - (b) reporting on the effectiveness of management actions against management target(s)
 - (10) provide evidence of consultation required by condition 4-2 and the outcomes of this consultation.
- 4-4 **Construction activities** may not commence until the proponent has received notice in writing from the **CEO** that the Cultural Heritage Management Plan satisfies the requirements of condition 4-3.
- 4-5 After receiving notice in writing from the **CEO** that the Cultural Heritage Management Plan satisfies the requirements of condition 4-3, the proponent must:
- (1) implement the provisions of the Cultural Heritage Management Plan; and
 - (2) continue to implement the Cultural Heritage Management Plan until the CEO has confirmed by notice in writing that the proponent has demonstrated the objective specified in condition 4-1 has been met.
- 4-6 In the event that monitoring, tests, surveys or investigations indicate non-achievement of management target(s) specified in the Cultural Heritage Management Plan, the proponent must:
- (1) report the non-achievement in writing to the **CEO** within twenty-one (21) days of the non-achievement being identified;
 - (2) investigate to determine the cause of the management target(s) not being achieved;

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- (3) provide a report to the **CEO** within ninety (90) days of the non-achievement being reported as required by condition 4-6(1). The report must include:
- (a) cause of management target(s) being exceeded;
 - (b) the findings of the investigation required by condition 4-6(2);
 - (c) details of revised and/or additional management actions to be implemented to prevent non-achievement of the management target(s); and
 - (d) relevant changes to proposal activities.
- 4-7 In the event that monitoring, tests, surveys or investigations indicate that one or more management action(s) specified in the Cultural Heritage Management Plan have not been implemented, the proponent must:
- (1) investigate to determine the cause of the management action(s) not being implemented;
 - (2) investigate to provide information for the **CEO** to determine potential environmental harm or alteration of the environment that occurred due to the failure to implement management action(s) to meet the objective specified in condition 4-1;
 - (3) provide a report to the **CEO** within twenty-eight (28) days of the non-achievement of the objective specified in condition 4-1 being identified. The report must include:
 - (a) cause for failure to implement management actions(s);
 - (b) the findings of the investigation required by condition 4-7(2);
 - (c) relevant changes to proposal activities; and
 - (d) measures to prevent, control or abate the environmental harm which may have occurred from the non-achievement of the objective specified in condition 4-1.
- 4-8 The proponent:
- (1) may review and revise the Cultural Heritage Management Plan; or
 - (2) must review and revise the Cultural Heritage Management Plan as and when directed by the **CEO**.
- 4-9 The proponent must implement the latest revision of the Cultural Heritage Management Plan required by condition 4-2, which the **CEO** has confirmed by notice in writing, satisfies the requirements of condition 4-3.

5 Revegetation

- 5-1 The proponent shall undertake progressive **revegetation** of areas disturbed by **construction activities** within the **development envelope** to ensure it is **self-sustaining**.
- 5-2 The proponent shall ensure that progressive **revegetation** of areas required by condition 5-1 includes:
- (1) retaining the vegetative material and topsoil removed by clearing and stockpiling the vegetative material and topsoil within the **development envelope**;
 - (2) At an **optimal time** within six (6) months following completion of **construction activities**, **revegetate** the areas cleared for **construction activities**, by:
 - (a) ripping the ground on the contour to remove soil compaction;
 - (b) laying the vegetative material and topsoil retained under condition 5-2(1) on the disturbed areas that are no longer required.
- 5-3 The proponent shall demonstrate that conditions 5-2(1) and 5-2(2) have been met for the reporting period in the Compliance Assessment Report required by condition 9-6.
- 5-4 The proponent shall report to the **CEO** six (6) years post construction on the outcomes of the **revegetation** required to be undertaken in condition 5-1, and:
- (1) should the objective in condition 5-1 not be met, the proponent shall undertake planting as a contingency action, ensuring only **local provenance** propagating materials are used to revegetate the area.

6 Offsets

- 6-1 The proponent shall implement offset measures to achieve the objective of counterbalancing the significant residual impact to 0.25 ha of foraging habitat for Carnaby's cockatoo (*Calyptoryhynchus latirostris*), as shown in Figure 3.
- 6-2 Within twelve (12) months from the date of this Statement the proponent shall prepare and submit an offset strategy to the requirements of the **CEO**.
- 6-3 The offset strategy shall:
- (1) demonstrate that the objective in condition 6-1 will be met;
 - (2) identify any area(s) to be acquired and/or for **on-ground management (Proposed Offset Conservation Area)**, which contains the environmental

values identified in condition 6-1, or similar values of equivalent conservation significance agreed by the **CEO**;

- (3) demonstrate how the proposed offset counterbalances the significant residual impact to the environmental value identified in condition 6-1 through application of the principles of the *WA Environmental Offsets Policy (2011)* and completion of the **WA Offsets Template** and the EPBC Act Offset assessment guide (the calculator) as described in the *WA Environmental Offsets Guidelines (2014)*, and the *Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy Assessment Guide (2012)*, or any subsequent revisions of these documents;
- (4) specify, if land acquisition is proposed:
 - (a) how the **Proposed Offset Conservation Area** will be acquired;
 - (b) a timeframe and works associated with establishing the **Proposed Offset Conservation Area**, including plans for maintaining the offset for at least twenty (20) years after completion of purchase; and
 - (c) each relevant management body for the on-going management of the **Proposed Offset Conservation Area**, including its role, and confirmation in writing that the relevant management body accepts responsibility for its role.
- (5) specify, if **on-ground management** is proposed:
 - (a) state the targets to be achieved, including completion criteria, which result in a **tangible improvement** to the environmental value being offset;
 - (b) demonstrate the consistency of the objective/s and target/s with the objectives of the National Recovery Plans for Carnaby's cockatoo (*Calyptorhynchus latirostris*), or any subsequent revision of this plan;
 - (c) detail the **on-ground management** actions with associated timeframes for implementation, to achieve the objective/s and target/s identified in condition 6-3(5)(a); and
 - (d) detail the monitoring, reporting and evaluation mechanisms for the objective/s, target/s and actions identified under conditions 6-3(5)(a) and 6-3(5)(c).

6-4 The proponent:

- (1) may review and revise the offset strategy; or

- (2) review and revise the offset strategy as and when directed by the **CEO** by a notice in writing, to the requirements of the **CEO**.
- 6-5 The proponent shall implement the latest revision of the offset strategy approved by the **CEO**.
- 6-6 The proponent shall continue to implement the offset strategy until the **CEO** has confirmed by notice in writing that the proponent has demonstrated that the objective in condition 6-1 has been met.
- 6-7 Should the actions, objectives, or targets in the offset strategy be unable to be met, the proponent shall notify the **CEO** within thirty (30) days of it being identified and provide details and timing of **contingency actions** to be undertaken, to the satisfaction of the **CEO**.
- 6-8 The proponent shall report to the **CEO** on the outcomes of the **contingency actions** as required by the condition 6-6 within sixty (60) days of completion.

7 Contact Details

- 7-1 The proponent shall notify the **CEO** of any change of its name, physical address or postal address for the serving of notices or other correspondence within twenty-eight (28) days of such change. Where the proponent is a corporation or an association of persons, whether incorporated or not, the postal address is that of the principal place of business or of the principal office in the State.

8 Time Limit for Proposal Implementation

- 8-1 The proponent shall not commence implementation of the proposal after five (5) years from the date of this Statement, and any commencement, prior to this date, must be substantial.
- 8-2 By the date that is five (5) years from the date of this Statement, the proponent shall notify the **CEO** in writing of the date of substantial commencement of the proposal, together with reasons why that date has been selected.

9 Compliance Reporting

- 9-1 The proponent shall prepare, and maintain a Compliance Assessment Plan which is submitted to the **CEO** at least six (6) months prior to the first Compliance Assessment Report required by condition 9-6, or prior to implementation of the proposal, whichever is sooner.
- 9-2 The Compliance Assessment Plan shall indicate:
 - (1) the frequency of compliance reporting;
 - (2) the approach and timing of compliance assessments;
 - (3) the retention of compliance assessments;

- (4) the method of reporting of potential non-compliances and corrective actions taken;
 - (5) the table of contents of Compliance Assessment Reports; and
 - (6) public availability of Compliance Assessment Reports.
- 9-3 After receiving notice in writing from the **CEO** that the Compliance Assessment Plan satisfies the requirements of condition 9-2 the proponent shall assess compliance with conditions in accordance with the Compliance Assessment Plan required by condition 9-1.
- 9-4 The proponent shall retain reports of all compliance assessments described in the Compliance Assessment Plan required by condition 9-1 and shall make those reports available when requested by the **CEO**.
- 9-5 The proponent shall advise the **CEO** of any potential non-compliance within seven (7) days of that non-compliance being known.
- 9-6 The proponent shall submit to the **CEO** the first Compliance Assessment Report fifteen (15) months from the date of issue of this Statement addressing the twelve (12) month period from the date of issue of this Statement and then annually from the date of submission of the first Compliance Assessment Report, or as otherwise agreed in writing by the **CEO**.

The Compliance Assessment Report shall:

- (1) be endorsed by the proponent's Chief Executive Officer or a person delegated to sign on the Chief Executive Officer's behalf;
- (2) include a statement as to whether the proponent has complied with the conditions;
- (3) identify all potential non-compliances and describe corrective and preventative actions taken;
- (4) be made publicly available in accordance with the approved Compliance Assessment Plan; and
- (5) indicate any proposed changes to the Compliance Assessment Plan required by condition 9-1.

10 Public Availability of Data

- 10-1 Subject to condition 10-2, within a reasonable time period approved by the **CEO** of the issue of this Statement and for the remainder of the life of the proposal, the proponent shall make publicly available, in a manner approved by the **CEO**, all validated environmental data (including sampling design, sampling methodologies, empirical data and derived information products (e.g. maps)),

management plans and reports relevant to the assessment of this proposal and implementation of this Statement.

10-2 If any data referred to in condition 10-1 contains particulars of:

- (1) a secret formula or process; or
- (2) confidential commercially sensitive information,

the proponent may submit a request for approval from the CEO to not make these data publicly available. In making such a request the proponent shall provide the CEO with an explanation and reasons why the data should not be made publicly available.

Table 3: Abbreviations and definitions

Acronym or abbreviation	Definition or term
CEO	The Chief Executive Officer of the Department of the Public Service of the State responsible for the administration of section 48 of the <i>Environmental Protection Act 1986</i> , or his delegate.
Construction activities	Activities that are associated with the substantial implementation of a proposal including but not limited to, earthmoving, vegetation clearing, grading or construction of right of way. Construction activities do not include Geotechnical investigations (including potholing for services and the installation of piezometers) and other preconstruction activities where no clearing of vegetation is required.
Contingency actions	Actions to be implemented when monitoring determines that a management target may not be met, and where the actions will bring the impact within the management target.
Development envelope	The area within the yellow line marked in Figure 1 of this Statement and defined by coordinates in Schedule 1.
Fauna handler	A person who is qualified and licenced under section 40 of the <i>Biodiversity Conservation Act 2016</i> .
ha	Hectare
Local provenance	native vegetation seeds and propagating material from natural sources within 100 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion of the area cleared
On-ground management	This includes revegetation (re-establishment of native vegetation in degraded areas) and rehabilitation (repair of ecosystem processes and management of weeds, disease or feral animals) with the

	<p>objective to achieve a tangible improvement to the environmental values in the offset area.</p> <p>Actions associated with on-ground management must be additional to those undertaken by the land manager as required by legislation.</p>
Optimal time	means the optimal time for undertaking revegetation in the relevant IBRA subregion of the area cleared
Proposed Offset Conservation Area	The areas of land identified in condition 6-3(2).
Revegetate/ion	The re-establishment of native vegetation in degraded areas.
Self-sustaining	Refers to vegetation that can survive (continue indefinitely) without on-going management actions such as watering, weed control or infill planting. If the proponent cannot demonstrate that the vegetation is self-sustaining, on-going management actions should be implemented to ensure its ongoing survival.
Tangible improvement	Demonstrated improvement of environmental values being offset as a direct result of on-ground management and/or revegetation.
WA Offsets Template	Template to be used to quantify the quantum of impact and offset extent required to counterbalance the proposal's significant residual impacts, as detailed in the <i>WA Environmental Offsets Guidelines</i> .

Figures (attached)

- Figure 1 Northern Goldfields Interconnect Pipeline development envelope
(This figure is a representation of the co-ordinates held by DWER (Doc Ref DWERDT512550))
- Figure 2 Eucalypt woodlands of the Western Australian Wheatbelt within development envelope
- Figure 3 Carnaby's cockatoo foraging habitat within development envelope



Figure 1: Northern Goldfields Interconnect Pipeline development envelope



Figure 2: Eucalypt woodlands of the Western Australian Wheatbelt within development envelope



Figure 3: Carnaby's cockatoo foraging habitat within development envelope

Schedule 1

All co-ordinates are in metres, listed in Map Grid of Australia Zone 50 and 51 (MGA Zone 51) datum of Geocentric Datum of Australia 1994 (GDA94)

Spatial data depicting the figures in this schedule are held by the Department of Water and Environmental regulation as follows:

- Figure 1: Northern Goldfields Interconnect Pipeline development envelope (DWERDT512550)
- Figure 2: Eucalypt woodlands of the Western Australian Wheatbelt within development envelope (DWERDT514208)
- Figure 3: Carnaby's cockatoo foraging habitat within development envelope (DWERDT514208)

Appendix B: Decision-making authorities

Section 45(1) of the *Environmental Protection Act 1986* requires the Minister for Environment to consult with decision-making authorities (DMAs), and if possible, agree on whether or not the proposal may be implemented, and if so, to what conditions and procedures, if any, that implementation should be subject.

The following DMAs have been identified:

Decision-Making Authority	Legislation (and approval)
1. Minister for Aboriginal Affairs	<i>Aboriginal Heritage Act 1972</i> - section 18 consent to impact a registered Aboriginal heritage site
2. Minister for Environment	<i>Biodiversity Conservation Act 2016</i> - section 40 authority to take or disturb threatened species and - section 45 authority to modify occurrence of a threatened ecological community
3. Minister for Mines and Petroleum	<i>Petroleum Pipelines Act 1969</i> Petroleum Pipelines (Environmental) Regulation 1997 Petroleum Pipelines (Management of Safety of Pipeline Operations) Regulations 2010 - approval for construction and operation
4. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i> - permit to interfere with beds and banks - permit to take water - groundwater abstraction licence - licence to construct bores - dewatering licence
5. Minister for Lands	<i>Lands Administration Act 1997</i> - Crown land access licence or easement <i>Dampier to Bunbury Pipeline Act 1997</i> - section 34 access right
6. Chief Executive Officer, Department of Biodiversity, Conservation and Attractions	<i>Biodiversity Conservation Act 2016</i> - authority to take flora and fauna (other than threatened species)
7. Chief Dangerous Goods Officer, Department of Mines, Industry Regulation and Safety	<i>Dangerous Goods Safety Act 2004</i> - storage and handling of dangerous goods
8. Chief Executive Officer, Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> - part V works approval and licence
9. Chief Executive Officer, City of Greater Geraldton	<i>Planning and Development Act 2005; Building Act 2011</i>

	<ul style="list-style-type: none"> - permit for worker accommodation (temporary construction camps) - above ground infrastructure
10. Chief Executive Officer, Shire of Yalgoo	<i>Planning and Development Act 2005; Building Act 2011</i> <ul style="list-style-type: none"> - permit for worker accommodation (temporary construction camps) - above ground infrastructure
11. Chief Executive Officer, Shire of Mt Magnet	<i>Planning and Development Act 2005; Building Act 2011</i> <ul style="list-style-type: none"> - permit for worker accommodation (temporary construction camps) - above ground infrastructure
12. Chief Executive Officer, Shire of Sandstone	<i>Planning and Development Act 2005; Building Act 2011</i> <ul style="list-style-type: none"> - permit for worker accommodation (temporary construction camps) - above ground infrastructure
13. Chief Executive Officer, Shire of Leonora	<i>Planning and Development Act 2005; Building Act 2011</i> <ul style="list-style-type: none"> - permit for worker accommodation (temporary construction camps) - above ground infrastructure

Note: In this instance, agreement is only required with DMAs 1, 2, 3, 4 and 5, these DMAs are Ministers.

Appendix C: Consideration of Environmental Protection Act principles

EP Act Principle	Consideration
<p>1. The precautionary principle</p> <p><i>Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.</i></p> <p><i>In application of this precautionary principle, decisions should be guided by –</i></p> <p>(a) <i>careful evaluation to avoid, where practicable, serious or irreversible damage to the environment; and</i></p> <p>(b) <i>an assessment of the risk-weighted consequences of various options.</i></p>	<p>The EPA has considered the precautionary principle in its assessment and has had particular regard to this principle in its assessment of Aboriginal heritage. The assessment of these impacts is provided in the report.</p> <p><u>Greenhouse gas emissions</u></p> <p>The EPA notes that climate change as a result of cumulative GHG emissions has the potential to cause serious damage to WA's environment. The specific impacts of any single proposal's GHG emissions are not able to be known with certainty at this time. However, the EPA has not used this as a reason for postponing assessment of the proposal's GHG emissions.</p>
<p>2. The principle of intergenerational equity</p> <p><i>The present generation should ensure that the health, diversity and productivity of the environment is maintained and enhanced for the benefit of future generations.</i></p>	<p>The EPA has considered the principle of intergenerational equity in its assessment and has had particular regard to this principle in its assessment of flora and vegetation and terrestrial fauna and social surroundings.</p> <p>The EPA considers consistency with this principle could be achieved with the implementation of its recommended conditions.</p> <p><u>Greenhouse gas emissions</u></p> <p>The EPA noted that GHG emissions pose a risk to future generations. In scoping for the proposal, the EPA requested that the proponent provide credible estimates of emissions over the life of the proposal as the proposal will be increasing the supply of gas to existing and future industries within the Mid-West region and the Goldfields. In considering the principle of intergenerational equity the EPA noted:</p> <ul style="list-style-type: none"> • a total of 58,748 t CO₂-e of scope 1 emissions and no scope 2 emissions associated with the proposal • the calculated scope 1 emissions are from construction and operational activities • once operational the proposal will have limited on-going emissions from the transport of gas, • <i>Environmental Factor Guideline – Greenhouse Gas Emissions</i> (EPA 2020b) which details that greenhouse gas from a proposal will be assessed where it

EP Act Principle	Consideration
	<p>exceeds 100,000 tonnes of scope 1 emissions each year measured in carbon dioxide equivalence (CO₂-e),</p> <ul style="list-style-type: none"> the proposal will generate scope 3 emissions as the pipeline will act as a conveyance system to facilitate the transfer of gas within Western Australia the proponent has presented credible estimates of scope 3 emissions, including scenarios with conservative estimates of downstream users and third-party gas consumption, estimated emissions from when the gas is consumed by customers and third parties are not related to the proposal the subject of this assessment. They have been prepared by the proponent as requested by the EPA for transparency, consistent with the <i>Environmental Factor Guideline – Greenhouse Gas Emissions</i> (EPA 2020b). <p>Any future proposal that is likely, if implemented, to have a significant effect on the environment with respect to GHG emissions will need to be referred to the EPA for consideration.</p>
<p>3. The principles of the conservation of biological diversity and ecological integrity</p> <p><i>Conservation of biological diversity and ecological integrity should be a fundamental consideration.</i></p>	<p>The EPA has considered the principle of conservation of biological diversity and ecological integrity in its assessment and has had particular regard to this principle in its assessment of flora and vegetation, and terrestrial fauna.</p> <p><u>Flora and vegetation and terrestrial fauna</u></p> <p>The EPA has considered to what extent the potential impacts from the proposal to flora and vegetation and terrestrial fauna can be ameliorated to ensure consistency with the principle of conservation of biological diversity and ecological, including by provision of offsets. The EPA has concluded that given the nature of the impacts that the proposed offsets are likely to counter-balance the impacts of the loss of biological diversity and ecological integrity.</p>
<p>4. Principles relating to improved valuation, pricing and incentive mechanisms</p> <p>(1) <i>Environmental factors should be included in the valuation of assets and services.</i></p> <p>(2) <i>The polluter pays principle — those who generate pollution and waste should bear the cost of containment, avoidance or abatement.</i></p>	<p>This principle was considered by the EPA when assessing the impacts of the proposal on the environmental values of flora and vegetation and terrestrial fauna. In considering this principle, the EPA notes that the proponent will bear the costs relating to implementing the proposal to achieve environmental outcomes, and management and monitoring of environmental impacts during construction, operation and decommissioning of the proposal.</p>

EP Act Principle	Consideration
<p>(3) <i>The users of goods and services should pay prices based on the full life cycle costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any wastes.</i></p> <p>(4) <i>Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentive structures, including market mechanisms, which enable those best placed to maximise benefits and/or minimise costs to develop their own solutions and responses to environmental problems.</i></p>	
<p>5. The principle of waste minimisation</p> <p><i>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</i></p>	<p>The EPA has considered the principle of waste minimisation in its assessment, and has had particular regard to this principle in its assessment of flora and vegetation, terrestrial fauna and Aboriginal heritage.</p> <p>The EPA notes that the proponent integrated the principle of waste minimisation into the proposal. Specifically, decision making during the proposal will incorporate the waste hierarchy to manage the potential waste streams. The proponent will implement the waste minimisation hierarchy of avoid, reuse, recycle and treat/dispose for the proposal.</p> <p>The EPA has had regard to this principle during the assessment of the proposal.</p>

Appendix D: Evaluation of other environmental factors

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
Land			
Subterranean fauna	The proposal has the potential to impact five Priority 1 calcrete aquifer PECs from excavation and dewatering.	<p><u>Public comments</u> Subterranean fauna identified as a concern in public submissions, but no reason given.</p> <p><u>Agency comments</u> None received for this factor.</p>	<p>In scoping for the proposal, the EPA requested that the proponent provide information that demonstrated suitable habitat for subterranean fauna did not occur in the proposal development envelope, as stated in their referral document. Where suitable habitat was present, the proponent was asked to identify the potential impacts from implementation of the proposal on the subterranean fauna communities with the calcrete PCs that the development envelope intersected. The proponent was asked to provide avoidance and mitigation measures for any indirect impacts.</p> <p>Having regard to:</p> <ul style="list-style-type: none"> • updated geotechnical investigations which confirmed groundwater was typically at 15 m to 25 m below ground level. The typical pipe burial depth is 2 m, • groundwater was intersected in close proximity to five watercourses. The proposal is unlikely to intersect groundwater in or near the calcrete PECs, • significant layers of calcrete had not been intersected to date, • the definition of areas where HDD will be applied (ie the deepest point of excavation relevant to the proposal) will not occur in or directly adjacent to the calcrete PECs. • the general thickness of the calcrete layer is up to 10 m. The closest is 16 km from the nearest PECs boundary, • the development envelope intersects < 1% of each mapped calcrete area • turkey nests will be excavated no deeper than typical pipeline burial depth.

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			<p>The EPA does not consider that the proposal will have a significant impact on the subterranean fauna communities of the five P1 calcrete PECs. Indirect impacts to this factor are manageable.</p> <p>Accordingly, the EPA does not consider the factor subterranean fauna to be a key environmental factor at the conclusion of its assessment.</p>
Water			
Inland waters	<p>The proposal has the potential to impact groundwater (including calcretes aquifers) from:</p> <ul style="list-style-type: none"> • Intersection during excavation • Use of HDD • Dewatering • Abstraction of water for pipeline pressure testing • Contamination from chemicals. <p>There are also potential impacts to alteration of surface water flow from the pipeline.</p>	<p><u>Public comments</u> None received for this factor.</p> <p><u>Agency comments</u> None received for this factor</p>	<p>The EPA assessed the potential impacts from the installation of the pipeline on inland waters, including calcrete aquifers, temporary waterbodies (claypans) and intermittent waterways (creeklines, tributaries and drainage lines).</p> <p>Having regard to:</p> <ul style="list-style-type: none"> • the updated geotechnical information since referral (as stated for the environmental factor subterranean fauna) • the use of HDD where the pipeline will intersect major creeklines • excavation for the pipeline will be shallow, typically 600 mm width, and will be backfilled • the waterways are intermittent and temporary (i.e. dry for much of the year) • that no DWER environmentally sensitive areas, important wetlands, RAMSAR sites, <i>Rights in Water and Irrigation Act 1914</i> declared surface water areas or irrigation districts are within 5 km of the site • water for the proposal would be supplied via the proponent's existing licensed groundwater bore off-site, <p>The EPA considers that the proposal will not result in a significant impact to the quality of the groundwater or alter the surface water flow, resulting in indirect impacts downstream.</p>

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
			<p>Accordingly, the EPA did not consider the factor Inland Waters to be a key environmental factor at the conclusion of its assessment.</p> <p>In addition, it is noted that:</p> <ul style="list-style-type: none"> impacts to water quality would be managed and regulated under the provisions of the <i>Petroleum and Geothermal Energy Resources Act 1967</i>; and the proponent is required to disclose all proposed drilling mud chemicals to DMIRS and publicly as per the requirements of the <i>Petroleum and Geothermal Energy Resources (Environment) Regulations 2012</i> under Regulation 15(9).
Air			
Greenhouse gas emissions	<p>The proposal is estimated to produce:</p> <ul style="list-style-type: none"> Scope 1 <p><i>Construction:</i> 25,639 t CO₂-e from diesel consumption (vegetation clearing, transport, construction camps and supporting facilities)</p> <p><i>Operations:</i> 33,109 t CO₂-e from gas (compressor and scraper stations) and diesel consumption (transport) and fugitive emissions.</p> <ul style="list-style-type: none"> Scope 3 	<p><u>Public comments</u></p> <p>At a high level, the submissions focused on the assertion that the GHG emissions information provided (for Scope 3 emissions) is inadequate and that the EPA should request further information from the proponent to ensure that the proposal is consistent with the EPA's Environmental Factor Guideline for Greenhouse Gas Emissions, and the Western Australian Government's Greenhouse Gas Emissions Policy for Major Projects.</p> <p>Within this same theme, submission comments queried assumptions and approach for the proponent's method to characterise Scope 3 emissions, and related topics for mitigation and offsets.</p>	<p>In scoping for the proposal, the EPA requested that the proponent provide credible estimates of scope 3 emissions over the life of the proposal as the proposal will be increasing the supply of gas to existing and future industries within the Mid-West region and the Goldfields.</p> <p>The following is noted:</p> <ul style="list-style-type: none"> a total of 58,748 t CO₂-e of scope 1 emissions and no Scope 2 emissions associated with the proposal the calculated scope 1 emissions are from construction and operational activities once operational the proposal will have limited on-going emissions from the transport of gas, Environmental Factor Guideline – Greenhouse Gas Emissions (EPA 2020b) which details that greenhouse gas from a proposal will be assessed where it exceeds 100,000 tonnes of scope 1 emissions each year measured in carbon dioxide equivalence (CO₂-e)

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
	<p>Construction: a total of 432,227 t CO₂-e (This assumes the emissions from stationary and transport fuel consumption, and pipeline and compressor station construction)</p> <p>Operation: the proponent has presented the two following scenarios for scope 3:</p> <ul style="list-style-type: none"> 194,791 t CO₂-e per annum (attributable to only natural gas consumption and distribution by the proponent) 2,206,231 t CO₂-e per annum (attributable to third-party gas consumption) <p>The proponent has stated there will be no scope 2 emissions associated with the construction and commissioning of the proposal.</p>	<p><u>Agency comments</u></p> <p>It is noted that the referral document provides estimated scope 1 and 2 greenhouse gas emissions for the proposal during the construction and operation stages for the proposal. As the purpose of the proposal is to ensure a reliable and increased supply of gas to existing and future industries within the Mid-West region and the Goldfields, it was requested that the proponent provide credible estimates of scope 3 emissions over the life of the proposal, as set out in the EPA's Environmental Factor Guideline for Greenhouse Gas Emissions.</p>	<ul style="list-style-type: none"> the proposal will generate scope 3 emissions as the pipeline will act as a conveyance system to facilitate the transfer of gas within Western Australia the proponent has presented credible estimates of scope 3 emissions, including scenarios with conservative estimates of downstream users and third-party gas consumption emissions from when the gas is consumed by customers and third parties are not related to the proposal the subject of this assessment. They have been prepared by the proponent as requested by the EPA for transparency, consistent with the <i>Environmental Factor Guideline – Greenhouse Gas Emissions</i> (EPA 2020b). <p>Accordingly, based on predicted scope 1 emissions from the proposal the EPA did not consider greenhouse gas emissions to be a key environmental factor at the conclusion of its assessment.</p> <p>It is noted that proposed future industries utilising gas from the proposal may refer amended/additional activities and new developments to the EPA, in the event it is likely to have a significant impact on the environment, if implemented. Should downstream proposals be referred to the EPA, then it would require information on scope 1 and 2 emissions for consideration and potential assessment by the EPA.</p>
People			
Social Surroundings (Amenity)	Noise emissions impacting on sensitive receptors from localised blasting during construction of the NGI	<p><u>Public comments</u></p> <p>None received during the public consultation period.</p>	The EPA assessed the potential impact from the use of blasting where conventional excavation, rock hammering or trenching equipment is ineffective and the impact from operation of the compressor station.

Environmental factor	Description of the proposal's likely impacts on the environmental factor	Government agency and public comments	Evaluation of why the factor is not a key environmental factor
	pipeline, and operation of the Ambania compressor station.	<p>Comments were provided by landholders and traditional owners in regard to blasting during the proponent's stakeholder consultation.</p> <p><u>Agency comments</u> None received for this factor.</p>	<p>Having regard to:</p> <ul style="list-style-type: none"> • blasting will be avoided to the maximum extent possible or minimised in the vicinity of Kerbar Cliffs • blasting will only be during daylight hours • the noise assessment identified that additional noise mitigation measures for the Ambania compressor station are not considered necessary based on the proposed design and location, and proximity from noise sensitive locations • controlled blasting will be used only where conventional excavation, rock hammering or trenching equipment is ineffective • refinement of the pipeline alignment has sought to avoid granite outcrops, breakaways and banded ironstone ridges • a Blasting Management Plan will be developed and implemented for the project • the proponent will continue to consult with the relevant landholder(s) and other third-parties (e.g. utilities, Main Roads) <p>The EPA considers that the proposal will not result in a significant increase to amenity (noise) and that the impacts to the factor social surrounds are manageable.</p> <p>Accordingly, the EPA did not consider the amenity aspect for the factor social surroundings to be a key matter at the conclusion of its assessment.</p> <p>In addition to the above, it is noted that the proposal will need to comply with the Environmental Protection (Noise) Regulations 1997.</p>

Appendix E: Relevant policy, guidance and procedures

The EPA had particular regard to the policies, guidelines and procedures listed below in the assessment of the proposal.

- *Environmental Factor Guideline – Air Quality* (EPA 2020)
- *Environmental Factor Guideline – Flora and Vegetation* (EPA 2016)
- *Environmental Factor Guideline – Greenhouse Gas Emissions* (EPA 2020)
- *Environmental Factor Guideline – Inland Waters* (EPA 2018)
- *Environmental Factor Guideline – Social Surroundings* (EPA 2016)
- *Environmental Factor Guideline – Subterranean Fauna* (EPA 2016)
- *Environmental Factor Guideline – Terrestrial Fauna* (EPA 2016)
- *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual* (EPA 2020)
- *WA Environmental Offsets Policy* (Government of Western Australia 2011)
- *WA Environmental Offsets Guidelines*, Government of Western Australia (2014)
- *Statement of Environmental Principles, Factors and Objectives* (EPA 2020)
- *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures* (State of Western Australia 2016)
- *Technical Guidance – Flora and vegetation surveys for environmental impact assessment* (EPA 2016)
- *Technical Guidance – Sampling of short range endemic invertebrate fauna* (EPA 2016)
- *Technical Guidance – Subterranean fauna surveys* (EPA 2016)
- *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA 2020).

Appendix F: List of submitters

7-day comment on referral

153 public submissions
Conservation Council Western Australia
Lock the Gate Alliance

Public review of proponent information

Organisations and public

Public submission 1
Conservation Council Western Australia
Lock the Gate Alliance

Government agencies

Department of Planning, Lands and Heritage
Department of Biodiversity, Conservation and Attractions
Department of Mines, Industry Regulation and Safety

Appendix G: Assessment timeline

Date	Progress stages	Time (weeks)
25 February 2021	EPA decided to assess – level of assessment set	4
6 April 2021	EPA requested additional information	5
3 May 2021	EPA received additional information	4
9 June 2021	EPA accepted additional information	5
14 June 2021	EPA released additional information for public review	4 days
28 June 2021	Public review period for additional information closed	3
3 September 2021	EPA received final information for assessment	9
14 September 2021	EPA accepted proponent's Response to Submissions	1.5
16 September 2021	EPA completed its assessment	2 days
15 October 2021	EPA provided report to the Minister for Environment	4
20 October 2021	EPA report published	3 days
3 November 2021	Appeals period closed	2

Timelines for an assessment may vary according to the complexity of the proposal and are usually agreed with the proponent soon after the Environmental Protection Authority (EPA) decides to assess the proposal and records the level of assessment.

In this case, the EPA met its timeline objective to complete its assessment and provide a report to the Minister.

References

APA 2021a, Northern Goldfields Interconnect Pipeline. EPA Referral, Additional Information. Report No. 20199-RP-HSE-0004.

APA 2021b Northern Goldfields Interconnect Pty Ltd, Northern Goldfields Interconnect Pipeline EPA Referral Supporting Document (Doc. No. 20199-RP-HSE-0001)

APA 2021c, Northern Goldfields Interconnect Pipeline. EPA Environmental Referral. Response to Submissions – EPA Assessment No. 2284. Report 20199-RP-HSE-0007

EPA 2016, *Environmental Factor Guideline – Flora and Vegetation*, Environmental Protection Authority, Perth, WA.

EPA 2016, *Environmental Factor Guideline – Social Surroundings*, Environmental Protection Authority, Perth, WA.

EPA 2016, *Environmental Factor Guideline – Subterranean Fauna*, Environmental Protection Authority, Perth, WA.

EPA 2016, *Environmental Factor Guideline – Terrestrial Fauna*, Environmental Protection Authority, Perth, WA.

EPA 2016, *Technical Guidance – Environmental impact assessment of marine dredging proposals*, Environmental Protection Authority, Perth, WA.

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EPA 2016, *Technical Guidance – Subterranean fauna surveys*, Environmental Protection Authority, Perth, WA.

EPA 2018, *Environmental Factor Guideline – Inland Waters*, Environmental Protection Authority, Perth, WA.

EPA 2020, *Environmental Factor Guideline – Air Quality*, Environmental Protection Authority, Perth, WA.

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EPA 2020, *Statement of Environmental Principles, Factors and Objectives*, Environmental Protection Authority, Perth, WA.

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Focused Vision Consulting 2020, Northern Goldfields Interconnect Pipeline Project detailed flora and vegetation assessment. Report to APA Northern Goldfields Connection Pty Ltd. December 2020.

Focused Vision Consulting 2021a, Infill flora and vegetation assessment – Northern Goldfields Interconnect Pipeline Project memorandum (appendix 1 of the additional information document).

Focused Vision Consulting 2021b, Northern Goldfields Interconnect Pipeline Project, supplementary targeted flora surveys (Eremaean regions).

Government of Western Australia 2011, *WA Environmental Offsets Policy*, Government of Western Australia, Perth, WA.

Government of Western Australia 2014, *WA Environmental Offsets Guidelines*, Government of Western Australia, Perth, WA.

State of Western Australia 2016, *Western Australia Government Gazette, No. 223, Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures*, 13 December 2016.