



Dr Tom Hatton  
Chairman, Environmental Protection Authority  
Locked Bag 10  
East Perth Western Australia 6892

13 June 2016

**Lake Disappointment Potash Project – Referral of a Proposal to the Environmental Protection  
Authority under Section 38(1) of the Environmental Protection Act 1986**

Dear Dr Hatton,

Reward Minerals Limited (Reward) has identified a substantial resource of potassium-rich brine in the sediments of Lake Disappointment, located in the northern Little Sandy Desert, approximately 320 km east of Newman, WA. Reward is currently undertaking feasibility studies into the establishment of a brine recovery and solar salt processing operation to produce in the order of 400,000 tpa of sulphate of potassium (SOP) at Lake Disappointment.

The proposed operation would involve the construction and operation of evaporation ponds, brine abstraction trenches, salt storage dumps, an SOP crystallisation plant, a 'fresh to brackish' water bore field, offices, workshops, accommodation, airstrip and access roads. The mine is expected to employ approximately 120 people and operate for at least 20 years (not including the construction and rehabilitation phases).

An EPA Referral Form has been completed for the proposal in accordance with EPA guidelines and accompanies this letter for your consideration. In preparing the referral documentation, Reward has carefully considered relevant EPA guidelines and the information provided in the *Environmental Impact Assessment Administrative Procedures 2012*.

Reward has considered a wide range of environmental factors and associated EPA objectives in preparing its referral for the Lake Disappointment Potash Project. On the basis of information currently available, we have identified the following eight preliminary key factors:

- Flora and Vegetation
- Landforms
- Subterranean Fauna
- Terrestrial Fauna
- Hydrological Processes
- Inland Waters Environmental Quality
- Heritage
- Rehabilitation and Decommissioning

Reward has actively engaged with key stakeholders since 2012 and proposes to continue constructive engagement and consultation with stakeholders throughout the further development and assessment of the Lake Disappointment project. A summary of stakeholder consultation conducted to date is contained in Attachment 1.2 to the referral form.

Reward considers that its Lake Disappointment Potash Project warrants assessment as a Public Environmental Review (PER). We do not consider that the proposal triggers the need for assessment under the *Environmental Protection and Biodiversity Conservation Act 1999*, but for certainty we have referred the proposal to the Commonwealth Department of the Environment concurrent with this referral to the EPA.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Michael Ruane'.

Dr Michael Ruane  
Managing Director

Cc: Mr Denis Snowden, Department of the Environment  
Mr Phil Boglio, Department of Mines & Petroleum

**Attachment:** Section 38 referral form – Lake Disappointment Potash Proposal.



# Environmental Protection Authority

## Referral of a Proposal to the Environmental Protection Authority under Section 38 of the *Environmental Protection Act 1986*.

### Referral requirements and Declaration

#### (a) Proponents

Proponent to complete before submitting form	
Completed all the questions in Part A (essential)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Completed all the questions in Part B	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Completed all other applicable questions	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Included Attachment 1 – any additional document(s) the proponent wishes to provide	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Included Attachment 2 – confidential information (if applicable)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Enclosed an electronic copy of all referral information, including spatial data and contextual mapping but clearly separating any confidential information	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Completed the Declaration	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
What is the type of proposal being referred? <i>* a referred proposal seeking to be declared a derived proposal</i>	<input checked="" type="checkbox"/> significant <input type="checkbox"/> strategic <input type="checkbox"/> derived* <input type="checkbox"/> under an assessed scheme
Do you consider the proposal requires formal environmental impact assessment?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If yes, what level of assessment? <i>API = Assessment of Proponent Information</i> <i>PER = Public Environmental Review</i>	<input type="checkbox"/> API Category A <input type="checkbox"/> API Category B <input checked="" type="checkbox"/> PER

## Declaration

I, Dr Michael Ruane, declare that I am authorised on behalf of Reward Minerals Ltd (being the person responsible for the proposal) to submit this form and further declare that the information contained in this form is true and not misleading.

Signature 	Name (print) Dr Michael Ruane		
Position	Managing Director	Organisation	Reward Minerals Ltd
Email	Michael.Ruane@intermin.com.au		
Address	159	Stirling Highway	
	Nedlands	WA	6009
Date	13 June 2016		

## PART A: Information on the proposal and the proponent

### 1 PROPONENT AND PROPOSAL DESCRIPTION

#### 1.1 The proponent of the proposal

Proponent and/or DMA to complete	
Name of the proponent	Reward Minerals Ltd
Joint Venture parties (if applicable)	NA
Australian Company Number(s)	009 173 602
Postal Address	PO Box 1104 Nedlands WA 6909
Key proponent contact for the proposal	Dr Michael Ruane 159 Stirling Hwy Nedlands, WA, 6009 Tel: (08) 9386 4699 Email: michael.ruane@intermin.com.au
Consultant for the proposal (if applicable) <i>Please include: name; physical address; phone; and email.</i>	NA

## 1.2 Proposal

Proponent to complete	
Title of the proposal	Lake Disappointment Potash Project
What project phase is the proposal at?	<input checked="" type="checkbox"/> Scoping <input type="checkbox"/> Feasibility <input type="checkbox"/> Detailed design <input type="checkbox"/> Other _____
Proposal type <i>More than one proposal type can be identified, however for filtering purposes it is recommended that only the primary proposal type is identified.</i>	<input checked="" type="checkbox"/> <b>Mineral / Resource Extraction</b> <input type="checkbox"/> Exploration – seismic <input type="checkbox"/> Exploration – geotechnical <input checked="" type="checkbox"/> Development
Proponent to complete	
Description of the proposal – describe the key characteristics of the proposal in accordance with EAG 1.	<p><b>Refer Figures 1 through 7 in Attachment 1.1.</b> This proposal is to abstract potassium-rich brines from sediments associated with Lake Disappointment, approximately 320 km east of the town of Newman WA and to produce sulphate of potash (SOP) by crude potash harvesting and crystallisation of SOP via solar evaporation of the harvested salts.</p> <p>The proposal includes the construction and use of associated mine infrastructure (evaporation ponds, water supply borefield, processing plant, offices, workshop, accommodation and roads). Waste salt would be stored in stockpiles on the Lake Disappointment playa. Potash product would be transported by road to Newman and then to shipping facilities at Port Hedland or Geraldton.</p>
Timeframe in which the proposal is to occur (including start and finish dates where applicable).	Reward is targeting Q2 2018 for start of on-ground works. Construction of project infrastructure would occur from Q2 2018 to Q4 2019. Potash production would commence in Q1 2019 and continue until 2039. Decommissioning and remaining rehabilitation works would occur from 2039 to 2041.
Details of any staging of the proposal.	This proposal is for 20 years of potash production. In the event that additional resource is confirmed, it is possible that a second stage of development would be proposed under a separate referral.
What is the current land use on the property, and the extent (area in hectares) of the property?	<p><b>Refer Figure 7 in Attachment 1.1.</b> The whole of the project area lies within determined native title claim areas (Determination numbers FCA 1208 and FCA 518). The native title determinations recognise the rights of the title holders to control access to the land and to use the land for a range of customary and other purposes. Reward has entered into an Indigenous Land Use Agreement (ILUA) with the native title holders.</p> <p>A substantial proportion of the project tenements held by Reward (totalling approximately 207,472 ha, or about 39.6% of Reward's current tenement holdings) lies within a declared Environmentally Sensitive Area (ESA). Most of the proposed operations area is located within a Schedule 1 Area, as described Schedule 1, clause 4 of the Environmental Protection (Clearing of Vegetation) Regulation 2004.</p>

Proponent to complete	
	<p>Lake Disappointment is listed by the Department of the Environment (DoE) as a Nationally Important Wetland.</p> <p>The southern extremity of Lake Disappointment is located within the proposed Lake Disappointment Nature Reserve (listed under the Environmental Protection Authority (EPA) Red Book recommendations for Conservation Reserves 1975-1993). The proposed Lake Disappointment Nature Reserve has not been gazetted.</p>
<p>Have pre-referral discussions taken place with the OEPA?</p> <p>If yes, please provide the case number. If a case number was not provided, please state the date of the meeting and names of attendees.</p>	<p>Reward has met with representatives of the OEPA on three occasions. No case number was provided. Details of the meetings follow.</p> <p>14 June 2012 – meeting with Peter Tapsell to present general project information.</p> <p>14 February 2013 – meeting with Chris Stanley to present general project information.</p> <p>17 August 2015 – meeting with Peter Tapsell to discuss mining proposal and mine closure plan for trial pond construction under exploration programme of works.</p>

### 1.3 Strategic / derived proposals – not applicable

### 1.4 Location

Proponent to complete	
Name of the Local Government Authority in which the proposal is located.	Shire of East Pilbara
<p>Location:</p> <p>a) street address; lot number; suburb; and nearest road intersection; or</p> <p>b) if remote the nearest town; and distance and direction from that town to the proposal site.</p>	Approximately 320 km east of Newman WA. Refer Figure 1.1.
<p>Have maps and figures been included with the referral (consistent with <a href="#">EAG 1</a> where appropriate)?</p> <p><i>The types of maps and figures which need to be provided (depending on the nature of the proposal) include:</i></p> <ul style="list-style-type: none"> <li>maps showing the regional location and context of the proposal; and</li> <li>figures illustrating the proposal elements.</li> </ul>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Refer Figures 1 through 7 in Attachment 1.1 and spatial data in Attachment 1.12</p>
<p>Have electronic copies of spatial data been included with the referral? <i>Spatial data are provided in Attachment 1.12</i></p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

1.5 Significance test and environmental factors

Proponent, DMA and Third Party to complete	
<p>What are the likely significant environmental factors for this proposal?</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Benthic Communities and Habitat</li> <li><input type="checkbox"/> Coastal Processes</li> <li><input type="checkbox"/> Marine Environmental Quality</li> <li><input type="checkbox"/> Marine Fauna</li> <li>✓ Flora and Vegetation</li> <li>✓ Landforms</li> <li>✓ Subterranean Fauna</li> <li><input type="checkbox"/> Terrestrial Environmental Quality</li> <li>✓ Terrestrial Fauna</li> <li>✓ Hydrological Processes</li> <li>✓ Inland Waters Environmental Quality</li> <li><input type="checkbox"/> Air Quality &amp; Atmospheric Gases</li> <li><input type="checkbox"/> Amenity</li> <li>✓ Heritage</li> <li><input type="checkbox"/> Human Health</li> <li><input type="checkbox"/> Offsets</li> <li>✓ Rehabilitation and Decommissioning</li> </ul>
<p>Having regard to the Significance Test (refer to Section 7 of the <i>EIA Administrative Procedures 2012</i>) in what ways do you consider the proposal may have a significant effect on the environment and warrant referral to the EPA?</p>	<p>The significance factors relevant to the Lake Disappointment Potash Project relate chiefly to the values, quality and sensitivity of the Lake Disappointment / Savory Creek system and the concerns of Traditional Owners and other stakeholders about the potential effects of implementing the proposal.</p> <p>The key environmental factors identified by Reward are: i) hydrological processes; ii) flora and vegetation, iii) heritage; iv) subterranean fauna and v) landform. The following additional factors have also been identified: inland waters environmental quality (linkage to hydrological processes); fauna (linkage to vegetation and hydrological processes); rehabilitation (integrating factor). Because of the location of the proposal there are unlikely to be cumulative impacts with other projects.</p> <p>There are well-established statutory process to regulate the activities proposed as part of project implementation, such that the impacts can be readily mitigated and monitored. The proposal involves conventional production methods used in solar salt production, an established industry routinely regulated by the Department of Environment Regulation and Department of Mines and Petroleum.</p>

## 1.6 Confidential information

All information will be made publically available unless authorised for exemption under the EP Act or subject to the Freedom of Information Act 1992.

Proponent to complete	
Does the proponent request that the EPA treat any part of the referral information as confidential?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>Ensure all confidential information is provided in a separate attachment in hard copy.</i>	

## 2 REGULATORY CONSIDERATIONS

### 2.1 Government approvals

**2.1.1 State or Local Government approvals – not applicable**

**2.1.2 Regulation of aspects of the proposal**

Complete the following to the extent possible.

Proponent to complete	
Do you have legal access required for the implementation of all aspects of the proposal? <i>If yes, provide details of legal access authorisations / agreements / tenure.</i> <i>If no, what authorisations / agreements / tenure is required and from whom?</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Some of the land required for project implementation is currently held under granted exploration (E) tenements. However, it will be necessary for Reward to seek and obtain mining and/or miscellaneous tenements from the Department of Mines and Petroleum to cover all operational components of the proposal.
	An Indigenous Land Use Agreement (ILUA) has been executed to allow development and operation of the proposal. A Section 18 consent to access and/or disturb land within the Lake Disappointment Project area was granted on 9 January 2013.
	Access to the mining operations area will be via public roads managed by the Shire of East Pilbara.
	Approvals will be required from the Department of Water to construct bores to access groundwater and to abstract water from the proposed process water borefield.



Outline both the existing approvals and approvals that will be / are being sought as a part of this proposal.

<b>Proponent to complete</b>			
Aspects* of the proposal	Type of approval	Legislation regulating this activity	Which State agency /entity regulate this activity?
<b>Existing approvals</b>			
Exploration drilling, sampling, survey and related investigative work.	Program of works. Approved PoWs are: 54230, 55875, 56505, 57815, 58188, 58800, 59071, 59221.	<i>Mining Act 1978</i>	DMP
Clearing of vegetation to enable exploration drilling, sampling, survey and related investigative work.	Native vegetation clearing permit. Approved permits are: COS 5111/1, 5111/2 and 5111/3.	<i>EP Act 1986 – Part V</i>	DMP/DER (with advice from DPaW)
Construction of water bores	Licences to construct water bores. Approved 26D permits are: 175644, 175702, 178842, 178843, 178844, 181369, 181603, 181733, 181738, 182168, 182578	<i>RIWI Act 1914</i>	DoW
Groundwater abstraction	Licences to take water. Approved 5C licences are: 175646, 175648, 175703, 181370, 181604, 181736, 181739, 182580	<i>RIWI Act 1914</i>	DoW
Land access and ground disturbance	Section 18 approval 9 January 2013.	<i>AHA 1972</i>	DAA
<b>Future approvals (to be sought)</b>			
Ground disturbance for mining and ore processing	Grant of tenure	<i>Mining Act 1978</i>	DMP
Mining and ore processing	Environmental approval via mining proposal and mine closure plan	<i>Mining Act 1978</i>	DMP
Mining and ore processing	Approval to operate via project management plan	<i>Mines Safety and Inspection Act 1994</i>	DMP
Construction of production bores	26D licence	<i>RIWI Act 1914</i>	DoW
Groundwater and brine abstraction	5C licences	<i>RIWI Act 1914</i>	DoW
Potash production by solar evaporation	Works approval and licence	<i>EP Act 1986 – Part V</i>	DER
Land access and ground disturbance	Additional Section 18 approval(s) for areas not included in current consent.	<i>AHA 1972</i>	DAA

\*e.g. mining, processing, dredging

### 2.1.3 Commonwealth Government *Environment Protection and Biodiversity Conservation Act 1999* approvals

Refer to the [assessment bilateral agreement](#) between the Commonwealth of Australia and the State of Western Australia for assistance on this section.

Proponent to complete	
1. Does the proposal involve an action that may be or is a controlled action under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(relates to potential impacts on migratory birds listed under the EPBC Act)</i>
2. What is the status of the decision on whether or not the action is a controlled action?	<input checked="" type="checkbox"/> Proposal not yet referred <input type="checkbox"/> Proposal referred, awaiting decision <input type="checkbox"/> Assessed – controlled action <input type="checkbox"/> Assessed – not a controlled action
3. If the action has been referred, when was it referred and what is the reference number (Ref #)?	Date: Not yet referred Ref #: _____
4. If the action has been assessed, provide the decision in an attachment. Has an attachment been provided?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
5. Do you request this proposal to be assessed under the bilateral agreement? (If <b>determined to be a controlled action</b> )	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Complete the following to the extent possible for the Public Comment of EPBC Act referral documentation.

Proponent to complete	
6. Have you invited the public to comment on your referral documentation?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
7. How was the invitation published? <b>Not applicable</b>	<input type="checkbox"/> newspaper <input type="checkbox"/> website
8. Did the invitation include all of the following? <b>Not applicable</b>	
9. Were any submissions received during the public comment period? <b>Not applicable</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No
10. Have public submissions been addressed? If yes provide attachment. <b>Not applicable</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No

### 2.1.4 Other Commonwealth Government Approvals

Proponent, DMA and Third Party to complete	
Is approval required from other Commonwealth Government/s for any part of the proposal?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <i>If yes, please complete the table below.</i>

### 3. SUPPORTING INFORMATION

Please attach copies of any relevant information on the proposal, supporting evidence and / or existing environmental surveys, studies or monitoring information undertaken and list the documents below. All attachments listed below are provided in Attachment 1 to the referral document.

<b>Proponent, DMA and Third Party to complete</b>			
	<i>Title</i>	<i>Author</i>	<i>Document Description</i>
(1.1)	Figures 1 through 7	Reward Minerals Ltd	Figures to show project location, tenure, land use and indicative layout, as recommended in EAG1.
(1.2)	Stakeholder register	Reward Minerals Ltd	Provides a summary of stakeholder engagement activities conducted by Reward as part of project development.
(1.3)	Level 2 Flora & Vegetation Survey - Lake Disappointment, Tenements: E45/2801 E45/3036, E45/3285, E45/3492, L45/302 & M45/1227, report prepared for Reward Minerals Limited, May 2016, V3	Botanica Consulting	Presents results of a Level 2 flora and vegetation survey covering an area of approximately 89,130ha in and around Lake Disappointment. The survey was initially conducted in April 2013. The 43 quadrats established in April 2013 were revisited in October 2013.
(1.4)	Sand Dune Vegetation Monitoring - Lake Disappointment Potash Project, report prepared for Reward Minerals Limited, September 2015	Botanica Consulting	Presents results of a 3-year baseline vegetation monitoring program aimed at assessing the biodiversity and health of native vegetation immediately surrounding the site access track (within 250m of track).
(1.5)	Riparian Vegetation Monitoring - Lake Disappointment Potash Project, report prepared for Reward Minerals Limited, September 2015	Botanica Consulting	Presents results of a 3-year baseline vegetation monitoring program aimed at assessing the biodiversity and health of native riparian vegetation immediately surrounding the Lake Disappointment playa to assess impacts of lake based exploration activities and potential future mining developments on the surrounding riparian vegetation.
(1.6)	Fauna Survey (Level 2), Phase 1 (May 2013) and Phase 2 (October 2013) - Lake Disappointment Potash Project, report prepared for Reward Minerals Ltd, report number SF 009514, VERSION 1, August 2014 (Currently under revision)	G Harewood	Report details the results of a two phase (seasonal), Level 2 terrestrial fauna survey over a nominal 89,130ha survey area in and around Lake Disappointment.
(1.7)	Ecological Character of Lake Disappointment, report prepared for Reward Minerals Ltd, June 2016.	Bennelongia Environmental Consultants	Presents the results of baseline studies, including surveys of aquatic invertebrates, to characterise the overall biological value of the Lake Disappointment playa and its surroundings.

<b>Proponent, DMA and Third Party to complete</b>			
(1.8)	Lake Disappointment - Subterranean Fauna Desktop Assessment, May 2015	Bennelongia Environmental Consultants	Documents the results of a search of the Western Australian Museum records and publicly available information on occurrence of stygofauna within 240 km of the proposed Lake Disappointment Potash Project.
(1.9)	Hydrological Investigation and Assessment - Lake Disappointment, report prepared for Reward Minerals Ltd, Revision No 2, May 2016	Pendragon Environmental Solutions	Report describes hydrological investigations and assessments at Lake Disappointment and presents a preliminary assessment of the potential impacts on inland waters of implementing the proposed Lake Disappointment Potash Project.
(1.10)	Acid Sulfate Soil Investigation- Lake Disappointment, report prepared for Reward Minerals Ltd, Revision No 2, May 2016.	Pendragon Environmental Solutions	Report presents the results of field and laboratory investigations to assess acid sulphate soil hazard at Lake Disappointment.
(1.11)	Process Water Review – Report for Reward Minerals Limited, May 2016	Strategic Water Management WA	Preliminary hydrogeological review of three options for supply of up to 3.1 GLpa of process water required for ore processing and related purposes.
(1.12)	Spatial data	Reward Minerals	Spatial data of proposed project envelope.

## PART B: ENVIRONMENTAL FACTORS

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Flora and Vegetation</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain representation, diversity, viability and ecological function at the species, population and community level.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>GS 51 – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in WA</p> <p>PS 2 – Environmental Protection of Native Vegetation in WA</p> <p>PS 3 – Terrestrial Biological Surveys as an Element of Biodiversity Protection</p> <p>GS 6 – Rehabilitation of Terrestrial Ecosystems</p> <p>PS 4 – Environmental Protection of Wetlands</p>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"><li>• <i>anticipated level of public interest in the impact;</i></li><li>• <i>consultation with regulatory agencies; and</i></li><li>• <i>consultation with community.</i></li></ul>	<p>There is likely to be a moderate to high level of interest in potential impacts to flora and vegetation. The stakeholder(s) with the strongest level of interest in this factor are the Department of Parks &amp; Wildlife, Department of Environment Regulation and individual scientists working at the WA Herbarium.</p> <p>Initial consultation with the WA Herbarium (Dr K Shepherd) has occurred. Following the first site visit the plant specimens were being identified and checked against specimens at the reference Herbarium it became apparent that there was a lack of good specimens. In discussions with the Curator of the Herbarium it was agreed upon that Dr Kelly Shepherd who is the taxonomic specialist for the Tecticornia genus would be engaged to provide the identification services. Subsequently Dr Shepherd looked at around 200 specimens from two different seasons. A number of specimens have been lodged at Western Australia Herbarium.</p> <p>DPAW has advised that further collections will be required to fully understand the distribution of the different species. These collections would need to come from within DPAW managed lands.</p> <p>Initial consultation with DER and DPaW has occurred in relation to vegetation clearing for exploration activities. A permit was initially granted by DEC for upgrade and construction of the access road for the exploration camp. This clearing permit had a number of conditions including a requirement for consultation with the then DEC. A flora assessment and a Fauna assessment was carried out. Before the road was constructed a damage permit was required for any interaction with the Marsupial Mole.</p> <p>An amendment to this clearing permit was given by the DER to allow for additional areas not given in the initial permit.</p>
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**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>5</p>	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>Refer Attachments 1.3, 1.4 and 1.5. Six floristic communities were identified within the 89,130ha baseline survey area. These communities comprised four major vegetation groups and were represented by a total of 38 Families, 104 Genera and 208 Taxa (including sub-species and variants). Based on the vegetation health rating scale adapted from Keighery, 1994 and Trudgen, 1988 (1 'pristine' to 7 'completely degraded'), four of the six floristic communities had a health rating of 4. The remaining two floristic communities had a health rating of 5. One introduced species (<i>Cenchrus ciliaris</i> (Buffel grass)) was identified within the survey area.</p> <p>None of the vegetation communities have National Environmental Significance as defined by the Commonwealth <i>Environment Protection and Biodiversity Conservation</i> (EPBC) Act 1999. No Threatened Flora or Threatened Ecological Communities (TEC) listed under Commonwealth legislation were identified within the area.</p> <p>No Priority Ecological Communities (PEC) as listed by DPaW were recorded within the survey area. The nearest recorded PEC is the Priority 3 'Riparian vegetation including phreatophytic species associated with creek lines and watercourses of Rudall River' community which is located approximately 20km north of the survey area.</p> <p>No Threatened Flora taxa were recorded within the survey area.</p> <p>One Priority Flora taxon (<i>Tecticornia</i> sp. Sunshine Lake (K.A. Shepherd et al KS 867) (P1)) was identified within the Heath of mixed <i>Tecticornia</i> spp. on salt lake edge vegetation community.</p> <p>Two unrecognised taxa of <i>Tecticornia</i> (<i>Tecticornia</i> sp. Nov A and <i>Tecticornia</i> sp. Nov B, as identified by K.A Shepherd 867) were also identified in the area, and are considered by the WA Herbarium to be of Conservation Significance. These taxa are presently undergoing further taxonomic work by the Western Australian Herbarium. A third <i>Tecticornia</i> specimen (<i>Tecticornia</i> aff. <i>calyptrata</i>, identified by K Shepherd as a potentially distinct taxon related to <i>Tecticornia calyptrata</i>) is also considered to be of Conservation Significance and is also presently undergoing further taxonomic work by the WA Herbarium.</p>
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**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

6	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>Implementation of the proposed Lake Disappointment Potash project has the potential to result in direct clearing of up to 377.24 ha of native vegetation (Figure 3). A large part of the project footprint lies within un-vegetated parts of the Lake Disappointment playa where the surface comprises bare sediment or a salt crust (refer Figure 3 in Attachment 1.1).</p> <p>No Threatened Flora or Threatened Ecological Communities will be impacted by project implementation.</p> <p>Construction and use of the proposed process water supply borefield has the potential to affect groundwater dependent vegetation occurring within the groundwater drawdown cone around the borefield.</p>
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> <li>• <i>Avoidance - avoiding the adverse environmental impact altogether;</i></li> <li>• <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i></li> <li>• <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i></li> <li>• <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i></li> </ul>	<p>The following mitigation measures have so far been identified by Reward:</p> <ul style="list-style-type: none"> <li>• Project infrastructure will be configured so as to minimise the disturbance footprint and, to the extent practicable, to avoid impacts on riparian vegetation.</li> <li>• Prior to any clearing, a weed management plan will be implemented prevent introduction and/or further spread of weeds.</li> <li>• Seed collection from representative vegetation communities will be implemented prior to clearing.</li> <li>• During any clearing, cleared vegetation will be collected and stored for use in future rehabilitation. Topsoil will be stripped and stockpiled so as to maintain seedbank viability and topsoil quality.</li> <li>• Further targeted survey work will be carried out to obtain additional material and population data for both the unrecognised <i>Tecticornia</i> taxa and <i>Tecticornia</i> aff. <i>calyptrata</i> identified in the baseline survey.</li> <li>• Reward will continue to consult with Traditional Owners, DPaW and the WA Herbarium as part of its development of a mine rehabilitation plan.</li> </ul>



**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>8</p>	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA’s objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> <li>• <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i></li> <li>• <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i></li> <li>• <i>comparison against any established environmental policies, guidelines, and standards.</i></li> </ul>	<p>The proposed Lake Disappointment Potash Project is characterised by Beard vegetation associations Little Sandy Desert 99, 152 and 158 in the Rundall (LSD1) sub-bioregion and by vegetation associations Little Sandy Desert 125 and 134 in the Trainor (LSD2) sub bio-region (DAFWA 2011). Approximately one hundred percent of the original pre-European vegetation extent of these associations remains in both subregions.</p> <p>Up to 377.24 ha of cleared land and other disturbed (but unvegetated) surfaces affected by project implementation will need to be rehabilitated at project completion. It is probable that some parts of the upgraded access roads (improvements to the Willjabu and Talawana Tracks) will be retained for the benefit of the Parrngurr community and visitors to the Canning Stock Route. The estimated area of vegetation clearing arising from proposed road upgrades is approximately 248 ha.</p> <p>At project completion cleared areas not required by the local community for access will be revegetated to achieve vegetation cover approximating the pre-development diversity and condition. It is unlikely that project implementation will materially alter the representation, diversity, viability or ecological function of vegetation at the species, population or community level.</p>
<p>9</p>	<p>EPA’s Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to <u>EAG 9</u></p>	<p><input type="checkbox"/> <i>meets the EPA’s objective</i></p> <p><input checked="" type="checkbox"/> <i>may meet the EPA’s objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA’s objective</i></p>
<p>10</p>	<p>Describe any assumptions critical to your conclusion (in Question 9). e.g. particular mitigation measures or regulatory conditions.</p>	<p><i>It will be necessary to demonstrate that project implementation will not significantly impact flora of conservation significance (specifically, protected or novel Tecticornia species).</i></p> <p><i>The potential for significant impacts of water or brine abstraction on groundwater dependent vegetation will require further assessment following completion of hydrogeological modelling.</i></p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Landforms</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain the variety, integrity, ecological functions and environmental values of landforms.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>EPB 23 - Guidance on the EPA's Landforms factor</p> <p>GS 6 – Rehabilitation of Terrestrial Ecosystems</p> <p>PS 4 – Environmental Protection of Wetlands</p> <p>DMP/EPA - Joint Guidelines for Preparing Mine Closure Plans, May 2015</p> <p>WA Planning Commission - Draft Guideline for the Determination of Wetland Buffer Requirements, 2005.</p> <p>Department of Environment and Conservation (2007). Draft Framework for mapping, classification and evaluation of wetlands in Western Australia.</p> <p>Department of Environment and Conservation (2012). 'Legislation and policy', in <i>A guide to managing and restoring wetlands in Western Australia</i></p>
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> <li>• <i>anticipated level of public interest in the impact;</i></li> <li>• <i>consultation with regulatory agencies; and</i></li> <li>• <i>consultation with community.</i></li> </ul>	<p>Amongst Traditional Owners there is a high level of interest in some parts of Lake Disappointment and surrounding landforms. Reward has entered into an agreement with the Martu People which recognises exclusion areas over parts of the tenements held by Reward. The company has agreed not to access these areas for exploration or other purposes, including for the purpose of baseline environmental studies.</p> <p>The Commonwealth Department of the Environment and some State agencies, notably DPaW and / or DoW, are expected to take a moderate to high level of interest in the Lake Disappointment playa, as one of the two reasons for inclusion of the Lake Disappointment / Savory Creek system in the Directory of Nationally Important Wetlands is that the system "It is a good example of a wetland type occurring within a biogeographic region in Australia".</p> <p>Some members of the broader public will take a moderate interest in landform aspects of the Lake Disappointment playa. The Canning Stock Route passes within 1 km of the northwest corner of the lake and any significant alterations to the playa landform in that area could be apparent to tourists travelling in that section of the Canning Stock Route.</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
5	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The Directory of Nationally Important Wetlands describes Lake Disappointment as “a megascale irregular sumpland with numerous microscale to macroscale islands”. The playa has an overall area of about 150,000 ha. The lake bed comprises saline lacustrine sediments (clay, silt, sand and gypsum). Aeolian dunes on the bed of the playa form islands rising 5 to 18 m above the bed.</p> <p>The area surrounding the playa is characterised by east-west trending longitudinal dunes, interspersed with claypans and small salt lakes.</p>
6	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>The development of evaporation ponds and associated infrastructure for potash production will result in modification of up to 6848.3 ha of the playa surface. This is equivalent to about 4.57% of the Lake Disappointment wetland (as defined in the Directory of Nationally Important Wetlands). The three most conspicuous projects elements resulting in landform impacts would be:</p> <ul style="list-style-type: none"> <li>• Evaporation and crystalliser ponds (~3693 ha)</li> <li>• Waste salt stockpiles up to approximately 8m in height (~ 2752 ha)</li> <li>• Brine collection trenches (~ 200 km total length, with top widths up to 5 m).</li> </ul>
7	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> <li>• <i>Avoidance - avoiding the adverse environmental impact altogether;</i></li> <li>• <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i></li> <li>• <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i></li> <li>• <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i></li> </ul>	<p>The following mitigation measures have so far been identified by Reward:</p> <ul style="list-style-type: none"> <li>• Reward has entered into an Indigenous Land Use Agreement with the native title holders, as part of which the company has committed to respecting permanent exclusion areas around all islands on the playa and in other areas nominated by the Traditional Owners as having great cultural significance.</li> <li>• Project infrastructure established outside the exclusion areas will be configured so as to minimise the disturbance footprint and, to the extent practicable, to establish engineered landforms at a scale that will not dominate the natural landscape.</li> <li>• It is unlikely that it would be feasible (or appropriate) to vegetate halite stockpiles at project completion. The halite stockpiles will be positioned on a part of the playa that has no natural vegetation. It is expected that the stockpiles will remain a feature of the playa landform for a considerable period.</li> </ul>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

8	Residual impacts – review the residual impacts against the EPA objectives.	<p>Reward estimates that implementation of the Lake Disappointment Potash Project would result in direct disturbance of approximately 7249.9 ha of land, of which 436.5 ha is currently vegetated, with the remaining land forming part of the bare playa surface. The estimated duration of disturbance is in the order of 20 years (the estimated life of project, plus 3 years to allow for construction and rehabilitation).</p> <p>At closure, approximately 4498.3 ha of the disturbed land would be rehabilitated to a condition approximating the pre-development condition of the land. Brine extraction trenches would be backfilled and former salt ponds would be re-contoured to blend with the surrounding terrain. The remaining 2751.7 ha would halite waste landforms, rising to an average height of about 8 m above the lake surface.</p> <p>The area occupied by halite stockpiles amounts to about 1.83 % of the Lake Disappointment system (as defined in the Directory of Nationally Important Wetlands, <a href="https://www.environment.gov.au/cgi-bin/wetlands/report.pl">https://www.environment.gov.au/cgi-bin/wetlands/report.pl</a>). It is unlikely that this change will materially alter hydrological function or ecological values of the system while in-situ or upon dissolution and return to the lake system (Refer Attachment 1.9).</p>
9	EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to <u>EAG 9</u>	<p><input type="checkbox"/> <i>meets the EPA's objective</i></p> <p><input checked="" type="checkbox"/> <i>may meet the EPA's objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i></p>
10	Describe any assumptions critical to your conclusion (in Question 9). e.g. <i>particular mitigation measures or regulatory conditions.</i>	<p><i>Assumes that a mine rehabilitation and closure plan can be agreed with key stakeholders.</i></p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Subterranean fauna</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	EAG 12 - Consideration of subterranean fauna in environmental impact assessment in Western Australia  GS 54a – Sampling Methods and Survey Considerations for Subterranean Fauna in WA
4	Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including: <ul style="list-style-type: none"> <li>• <i>anticipated level of public interest in the impact;</i></li> <li>• <i>consultation with regulatory agencies; and</i></li> <li>• <i>consultation with community.</i></li> </ul>	This factor is unlikely to be of general public interest, but may attract moderate interest from DPaW, OEPA and the WA Museum (as well as some researchers). The presence of subterranean fauna in the project area has not yet been established.
5	Baseline information - describe the relevant characteristics of the receiving environment. <i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i>	A desktop stygofauna study for the Lake Disappointment Potash Project (Attachment 1.8) has concluded that: <ul style="list-style-type: none"> <li>• There is a lack of knowledge of stygofauna communities in the vicinity of Lake Disappointment: a WA Museum database search found no records of subterranean fauna within a 100 km radius of the project area;</li> <li>• Further afield, moderately rich stygofauna communities have been recorded;</li> <li>• There is some calcrete in the vicinity of Lake Disappoint and calcrete aquifers have previously been show to host rich stygofauna communities</li> </ul>
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	If the water supply borefield required for project implementation draws on calcrete or alluvial aquifers containing fresh to brackish water, there is potential for impact on stygal communities as a result of groundwater drawdown, which would cause loss of stygofauna habitat.  It is not possible at this stage to assess the magnitude of potential impacts from groundwater abstraction.
7	Mitigation measures - what measures are proposed to mitigate the potential environmental impacts?	Given that the presence of stygofauna has not yet been demonstrated and hydrogeological assessment of the proposed borefield is at an early stage, no mitigation measures have been proposed.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
8	Residual impacts – review the residual impacts against the EPA objectives.	It is not yet possible to assess residual impacts.
9	EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to <u>EAG 9</u>	<input type="checkbox"/> <i>meets the EPA's objective</i> <input checked="" type="checkbox"/> <i>may meet the EPA's objective</i> <input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i>
10	Describe any assumptions critical to your conclusion (in Question 9). <i>e.g. particular mitigation measures or regulatory conditions.</i>	Assumes that further field surveys and hydrogeological modelling will enable characterisation of subterranean fauna and habitats and assessment of hydrological changes arising from proposed water abstraction.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Terrestrial fauna</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain representation, diversity, viability and ecological function at the species, population and assemblage level.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>GS 20 – Sampling of Short Range Endemic Invertebrate Fauna for Environmental Impact Assessment in WA</p> <p>GS 56 – Terrestrial Fauna Surveys for Environmental Impact Assessment in WA</p> <p>PS 3 – Terrestrial Biological Surveys as an Element of Biodiversity Protection</p> <p>PS4 - Environmental Protection of Wetlands</p> <p>Technical Guide on Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment</p> <p>Wetlands Conservation Policy for Western Australia, 1997</p> <p>Guidelines checklist for preparing a wetland management plan, DEC, 2008</p>
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> <li>• <i>anticipated level of public interest in the impact;</i></li> <li>• <i>consultation with regulatory agencies; and</i></li> <li>• <i>consultation with community.</i></li> </ul>	<p>Potential impacts on terrestrial fauna are likely to attract a high level of interest amongst regulators (especially DPaW and DoE) and in parts of the general public, including conservation groups such as the Wildlife Society and the Conservation Council of WA (CCWA). Reward held initial discussions with the CCWA in 2013. At the meeting, the CCWA representative raised the issue of attracting birds to the playa more regularly than is currently the case as a result of the establishment of brine ponds.</p> <p>Reward has undertaken initial consultation with the DoE and with DPaW in connection with its exploration works at Lake Disappointment. Matters discussed included the need to adopt design features to reduce risk of fauna entrapment in brine trenches, the need to site infrastructure so as to avoid riparian vegetation which may provide habitat for lizards, and the need to design ponds to minimise risk to water birds.</p> <p>Broader consultation will be undertaken through the PER process.</p>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>5</p>	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>Characterisation of terrestrial fauna and fauna habitat has been carried out through a Level 2 fauna survey conducted in May and October 2013 over an area of about 89,130 ha in and around Lake Disappointment (refer Attachment 1.6). At the request of the Traditional Owners of the land, the baseline survey did not include ground-based surveys of land within the Exclusion Areas agreed between Reward and the Martu people. A further survey targeting mainly invertebrate fauna of the Lake Disappointment playa and surrounding claypans and smaller salt lakes was conducted in January 2016 (refer Attachment 1.7).</p> <p>The field survey recorded 171 native and five introduced vertebrate species. The identified assemblage included five species of frog, 50 species of reptiles, 98 species of birds and 18 native mammals (includes 8 species of bat). Evidence of fourteen species of conservation significance was recorded in or near the project area.</p> <p>Twenty-nine species of waterbirds were recorded at Lake Disappointment and its surrounds during surveys between 2012 and 2016, with many species recorded only outside the lake. Four migratory shorebirds listed under the Commonwealth legislation have been recorded (Sharp-tailed Sandpiper, Red-necked Stint, Common Greenshank and Marsh Sandpiper); while records of the endemic Banded Stilt probably have greatest conservation significance. The Banded Stilt has been recorded breeding at Lake Disappointment on several occasions, including in 2013 and 2015.</p> <p>Fifty five individual invertebrate specimens from groups often representing SREs were collected during the fauna and targeted invertebrate survey. None of the invertebrates collected were confirmed as SREs however five of the species have been classified as potential SREs. All five of the potential SREs collected in the field survey were from sand dune habitat which is widespread outside the study area.</p> <p>A small amount of aquatic invertebrate surveying was done in 2004 and more intensive survey was conducted in late 2015 and early 2016 when, in addition to sweep sampling, hatching trials were conducted using samples of lakebed. A total of 76 species were collected from Lake Disappointment and surrounding waterbodies, with 10 species at the lake itself, 15 species in Savory Creek and 66 species in surrounding claypans. Diatoms were also sampled in early 2016. Altogether, 20 species of diatom were collected, with 18 species found in Lake Disappointment, four species at Savory Creek and 13 species in claypans.</p> <p>Overall, the available information on waterbirds, aquatic invertebrates and diatoms suggests that Lake Disappointment itself has relatively low biological values, except for its role for Banded Stilts. The occasional breeding events by Banded Stilts on islands in Lake Disappointment appear to follow infrequent major rainfall events.</p> <p>At least one new species of ostracod occurs in the lake. It is possible that new species of diatom are also present. The biological values of Lake Disappointment are mostly limited by the high salinity of the lake when it floods.</p>
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**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>6</p>	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>The proposed construction of brine evaporation ponds on the surface of the Lake Disappointment playa has the potential to impact on some fauna species, in particular those (such as the Lake Disappointment Dragon and the Lake Disappointment Gecko) that are restricted to the riparian habitat surrounding the playa.</p> <p>Project implementation could affect fauna that use the Lake itself, in particular breeding water birds and to a lesser extent migratory waders. The development and use of evaporation ponds across the playa surface has the potential to modify surface water flows and therefore to affect breeding attempts of the banded stilt which appears to rely on islands forming in flooded areas after significant rain events. The success of these breeding events appears to be reliant on water salinities being suitable for macro-invertebrates to flourish, as these appear to represent the chief food source for adult birds and hatchlings. The rapid evaporation of surface waters on Lake Disappointment during most years severely limits the duration and frequency of conditions favourable for such events.</p>
<p>7</p>	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> <li>• <i>Avoidance - avoiding the adverse environmental impact altogether;</i></li> <li>• <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i></li> <li>• <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i></li> <li>• <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i></li> </ul>	<p>On the basis of information available so far, Reward proposes the following mitigate measures to avoid or minimise impacts on terrestrial fauna:</p> <ul style="list-style-type: none"> <li>• Project infrastructure will be configured so as to minimise the disturbance footprint and, to the extent practicable, to avoid impacts on riparian habitats.</li> <li>• Off-playa infrastructure will be sited so as to avoid or minimise impacts on freshwater claypans, as these have been identified as high-biodiversity habitats.</li> <li>• Project infrastructure will not encroach on exclusion areas agreed with Traditional Owners. The exclusion areas include the all of the islands within the Lake Disappointment playa used by Banded Stilts as breeding habitat.</li> <li>• Project infrastructure established outside the exclusion areas will be configured so as to minimise the direct disturbance footprint.</li> <li>• To the extent practicable, project elements will be designed and operated to maintain natural surface water flows, especially in near-riparian areas and in the surface flow channels that contain and direct flow during major storm events.</li> <li>• Progressive rehabilitation of vegetation and habitats will be implemented to the extent practicable.</li> </ul> <p>Given the limited amount of study that has been undertaken at Lake Disappointment, notwithstanding its listing in the Directory of Nationally Important Wetlands, Reward considers that there may be opportunities to support the WA wetlands policy, which recommended "...the establishment and operation of a small number of strategically-located wetland centres..", as a form of biodiversity offset.</p>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

8	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p>The main residual impact of project implementation on fauna and fauna habitats arises from the establishment of large halite stockpiles on the playa surface. The stockpiles are estimated to require an area of approximately 2752 ha, or about 1.83% of the Lake Disappointment system. The stockpiles will be a long term feature and are likely to persist for several decades following project completion.</p> <p>Providing the halite stockpiles and evaporation ponds are sited so as to avoid key functional and structural components of the system – notably the riparian zone, the major surface flow channels and the islands that provide fauna habitat, they are unlikely to give rise to significant adverse impacts on fauna.</p> <p>Neither short term nor long term geochemical impacts on fauna are likely (refer also discussion under Terrestrial Environmental Quality).</p>
9	<p>EPA’s Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? <i>Refer to <u>EAG 9</u></i></p>	<p><input type="checkbox"/> <i>meets the EPA’s objective</i>  <input checked="" type="checkbox"/> <i>may meet the EPA’s objective</i>  <input type="checkbox"/> <i>is unlikely to meet the EPA’s objective</i></p>
10	<p>Describe any assumptions critical to your conclusion (in Question 9). <i>e.g. particular mitigation measures or regulatory conditions.</i></p>	<p>Assumes that further hydrological assessment confirms preliminary assessment of the key functional attributes of the Lake Disappointment system.</p> <p>Assumes that project infrastructure can be engineered to avoid significant modification to pre-development surface flow systems.</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Hydrological processes – surface water and groundwater systems</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain the hydrological regimes of groundwater and surface water so that existing and potential uses, including ecosystem maintenance, are protected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>PS 4 – Environmental Protection of Wetlands</p> <p>DoW - Wild rivers in Western Australia - About wild rivers, <i>Water notes</i> WN37 January 2009.</p> <p>DoW - Operational policy no. 1.02 – Policy on water conservation /efficiency plans, 2009.</p> <p>DoW - Operational policy no. 5.12 – Hydrogeological reporting associated with a groundwater well licence, 2009.</p>
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> <li>• <i>anticipated level of public interest in the impact;</i></li> <li>• <i>consultation with regulatory agencies; and</i></li> <li>• <i>consultation with community.</i></li> </ul>	<p>The native title holders, as well as the Commonwealth Department of the Environment and the WA Department of Water are likely to have a high level of interest in the potential impacts of project implementation on hydrological processes.</p> <p>Reward has held initial discussions with the DoW about scoping of baseline hydrological studies for the project (meeting held at DoW in Perth, 2 February 2016).</p>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>5</p>	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The Lake Disappointment catchment is situated in the Little Sandy Desert, at the north-west corner of the Western Shield, and is underlain geologically by the Savory (geological) Basin and the Paterson Orogen, both containing Late Proterozoic rocks (Beard 2005). The Savory Basin mainly comprises gently east dipping medium to coarse-grained sandstone and pebbly conglomerate.</p> <p>The Disappointment Palaeoriver, which contains Lake Disappointment itself, was suggested by Beard (2005) to be a palaeoriver that drained into Rudall River via Savory Creek. Little detailed information on the hydrogeology of the Disappointment Palaeoriver is available. There are no flow or water quality gauging stations located within close proximity.</p> <p>The former connection to Rudall River was disrupted in the Miocene by one or more factors including tectonic movement, a slight uplift of ridges to the north and sinking of the lake basin. This resulted in Lake Disappointment becoming a terminal basin within an internally draining catchment with a hypersaline brine reservoir under the lake because of prolonged concentration by evaporation (Pendragon 2014).</p> <p>Lake Disappointment and its tributaries lie within the Savory Creek surface catchment are classified as Priority 1 wild rivers. These rivers are afforded a high level of regulatory protection. The DoW aims to protect wild river systems chiefly by limiting impacts to waterways and foreshore areas and by seeking to maintain natural flow regimes, hydrological connections and ecological functions.</p> <p>Lake Disappointment itself and the associated Savory Creek system are listed in the Directory of Nationally Important Wetlands (<a href="http://www.environment.gov.au/water/wetlands/australian-wetlandsdatabase">http://www.environment.gov.au/water/wetlands/australian-wetlandsdatabase</a>). The directory does not differentiate between the Lake Disappointment playa and the Savory Creek drainage system. Neither Savory Creek nor Lake Disappointment is listed as a wetland under the Ramsar Convention, and accordingly neither is protected under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) as a wetland of international importance.</p> <p>The lake lies within a proclaimed groundwater area under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act).</p> <p>Lake Disappointment is not located within a proclaimed surface water area.</p>
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**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>6</p>	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>There is currently one groundwater abstraction site within the proposed project area. Cory Bore, located 16 km north of the Lake Disappointment shoreline, is equipped with a delivery pump and power generator to provide water for domestic purposes (up to 1 MLpa). Two locations have been identified as possible process water supply borefields (refer Figure 4, Attachment 1.1). These include the Mackay borefield ("Borefield 1" on Figure 4) and the Cory borefield ("Borefield 2" on Figure 4).</p> <p>The nearest community is Parngurr (Cotton Creek) which is approximately 37km to the northwest and upgradient of the potential Lake Disappointment (LD) borefields. The other bore of importance in the general project locality is Georgia bore, which is approximately 16km to the east of the intersection of the Talawana track and mine operations access road. Georgia bore is situated on the Canning stock route.</p> <p>It is unlikely that there would be any impact on the water supply for the community Cotton Creek or on the Georgia bore as a result of the development and pumping of production borefields for the Lake Disappointment Project, due to the considerable separation distances between existing bores and the areas being considered for supply of process water. However further hydrogeological investigation and modelling will be required to substantiate this initial assessment.</p> <p>The potential impacts of water abstraction on groundwater dependent vegetation near the McKay Creek delta and effects of groundwater drawdown on stygofauna (if present) will also need to be considered as part of further hydrogeological assessment.</p> <p>An initial hydrological assessment of the Lake Disappointment Potash Project (Attachment 1.9) has concluded that:</p> <ul style="list-style-type: none"> <li>• Construction of infrastructure on Lake Disappointment to exploit the Sulfate of Potassium resource will not materially impact on the hydrological function of the lake.</li> <li>• The inlets and primary drainage channels of Savory Creek and the unnamed south-eastern tributary lie within agreed exclusion zones and will not be interfered with.</li> <li>• Flood levels will not increase as a result of project infrastructure on or near the Lake Disappointment playa, and flooding will not have a significant effect on the local and regional environment as a consequence of operations.</li> </ul>
<p>7</p>	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts?</p>	<p>Further hydrological assessment will be undertaken to define an appropriate and effective system for mitigation of impacts on hydrological processes.</p>

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
8	Residual impacts – review the residual impacts against the EPA objectives.	Further project design and investigation of surface and groundwater systems will be required to enable characterisation and assessment of residual impacts.
9	EPA’s Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to <u>EAG 9</u>	<input type="checkbox"/> <i>meets the EPA’s objective</i> <input checked="" type="checkbox"/> <i>may meet the EPA’s objective</i> <input type="checkbox"/> <i>is unlikely to meet the EPA’s objective</i>
10	Describe any assumptions critical to your conclusion (in Question 9). <i>e.g. particular mitigation measures or regulatory conditions.</i>	Relies on the results of further surface and groundwater investigations to be carried out under an agreed programme (to be defined in the Environmental Scoping Document).

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Inland waters environmental quality</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To maintain the quality of groundwater and surface water, sediment and biota so that the environmental values, both ecological and social, are protected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>DER - Identification and investigation of acid sulfate soils and acidic landscapes, Revised June 2015</p> <p>DoW -Western Australian water in mining guideline, Report No 12, 2013.</p> <p>DoW – WQPN 15: Extractive industries near sensitive water resources</p> <p>DoW – WQPN 44: Roads near sensitive water resources</p> <p>DoW – WQPN 51: Industrial wastewater management and disposal</p> <p>DoW – WQPN 52: Stormwater management at industrial sites</p> <p>DoW – WQPN 81: Tracks and trails near sensitive water resources</p> <p>DoW – WQPN 83: Infrastructure corridors near sensitive water resources:</p>
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> <li>• <i>anticipated level of public interest in the impact;</i></li> <li>• <i>consultation with regulatory agencies; and</i></li> <li>• <i>consultation with community.</i></li> </ul>	<p>The chief consideration related to inland water quality is likely to be the protection of water quality for the support of terrestrial fauna, and possibly of subterranean fauna. DPaW, DER, DoW and DoE are all likely to take a moderate to high level of interest in water quality matters.</p> <p>Initial consultation has been carried out with Dr S Appleyard (DER) in relation to the design of baseline studies for assessment of acid sulphate soil risk. The results of this work are presented in Attachment 1.10.</p> <p>Correspondence and consultation with DMP, DPaW and DER has also been carried out in connection with management of drilling spoil generated during Reward's exploration drilling programme.</p>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>5</p>	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The surficial geology of the Lake Disappointment Potash Project area generally comprises:</p> <ul style="list-style-type: none"> <li>• Quaternary Lacustrine deposits of clay, silt, sand and evaporite minerals.</li> <li>• Quaternary Kopi deposits (flour gypsum) as stabilised dunes adjacent to lacustrine deposits along the western margin of the lake.</li> <li>• Quaternary reworked aeolian deposits (clay, silt and sand) to the west of the lake.</li> <li>• Regionally extensive Quaternary aeolian sand and clayey sand plains and longitudinal dunes adjacent to the lake. Sand deposits also occur as discontinuous islands of shallow relief within the perimeters of the lake.</li> </ul> <p>The lake is underlain by substantial lacustrine sediments to depths of up to 100m. Hyper-saline brines containing significant potash values are contained within shallow sediments, primarily alternating sands and clays with large amounts of gypsum, indicative of alkaline conditions.</p> <p>The Australian National Acid Sulfate Soil Risk Map (ASRIS, Figure 2.1) indicates that Lake Disappointment is an inland water body with sediments of recent (Holocene) geological age with a high probability, but with very low confidence, of the presence of potential acid sulphate soils (PASS).</p> <p>An initial assessment of acid generating potential of shallow sediments at the Lake Disappointment playa, and of trace element composition of the shallow playa deposits has been completed (Attachment 1.10). The assessment included testing of 102 samples of lake sediments from 39 locations and 22 samples of monosulfidic black ooze (MBOs) from 22 locations. The samples were analysed for field pHs and subsequently 61 sediments were selected, together with the 22 MBOs, for further analysis using the Suspension Peroxide Oxidation Combined Acidity and Sulfur (SPOCAS) method to ascertain their potential to generate acidity. Selected samples of the MBOs were also analysed for Acid Volatile Sulfur (AVS). Concentrations of heavy metals were determined on laboratory leachates prepared from samples of the MBOs. The testing programme has found:</p> <p>Shallow lake sediments typically have field pHs well above a level that would indicate potential for acid generation;</p> <p>The MBOs contain no actual acidity but have some potential for acid generation and a significant acid neutralising potential. The MBOs are characterised by relatively low concentrations of Acid Volatile Sulphur and very low concentrations of leachable metals.</p>
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Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	<p>On the basis of results available to date, the acid generation hazard associated with dewatering of sediments, including the thin, discontinuous layer of MBOs is considered to be low.</p> <p>The risk of impacts on water quality as a result of spillage of fuels or reagents is considered low to moderate. No introduced chemical reagents are utilised in the SOP crystallisation plant.</p>
7	Mitigation measures - what measures are proposed to mitigate the potential environmental impacts?	<p>Detailed investigations currently being undertaken to provide additional information on the potential for mobilisation of acid or metals as a result of changing the oxygenation and/or saturation of shallow sediments as a result of project activities. The need for mitigation measures will be assessed when the results of further testing area available.</p> <p>Fuel storage and dispensing facilities will be designed and operated in accordance with relevant requirements of AS/NZS 1940:2004. Fuel storage facilities will be located outside the 1 in 100 year flood zone. Reward will implement and maintain formal spill detection, response, clean up and reporting procedures.</p>
8	Residual impacts – review the residual impacts against the EPA objectives. •	<p>On the basis of information available to date, it is unlikely that significant residual impacts on environmental water quality will result from acidification of lake sediments.</p> <p>At project completion, a site contamination assessment will be conducted to ensure that no residual contamination remains that would affect agreed post-closure land uses.</p>
9	EPA's Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? <i>Refer to EAG 9</i>	<p><input checked="" type="checkbox"/> <i>meets the EPA's objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA's objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA's objective</i></p>
10	Describe any assumptions critical to your conclusion (in Question 9). <i>e.g. particular mitigation measures or regulatory conditions.</i>	Assumes that further detailed testing confirms the initial conclusions concerning the risk of acid generation or metals release as a result of altered aeration or groundwater condition in shallow sediments.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Heritage</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To ensure that historical and cultural associations, and natural heritage, are not adversely affected.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	GS 41 – Assessment of Aboriginal Heritage DAA (undated) - Guidelines for Preparing Aboriginal Heritage Survey Reports
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> <li>• <i>anticipated level of public interest in the impact;</i></li> <li>• <i>consultation with regulatory agencies; and</i></li> <li>• <i>consultation with community.</i></li> </ul>	<p>Aboriginal Traditional Owners have a very high level of interest in the cultural values of the Lake Disappointment area. The whole of the project area lies within determined native title claim areas (Determination numbers FCA 1208 and FCA 518). Reward has entered into an Indigenous Land Use Agreement (ILUA) with the Martu People to guide project activities including, but not limited to, land access. Reward Minerals provides regular project updates to Traditional owners through the native title representative body and on country meetings. The company engages both formally and informally with local communities. Approximately 20% of the exploration activities comprises labour sourced from the local communities.</p> <p>Reward conducts heritage clearance surveys on a regular basis to confirm access approvals from the relevant Martu group before implementing any significant site works.</p>
5	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	Effectively the whole of Lake Disappointment lies within a registered Aboriginal heritage site (Site ID 12103). The area is listed as having ceremonial and/or mythological values and has been the subject of field and desktop ethnographic studies. These studies have not been appended to this referral to respect cultural sensitivities.
6	Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.	By respecting conditions set out in the ILUA, it is considered unlikely that Reward's proposed activities will result in any significant impacts to heritage values.
7	Mitigation measures - what measures are proposed to mitigate the potential environmental impacts?	The ILUA between Reward and the Martu People establishes exclusion areas over parts of the tenements held by Reward. The company has agreed not to access these areas for exploration, project implementation or other purposes, including for the purpose of baseline environmental studies. By adherence to the terms of the ILUA, impacts on significant cultural values – including heritage values – will be substantially avoided.

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

8	Residual impacts – review the residual impacts against the EPA objectives. •	No material adverse residual impacts on heritage values are expected. Some positive residual impacts are likely, for example improved access for traditional owners to places of cultural significance.
9	EPA’s Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to <u>EAG 9</u>	<input checked="" type="checkbox"/> <i>meets the EPA’s objective</i> <input type="checkbox"/> <i>may meet the EPA’s objective</i> <input type="checkbox"/> <i>is unlikely to meet the EPA’s objective</i>
10	Describe any assumptions critical to your conclusion (in Question 9). <i>e.g. particular mitigation measures or regulatory conditions.</i>	The existing ILUA is maintained and complied with.

Proponent to complete. DMA and Third Party to complete to the best of their knowledge.		
1	Factor, as defined in <u>EAG 8</u>	<b>Rehabilitation and decommissioning</b>
2	EPA Objective, as defined in <u>EAG 8</u>	To ensure that premises are decommissioned and rehabilitated in an ecologically sustainable manner.
3	Guidance - what established policies, guidelines, and standards apply to this factor in relation to the proposal?	<p>DMP / EPA – Joint Guidelines for Preparing Mine Closure Plans, May 2015</p> <p>GS 6 – Rehabilitation of Terrestrial Ecosystems</p> <p>EPB 19 - EPA involvement in mine closure</p> <p>Strategic Framework for Mine Closure; Australian and New Zealand Minerals and Energy Council and the</p> <p>Minerals Council of Australia (ANZMEC/MCA 2000) - Mine Closure and Completion, Leading Practice Sustainable Development Program for the Mining Industry</p> <p>Department of Industry, Tourism and Resources (DITR 2009b) - Mine Rehabilitation, Leading Practice Sustainable Development Program for the Mining Industry; Department of Industry, Tourism and Resources (DITR 2006)</p> <p>International Council on Mining and Metals (ICMM 2008) - Planning for Integrated Mine Closure: Toolkit</p>
4	<p>Consultation - outline the need for consultation and the outcomes of any consultation in relation to the potential environmental impacts, including:</p> <ul style="list-style-type: none"> <li>• <i>anticipated level of public interest in the impact;</i></li> <li>• <i>consultation with regulatory agencies; and</i></li> <li>• <i>consultation with community.</i></li> </ul>	<p>Interest in mine rehabilitation and closure is expected to attract a moderate to high level of interest, especially from Traditional Owners, the Shire of East Pilbara, DMP, DPaW and some conservation organisations, such as the CCWA.</p> <p>Reward has not yet undertaken stakeholder consultation on the issue of project closure and rehabilitation, as the proposal is still in an early stage of development.</p>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>5</p>	<p>Baseline information - describe the relevant characteristics of the receiving environment.</p> <p><i>This may include: regional context; known environmental values, current quality, sensitivity to impact, and current level of cumulative impacts.</i></p>	<p>The project area is situated within the Paterson-Yeneena Province, which consists of Sandplain, dunes, hills and ranges (with some salt lakes and calcrete plains) on the sedimentary rocks and gneiss of the western Paterson Orogen and Yeneena Basin. Red sandy earths occur with Red deep sands and Stony soils (and some Red loamy earths, Red shallow loams, Bare Rock, Salt lake soils and Red shallow sands). Vegetation consists of Spinifex grasslands with scattered eucalypts and acacias and some salt lakes (DAFWA, 2014b).</p> <p>A level 2 Flora and Vegetation survey (Botanica 2016) identified six floristic communities, represented by a total of 38 Families, 104 Genera and 208 Taxa. Based on the vegetation health rating scale (adapted from Keighery, 1994 and Trudgen, 1988), four of the six floristic communities had a health rating of 4 while the remaining two had a health rating of 5.</p> <p>One taxon of Flora of Conservation Significance (<i>Tecticornia</i> sp) Sunshine Lake (K.A. Shepherd et al KS 867) (P1) and three unrecognised taxa of <i>Tecticornia</i> are known from the survey area.</p> <p>One introduced species was identified within the survey area; <i>Cenchrus ciliaris</i> (Buffel grass).</p>
<p>6</p>	<p>Impact assessment - describe the potential impact/s that may occur to the environmental factor as a result of implementing the proposal.</p>	<p>It is likely that potential impacts to the terrestrial landscape can be successfully managed through appropriate topsoil and weed management. Halite stockpiles will remain as a feature of the landscape for a significant period, but will be designed with the intent to ensure ecosystem function is not compromised.</p>

**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>7</p>	<p>Mitigation measures - what measures are proposed to mitigate the potential environmental impacts? The following should be addressed:</p> <ul style="list-style-type: none"> <li>• <i>Avoidance - avoiding the adverse environmental impact altogether;</i></li> <li>• <i>Minimisation - limiting the degree or magnitude of the adverse impact;</i></li> <li>• <i>Rehabilitate – restoring the maximum environmental value that is reasonably practicable; and</i></li> <li>• <i>Offsets – actions that provide environmental benefits to counterbalance significant residual environmental impacts or risks of a project or activity.</i></li> </ul>	<p>Reward has so far identified the following rehabilitation strategies for minimising impact and improving the likelihood of good rehabilitation outcomes:</p> <ul style="list-style-type: none"> <li>• Project infrastructure will be configured so as to minimise the disturbance footprint to the extent practicable.</li> <li>• Prior to any clearing, a weed management plan will be implemented prevent introduction and/or further spread of weeds.</li> <li>• Seed collection from representative vegetation communities will be implemented prior to clearing.</li> <li>• During any clearing, cleared vegetation will be collected and stored for use in future rehabilitation. Topsoil will be stripped and stockpiled so as to maintain seedbank viability and topsoil quality.</li> <li>• Rehabilitation (for example, of borrow pits) will be implemented progressively, to the extent practicable.</li> <li>• Reward will continue to consult with Traditional Owners, DPaW and the WA Herbarium as part of its development of a mine rehabilitation plan.</li> <li>• Best practise and innovative rehabilitation methodology will be employed to ensure maximum environmental value is restored where possible.</li> <li>• Where required Reward will undertake rehabilitation trials and benchmark results prior to closure.</li> </ul>
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**Proponent to complete. DMA and Third Party to complete to the best of their knowledge.**

<p>8</p>	<p>Residual impacts – review the residual impacts against the EPA objectives.</p> <p><i>It is understood that the extent of any significant residual impacts may be hard to quantify at the referral stage. Referrers are asked to provide, as far as practicable, a discussion on the likely residual impacts and form a conclusion on whether the EPA’s objective for this factor would be met if residual impacts remain. This will require:</i></p> <ul style="list-style-type: none"> <li>• <i>quantifying the predicted impacts (extent, duration, etc.) acknowledging any uncertainty in predictions;</i></li> <li>• <i>putting the impacts into a regional or local context, incorporating knowable cumulative impacts; and</i></li> <li>• <i>comparison against any established environmental policies, guidelines, and standards.</i></li> </ul>	<p>The main residual impact of project implementation arises from the establishment of large halite stockpiles on the playa surface. The stockpiles are estimated to require an area of approximately 2752 ha, or about 1.83% of the Lake Disappointment system over the 20 year operational period. The stockpiles will be a long term feature and are likely to persist for several decades following project completion.</p> <p>There is some potential for sale of halite from Lake Disappointment in the future, but sale of halite would require extension of rail facilities from Pilbara iron ore operations and access to existing facilities of those operations.</p> <p>Although the halite stockpiles will result in a long term modification of surface topography at the northwestern part of the playa, it is unlikely that hydrological or ecological functions of the overall playa will be materially altered.</p> <p>Innovative mine closure planning may generate opportunities for re-purposing of some elements of the potash production infrastructure – for example, aquaculture or ecotourism / research activities.</p>
<p>9</p>	<p>EPA’s Objective – from your perspective and based on your review, which option applies to the proposal in relation to this factor? Refer to <u>EAG 9</u></p>	<p><input checked="" type="checkbox"/> <i>meets the EPA’s objective</i></p> <p><input type="checkbox"/> <i>may meet the EPA’s objective</i></p> <p><input type="checkbox"/> <i>is unlikely to meet the EPA’s objective</i></p>
<p>10</p>	<p>Describe any assumptions critical to your conclusion (in Question 9). <i>e.g. particular mitigation measures or regulatory conditions.</i></p>	<p>Assumes that a mine rehabilitation strategy can be agreed with key stakeholders and would be implemented as a condition of project completion.</p>

