

**Table 19: Summary of Assessment of Preliminary Key Environmental Factors**

No.	Potential Impact	Environmental Aspect	Mitigation Measures	Proposed Regulatory Measures	Outcomes that demonstrate Proposal meets EPA Objectives
<b>1</b>	<b>Flora and Vegetation</b>				
<b>EPA Objective:</b> To maintain representation, diversity, viability and ecological function at the species, population and community level.					
No TECs, PECs or Threatened flora listed under either the EP Act or EPBC Act recorded in the Proposal Area.					
Three Priority 3 listed flora species were recorded from the Proposal Area:					
<ul style="list-style-type: none"> <li>o <i>Pterocaulon intermedium</i></li> <li>o <i>Tephrosia vallecuate</i></li> <li>o <i>Triodia caelestialis</i>.</li> </ul>					
Two potential groundwater dependant ecosystems were recorded within the expected groundwater drawdown zone:					
<ul style="list-style-type: none"> <li>o Vegetation community <i>MaMvEtCpCc</i></li> <li>o Tributaries associated with the Fraser River North and South.</li> </ul>					
1.1	Clearing of vegetation, up to approximately 1,723 ha of remnant vegetation, including potential direct loss of Priority flora individuals or populations.	Thunderbird mine pit and associated infrastructure	<ul style="list-style-type: none"> <li>• Limit clearing of native vegetation for the Proposal to only what is required, as required</li> <li>• Utilise existing disturbed areas, where possible (i.e. existing tracks)</li> <li>• Avoid locations of Priority flora individuals/populations during advanced mine planning, where possible (i.e. road alignments).</li> <li>• Prohibit all off-road driving to prevent accidental losses of Priority fauna</li> <li>• Progressive rehabilitation of decommissioned areas during the life of the Proposal.</li> </ul>	Clearing to be conducted under an approved Ministerial Statement issued by the Environment Minister, resulting from the assessment of this referral and subsequent Environmental Review documents.  Alternatively, if a Not Assessed Decision is the outcome of this referral, a Native Vegetation Clearing Permit will be submitted to the Department of Mines and Petroleum for assessment under the provisions of the EP Act.	The Proposal is not expected to affect the conservation status of any Priority taxa known to occur in the Proposal Area, or have a significant effect on the representation of species at a local or regional level.
1.2	Fragmentation of populations of Priority flora species	Thunderbird mine pit and associated infrastructure	As above	As above	All three Priority flora species present within the Proposal Area are considered widely distributed outside the Proposal Area and therefore are not expected to be

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					significantly fragmented by the Proposal.
1.2	Drawdown of groundwater and/or alteration of subsurface flows resulting in direct impacts to groundwater dependant vegetation	Groundwater abstraction and mine pit dewatering	<ul style="list-style-type: none"> <li>Groundwater abstraction and dewatering will only progress to meet the water demand at the time</li> <li>Implement a groundwater monitoring program to detect and/or monitor any potential impacts to the water levels at the soak associated with vegetation community <i>MaMvEtCpCc</i>.</li> </ul>	Licence to Take Water (5C) to be obtained under the RIWI Act managed by the Department of Water (DOW)	No impacts to the soak within vegetation community <i>MaMvEtCpCc</i> are expected as it is not considered to be connected to the Proposals water supply (Broome aquifer). Impacts to tributaries associated with the Fraser rivers are considered minimal and no impacts to the vegetation within these areas are expected.
1.3	Modification of surface water flows resulting in direct impacts to flora and vegetation communities (i.e. soil erosion)	Physical presence of Thunderbird mine pit and associated infrastructure	<ul style="list-style-type: none"> <li>Implement a Surface Water Management Plan to manage stormwater runoff within the Proposal Area</li> <li>All associated infrastructure will be located off natural drainage lines and flood prone areas, where possible</li> </ul>	n/a	No groundwater dependant vegetation communities are located within the Proposal Area and therefore vegetation communities relying on local surface water flows are not expected to be impacted.. Additionally, all surface water will be managed such that it does not cause significant runoff into surrounding vegetation and therefore local flora and vegetation are unlikely to be impacted by altered surface water flows.

No.	Potential Impact	Environmental Aspect	Mitigation Measures	Proposed Regulatory Measures	Outcomes that demonstrate Proposal meets EPA Objectives
1.4	Potentially contaminated surface water run-off indirectly impacting flora and vegetation	Physical presence of associated infrastructure likely to use/store contaminating substances (i.e. TSF, processing plants, workshops etc)	<ul style="list-style-type: none"> <li>• Implement a Surface Water Management Plan to manage stormwater runoff within the Proposal Area</li> <li>• Implement a Spill Management Plan to manage accidental spills and releases of potentially contaminating substances</li> <li>• Regularly inspect vegetation surrounding these Proposal Areas for signs of plant stress</li> </ul>	n/a	All surface water and accidental spills/releases of contaminating substances will be managed such that it does not cause significant runoff into surrounding vegetation and therefore local flora and vegetation are unlikely to be impacted by altered surface water flows.
<b>2</b>	<b>Terrestrial Fauna</b>				
<p><b>EPA Objective:</b> To maintain representation, diversity, viability and ecological function at the species, population and assemblage level</p> <p>One Threatened Fauna taxa listed as Vulnerable under the EP Act and EPBC Act recorded in the Proposal Area:</p> <ul style="list-style-type: none"> <li>○ Greater Bilby (<i>Macrotis lagotis</i>)</li> </ul> <p>Two Priority fauna species listed by DPAW recorded in the Proposal Area:</p> <ul style="list-style-type: none"> <li>○ Australian Bustard (<i>Ardeotis australis</i>) – P4</li> <li>○ Short-tailed Mouse (<i>Leggadina lakedownensis</i>) – P4</li> </ul> <p>Six Migratory species listed under the recorded in the Proposal Area:</p> <ul style="list-style-type: none"> <li>○ Fork-tailed Swift (<i>Apus pacificus</i>)</li> <li>○ Rainbow Bee-eater (<i>Merops ornatus</i>)</li> <li>○ Common Greenshank (<i>Tringa nebularia</i>) – wetland species</li> <li>○ Eastern Yellow Wagtail (<i>Motacilla tschutschensis</i>) – wetland species</li> <li>○ Grey Wagtail (<i>Motacilla cinerea</i>) – wetland species</li> <li>○ Wood Sandpiper (<i>Tringa glareola</i>) – wetland species</li> </ul> <p>No significant fauna habitats occur in the Proposal Area.</p> <p>One significant fauna habitat association identified within the vicinity of the Proposal Area:</p> <p>The Threatened Greater Bilby (<i>Macrotis lagotis</i>) has a strong habitat association with the Pindan shrubland vegetation community.</p>					

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18 potential SREs and one confirmed SRE are located within the Proposal Area:									
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; vertical-align: top;"> <ul style="list-style-type: none"> <li>○ <i>Aname</i> 'MYG284'</li> <li>○ <i>Aname</i> 'MYG285'</li> <li>○ <i>Aname</i> 'MYG387' and <i>Aname</i> 'MYG387?'</li> <li>○ <i>Aname</i> 'MYG388'</li> <li>○ <i>Aname</i> 'sp. indet.'</li> </ul> </td> <td style="width: 25%; vertical-align: top;"> <ul style="list-style-type: none"> <li>○ <i>Aname</i> 'sp. juv'</li> <li>○ Olpiidae 'genus indet. (juvenile)'</li> <li>○ <i>Lychas</i> 'broome'</li> <li>○ <i>Lychas</i> 'JPP'</li> <li>○ <i>Lychas</i> 'JPP2'</li> <li>○ <i>Lychas</i> 'JPP3'</li> </ul> </td> <td style="width: 25%; vertical-align: top;"> <ul style="list-style-type: none"> <li>○ <i>Urodacus</i> 'kraepelini'</li> <li>○ <i>Urodacus</i> 'sp. indet.'</li> <li>○ <i>Dampetrus</i> sp.</li> <li>○ Armadillidae 'EE1501C'</li> <li>○ Buddelundiinae 'Gen. indet. NE Broome'</li> </ul> </td> <td style="width: 25%; vertical-align: top;"> <ul style="list-style-type: none"> <li>○ <i>Buddelundia</i> 'sp.74'</li> <li>○ <i>Buddelundia</i> '90'</li> <li>○ <i>Buddelundia</i> '91'</li> <li>○ <i>Quistrachia leptogramma</i></li> <li>○ <i>Rhagada bulgana</i></li> </ul> </td> </tr> </table>						<ul style="list-style-type: none"> <li>○ <i>Aname</i> 'MYG284'</li> <li>○ <i>Aname</i> 'MYG285'</li> <li>○ <i>Aname</i> 'MYG387' and <i>Aname</i> 'MYG387?'</li> <li>○ <i>Aname</i> 'MYG388'</li> <li>○ <i>Aname</i> 'sp. indet.'</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Aname</i> 'sp. juv'</li> <li>○ Olpiidae 'genus indet. (juvenile)'</li> <li>○ <i>Lychas</i> 'broome'</li> <li>○ <i>Lychas</i> 'JPP'</li> <li>○ <i>Lychas</i> 'JPP2'</li> <li>○ <i>Lychas</i> 'JPP3'</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Urodacus</i> 'kraepelini'</li> <li>○ <i>Urodacus</i> 'sp. indet.'</li> <li>○ <i>Dampetrus</i> sp.</li> <li>○ Armadillidae 'EE1501C'</li> <li>○ Buddelundiinae 'Gen. indet. NE Broome'</li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Buddelundia</i> 'sp.74'</li> <li>○ <i>Buddelundia</i> '90'</li> <li>○ <i>Buddelundia</i> '91'</li> <li>○ <i>Quistrachia leptogramma</i></li> <li>○ <i>Rhagada bulgana</i></li> </ul>
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No significant fauna species, short-range endemic invertebrate species or habitats are restricted to the Proposal Area.									
2.1	Removal of fauna habitat through clearing of native vegetation (up to 1,723 ha)	Thunderbird mine pit and associated infrastructure	<ul style="list-style-type: none"> <li>• Limit clearing of native vegetation for the Proposal to only what is required, as required</li> <li>• Utilise existing disturbed areas, where possible (i.e. existing tracks)</li> <li>• Undertake clearance surveys prior to land disturbance activities to identify and relocate local fauna (if possible), particularly the conservation significant ground-dwelling mammals (Greater Bilby and the Short-tailed Mouse) and nests of Migratory birds</li> <li>• Prohibit all off-road driving to prevent further disturbance to surrounding fauna habitat</li> <li>• Progressive rehabilitation of decommissioned areas during the life of the Proposal.</li> </ul>	<p>Clearing to be conducted under an approved Ministerial Statement issued by the Environment Minister, resulting from the assessment of this referral and subsequent Environmental Review documents.</p> <p>Alternatively, if a Not Assessed Decision is the outcome of this referral, a Native Vegetation Clearing Permit will be submitted to the Department of Mines and Petroleum for assessment under the provisions of the EP Act.</p>	<p>The Proposal may potential pose a moderate risk to the Threatened Greater Bilby species, due to the potential displacement of some individuals as a result of habitat removal.</p> <p>The Proposal is not expected to affect the conservation status of any other Threatened or Priority taxa, SRE species or fauna habitats known to occur in the Proposal Area, or have a significant effect on the representation of species or habitats at a local or regional level.</p>				
2.2	Construction of linear infrastructure, resulting in habitat barriers to local fauna	Physical presence internal haul roads	<ul style="list-style-type: none"> <li>• Minimal linear infrastructure will be constructed for the Proposal (&lt;41 ha), with the longest stretch of road extending between the mine pit area and the Great Northern</li> </ul>	As above	Some temporary displacement of fauna may occur during construction activities but impacts are not expected to affect the conservation status of				

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			<p>Highway approximately 30 km in length</p> <ul style="list-style-type: none"> <li>Internal haul roads will be constructed at a width of up to 7 m, suitable for fauna to cross.</li> </ul>		any fauna taxa known to occur in the Proposal Area, or have a significant effect on the representation of any species at a local or regional level.
2.3	Increased artificial lighting may impact fauna sensitive to light	Physical presence of Thunderbird mine pit and associated infrastructure	<ul style="list-style-type: none"> <li>Lighting will be directed only upon operations work sites and camps</li> <li>Lighting will only be used as necessary to provide a safe environment for construction workers and camp residents</li> </ul>	n/a	The Proposal is not located in areas known to inhabit fauna that are significantly sensitive to light. As such, the use of artificial light during construction and operation of the Proposal is not expected to have any significant impact to local fauna.
2.4	Increased feral animal activity	Generation of waste from Proposal areas, particularly the accommodation camp	<ul style="list-style-type: none"> <li>Implement Waste Management Plan to adequately deal with all waste generated during the life of the Proposal</li> <li>Temporarily store waste in sealed containers to avoid access to fauna</li> <li>Construct barriers (i.e. fences) around any onsite landfills to prevent fauna access</li> <li>Implement a Feral Animal Management Plan to manage the introduction of new species to the Proposal Area and minimise ongoing impacts to native flora and fauna by the presence of existing introduced species.</li> </ul>	Application for Works Approval and Operating Licence for the construction and operation of an onsite putrescible landfill to the Department of Environment and Regulation, under the requirements of the EP Act.	The implementation of both a Waste Management Plan and Feral Animal Management shall assist in preventing any increase in feral animal activity in the Proposal Area, minimising ongoing impacts to local flora and fauna.
2.5	Operation of heavy vehicle, equipment and machinery across the Proposal Area, resulting in increased sound and vibration	Mining of orebody, ore processing, transportation of mine site workers and haulage	<ul style="list-style-type: none"> <li>Undertake Clearance Surveys prior to land disturbance activities to limit impacts to fauna</li> <li>Reduce traffic speeds within the Proposal Area to a maximum of</li> </ul>	n/a	Speed restrictions and signage in areas of known significant fauna will significantly reduce the likelihood of accidental strikes to local. Although some local displacement of fauna will occur,

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	and potential injury and/or death of fauna		60 km/hr, particularly in the Pindan Scrubland habitat known to support Greater Bilby populations <ul style="list-style-type: none"> <li>• Erect signage along internal haul roads in areas known to support significant fauna populations (i.e. in close proximity to known Bilby populations)</li> </ul>		fauna deaths are considered unlikely where sufficient management actions are implemented.
<b>3</b>	<b>Hydrological Processes</b>				
<b>EPA Objective:</b> To maintain the hydrological regimes of groundwater and surface water so that existing and potential users, including ecosystem maintenance, are protected					
<p>Two potential groundwater dependant ecosystems were recorded within the expected groundwater drawdown zone:</p> <ul style="list-style-type: none"> <li>○ Vegetation community <i>MaMvEtCpCc</i></li> <li>○ Tributaries associated with the Fraser River North and South.</li> </ul> <p>Other groundwater users within the predicted groundwater drawdown zone include:</p> <ul style="list-style-type: none"> <li>○ Heritage Site Nill Bubbaca Well, a camp and water source, 30 km south-east of the Proposal Area</li> <li>○ Mount Jowlaenga Station, two bores within 5 km of the Proposal Area</li> </ul>					
3.1	Drawdown of local groundwater resources  Modification to groundwater/ subsurface flows	Dewatering of the mine pit for removal of the orebody  Groundwater abstraction for the Proposals water use requirements	<ul style="list-style-type: none"> <li>• Groundwater modelling conducted for the Proposal to predict local drawdown effects. This shall be revised in the event of significant changes to the Proposals water demand or borefield locations</li> <li>• Implement a Water Operating Strategy to manage all aspects relating to groundwater abstraction and dewatering for the Proposal, this will include:               <ul style="list-style-type: none"> <li>○ Groundwater monitoring program across the Proposal Area to determine if changes to water levels are within predicted parameters</li> <li>○ Groundwater monitoring</li> </ul> </li> </ul>	Licence to Take Water (5C) to be obtained under the RIWI Act managed by the DOW	The groundwater abstraction required for the Proposal is unlikely to result in any significant drawdown on any groundwater resources, or indirect impacts to surrounding groundwater dependant vegetation communities or other groundwater users.  It is expected that the existing hydrological regime of groundwater within the Proposal Area will not be significantly altered.

No.	Potential Impact	Environmental Aspect	Mitigation Measures	Proposed Regulatory Measures	Outcomes that demonstrate Proposal meets EPA Objectives
			<p>program to detect and/or monitor any potential impacts to the water levels at the soak associated with vegetation community <i>MaMvEtCpCc</i></p> <ul style="list-style-type: none"> <li>○ Groundwater monitoring program to detect and/or monitor any potential impacts to the bores located within the Mount Jowlaenga Station.</li> </ul>		
3.2	Modification to surface water flows	Physical presence of Thunderbird mine pit and associated infrastructure	<ul style="list-style-type: none"> <li>• Implement a Surface Water Management Plan to manage stormwater runoff within the Proposal Area</li> <li>• All associated infrastructure will be located off natural drainage lines and flood prone areas, where possible.</li> </ul>	n/a	Surface water will be managed such that it does not cause significant runoff into surrounding ecosystem and therefore local flora and fauna are unlikely to be impacted by altered surface water flows.
4	<b>Rehabilitation</b>				
<b>EPA Objective:</b> To ensure that premises are decommissioned and rehabilitated in an ecologically sustainable manner					
4.1	Topsoil viability Plant propagation success	Revegetation of native species	<ul style="list-style-type: none"> <li>• Biological surveys conducted to identify existing native species and vegetation communities present</li> <li>• Identify suitable species for revegetation, especially Priority species if viable</li> <li>• Conduct seed collection of suitable species for revegetation prior to land clearing activities</li> <li>• Collect and stockpile topsoil from proposed disturbance areas for re-use in rehabilitation activities</li> <li>• Progressively rehabilitate areas once they are no longer required for the Proposal.</li> </ul>	Prepare and implement a Mine Closure Plan, approved by the DMP under the provisions of the Mining Act	Mine closure, decommissioning and rehabilitation activities will be managed throughout the life of the Proposal. Areas will be progressively rehabilitated to minimise long-term impacts and to promote re-establishment of ecologically sustainable flora populations and vegetation communities.

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4.2	Fauna re-habitation success	Replacement of fauna habitats	<ul style="list-style-type: none"> <li>Identify suitable plant species that provide local fauna habitat for use in rehabilitation activities</li> <li>Collect and stockpile felled trees for re-use in rehabilitation activities</li> <li>Progressively rehabilitate areas once they are no longer required for the Proposal.</li> </ul>	As above	Mine closure, decommissioning and rehabilitation activities will be managed throughout the life of the Proposal. Areas will be progressively rehabilitated to minimise long-term impacts and to promote re-establishment of ecologically sustainable habitats supporting a variety of local fauna.
4.3	Modification to existing landforms	Reestablishment of natural land contours	<ul style="list-style-type: none"> <li>Re-contour disturbed ground close to original land surface</li> <li>Progressively backfill mine pit, where suitable quantities of backfill material is available</li> <li>Progressively rehabilitate any area no longer required for the Proposal.</li> </ul>	As above	Mine closure, decommissioning and rehabilitation activities will be managed throughout the life of the Proposal. Areas will be progressively rehabilitated to minimise long-term impacts and to promote re-establishment of natural landscapes, where possible, and promote an ecologically sustainable ecosystem supporting native flora and fauna.
<b>5</b>	<b>Heritage</b>				
<b>EPA Objective:</b> To ensure that historical and cultural associations, and natural heritage, are not adversely affected					
5.1	Disturbance to or removal of heritage sites/places	Construction of Proposal infrastructure	<ul style="list-style-type: none"> <li>Conduct/review heritage surveys for all proposed disturbance areas</li> <li>Consult with all relevant Traditional Owner Groups and Native Title Groups</li> <li>Create exclusions zones around sites/places as recommended by heritage surveys</li> <li>Conduct clearance surveys prior to clearing activities.</li> </ul>	n/a	No registered or unregistered heritage sites and/or places are proposed to be disturbed as part of the Proposal. Through ongoing consultation with all relevant stakeholders, significant heritage values of the Proposal area will not be impacted.



## 7 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE

The EPBC Act provides for the protection of nationally and internationally significant flora, fauna, ecological communities and heritage places. Under the EPBC Act, the following are Matters of National Environmental Significance (MNES):

- World heritage properties.
- National heritage places.
- Wetlands of international importance (listed under the RAMSAR Convention).
- Listed threatened species and ecological communities.
- Migratory species protected under international agreements.
- Commonwealth marine areas.
- The Great Barrier Reef Marine Park.
- Nuclear actions (including uranium mines).

The Proposal will be separately referred to the Department of Environment.

### 7.1 EPBC ACT OBJECTIVES

The objectives of the EPBC Act are to:

- Provide for the protection of the environment, especially for MNES.
- Conserve Australian biodiversity.
- Promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources.
- Enhance the protection and management of important natural and cultural places.
- Control the international movement of wildlife, wildlife specimens and products made or derived from wildlife.

Guidance on the assessment and management of MNES exists at a Federal government level, as shown in Table 20.

**Table 20: Commonwealth Guidance for Assessment and Management of MNES**

Document	Description
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Provides guidance for the preparation and evaluation of impact assessment. The Act aims to prevent significant impacts occurring to Matters of National Environmental Significance.
Matters of National Environmental Significance: Impact Guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999 (2009)	Provides overarching guidance for the assessment of proposed actions to determine whether the action is likely to have significant impacts on a matter protected under national environmental law.
Matters of National Environmental Significance: Impact Guidelines 1.2 Actions on, or impacting upon, Commonwealth land and Actions by Commonwealth Agencies (2010)	This guideline helps to determine whether or not to submit a referral to the DoE and whether approval is required under the EPBC Act.

### 7.1 STUDIES

Biological studies relevant to the Proposal are detailed in Table 7.

## **7.2 LISTED THREATENED SPECIES**

No EPBC listed Threatened flora or Threatened Ecological Communities (TEC's) have been recorded within the Proposal Area.

One EPBC listed Threatened Fauna, the Greater Bilby (*Macrotis lagotis*), was recorded within the Proposal Area and may be moderately impacted as a result of the Proposal. Further information relating to this species is provided in 6.2.2.3.1 and proposed management actions outlined in Table 19.

## **7.3 PREDICTED OUTCOME**

The Proposal is likely to impact on one fauna species listed under the EPBC Act, the Greater Bilby. However, proposed management actions will significantly reduce any impact to this species by limiting the effects of land disturbance, feral animal activities and local vehicle traffic.

## 8 PRINCIPLES OF THE EP ACT

The EP Act sets out five principles by which protection of the environment is to be achieved in Western Australia. Consideration has been given to these five principles by the Proponent and the manner in which they have been applied is outlined in Table 16.

**Table 21: Principles of Environmental Protection**

Principle of the EP Act	Principle Consideration Given	Reference
<p><b>1. Precautionary Principle</b> 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.</p> <p>In the application of the precautionary principle, decisions should be guided by:</p> <ul style="list-style-type: none"> <li>• Careful evaluation to avoid, where practicable, serious or irreversible damage to the environment</li> <li>• An assessment of the risk-weighted consequences of various options.</li> </ul>	<p>The Proponent recognises the importance of minimising environmental impacts as it is vital in ensuring the proponent’s longevity, success, growth and positioning in domestic and global markets. This will be achieved by successful management of potential risks to the environment.</p> <p>The Proponent will implement an overarching environmental management plan (EMP) which will address all of its activities with potential to affect the environment. The key elements of the EMP will include assessing environmental risk arising from environmental aspects with the intention of identifying issues early in the process to enable planning for avoidance and/or mitigation.</p> <p>Part of this process will include undertaking detailed site investigations of the biological and physical environs. Where these investigations identify significant conservation issues, management measures are incorporated into project design to avoid, where practicable, or minimise any potential impacts.</p> <p>As a result, this Proposal has been designed to minimise potential impacts to key environmental values of the flora, vegetation, fauna and hydrological processes.</p>	<p>Table 19</p>
<p><b>2. Intergenerational Equity</b> The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations.</p>	<p>The Proponent’s decision-making processes incorporate sustainability principles and the implementation of innovative technologies where feasible.</p> <p>The proponent aims to inspire an ethic and attitude that strives for continuous improvement and ongoing learning. The Proponent encourages its contractors and employees to engage in positive attitudes and behaviour concerning respect for the environment. They recognise sustainability cannot be achieved without the contribution and action of the entire team.</p>	<p>Section 2 and Table 19</p>
<p><b>3. Conservation of Biological Diversity and Ecological Integrity</b> Conservation of biological diversity and ecological integrity should be a fundamental consideration.</p>	<p>Conservation of biological diversity and ecological integrity is fundamental to The Proponent’s approach to environmental management and is a major environmental consideration for the Proposal.</p> <p>Biological investigations have been conducted for the entire Proposal Area four years to identify values of environmental conservation significance required to be protected from disturbance.</p> <p>This Proposal has been designed to minimise potential impacts to the key environmental</p>	<p>Sections 4 and 5, Table 19.</p>

Principle of the EP Act	Principle Consideration Given	Reference
	values of the surrounding flora and vegetation and significant fauna species.	
<p><b>4. Improved valuation, pricing and incentives mechanisms</b></p> <p>Environmental factors should be included in the valuation of assets and services. The polluter pays principle – those who generate pollution and waste should bear the cost of containment, avoidance or abatement. 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. Environmental goals, having been established, should be pursued in the most cost effective way, by establishing incentives 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.</p>	<p>The Proponent acknowledges the need for improved valuation, pricing and incentive mechanisms and endeavours to pursue these principles when and wherever possible. For example:</p> <ul style="list-style-type: none"> <li>• Environmental factors have significantly influenced project design so as to minimise effects to those environmental factors</li> <li>• The Proponent has put in place procedures that will ensure that pollution-type impacts are minimised as far as practicable.</li> </ul>	Section 2 and Table 19
<p><b>5. Waste Minimisation</b></p> <p>All reasonable and practicable measures should be taken to minimise the generation of waste and its discharge into the environment.</p>	<p>The Proponent’s approach to waste management is, in order of priority:</p> <ul style="list-style-type: none"> <li>• Avoid and reduce at source</li> <li>• Reuse and recycle</li> <li>• Treat and/or dispose.</li> </ul>	Section 2 and Table 19

## **9 CONCLUSIONS**

### **9.1 PROPONENT CONCLUSION**

This EPA referral has provided supporting information to the EPA in order to determine the Level of Assessment for the Proposal. This document has provided information about the existing environment and potential impacts arising from the implementation of the Proposal and defines the Proponents' approach of managing potential impacts for each of the EPA's environmental factors. The Proposal has been designed to avoid and minimise impacts to the preliminary key environmental factors where practicable.

Figure 9.1 below provides the Proponents diagrammatic representation of the level of impact posed by the Proposal on the Key Preliminary Environmental Factors. The diagram demonstrates how the application of mitigation options, such as a Part V Native Vegetation Clearing Permit offset condition and water operating licence conditions for management of groundwater abstraction, will result in the Proposal which meeting the EPA's objectives.

The Proponent considers that the information and assessment presented in this referral adequately identifies and addresses environmental aspects and issues relevant to the Proposal and is adequate to enable the EPA to conclude that Proposal requires assessment under Part IV of the EP Act at an API-A Level.

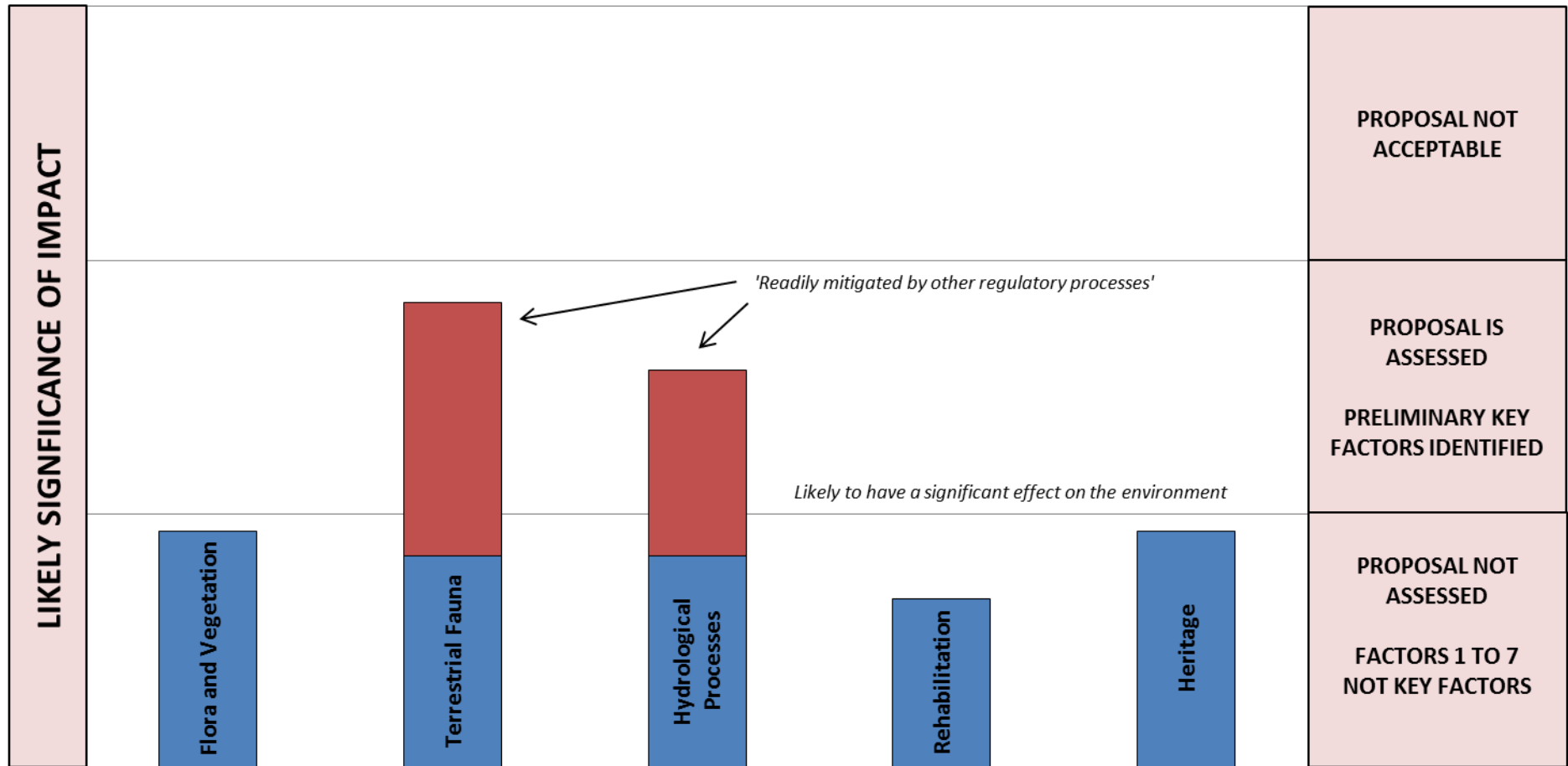


Figure 9.1 Application of the EPA's Significance Framework

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