



# Report and recommendations of the Environmental Protection Authority



**Parker Range (Mount Caudan) Iron Ore Project**  
– inquiry under section 46 of the  
*Environmental Protection Act 1986*  
to amend Ministerial Statement 892

**Polaris Metals Pty Ltd**

Report 1696

January 2021

## Inquiry under section 46 of the *Environmental Protection Act 1986*

The Minister for Environment has requested that the Environmental Protection Authority (EPA) inquire into and report on the matter of changing the implementation condition 8-4 (Malleefowl) of Ministerial Statement 892 relating to the Parker Range (Mount Caudan) Iron Ore Project, to remove the reference to one single inactive malleefowl mound which is authorised to be removed within the mine footprint.

Section 46(6) of the *Environmental Protection Act 1986* requires the EPA to prepare a report that includes:

- (a) a recommendation on whether or not the implementation conditions to which the inquiry relates, or any of them, should be changed
- (b) any other recommendations that it thinks appropriate.

The following is the EPA's report to the Minister pursuant to s. 46(6) of the *Environmental Protection Act 1986*.



Professor Matthew Tonts  
Chair

25 January 2021

ISSN 1836-0483 (Print)  
ISSN 1836-0491 (Online)  
Assessment No. 2258

# Contents

**1. The Proposal ..... 1**

**2. Requested Changes to the Conditions ..... 3**

**3. Inquiry into Changing the Conditions ..... 4**

**4. Inquiry Findings ..... 5**

    4.1 Terrestrial Fauna..... 5

**5. Conclusions and Recommendations ..... 13**

**References ..... 15**

**Appendix 1: Identified Decision-Making Authorities and Recommended  
Environmental Conditions..... 16**

# 1. The Proposal

The Parker Range (Mount Caudan) Iron Ore Project (the proposal) is to develop and operate the Parker Range (Mount Caudan) Iron Ore Project located approximately 15 kilometres (km) south-east of Marvel Loch in the Shire of Yilgarn. The proposal consists of a mining area and haul road area. The mining area includes an above and below the watertable iron ore mine, associated infrastructure, and the Parker Range Bypass Road. The proponent for the proposal is Polaris Metals Pty Ltd.

The Environmental Protection Authority (EPA) assessed the proposal at the level of Public Environmental Review (PER) and published its report in August 2011 (Report 1410). In this report, the EPA considered the following key environmental factors were relevant to the proposal:

- Flora and Vegetation
- Fauna
- Air Quality – dust
- Groundwater
- Closure and Rehabilitation.

In applying the *Statement of Environmental Principles, Factors and Objectives* (EPA 2020a) these factors are now represented by:

- Flora and Vegetation
- Terrestrial Fauna
- Air Quality
- Inland Waters
- Terrestrial Environmental Quality.

The EPA concluded in Report 1410, that it was likely the EPA's objectives would be achieved provided there was satisfactory implementation by the proponent of the EPA's recommended conditions.

The then Minister for Environment approved the proposal for implementation, subject to the implementation conditions of Ministerial Statement (MS) 892 on 12 April 2012.

## Previously approved changes to the proposal

There has been one change to the proposal under s. 45C of the *Environmental Protection Act 1986* (EP Act), approved on 26 June 2020. The approved change included:

- change in development envelope
- change in disturbance footprint and vegetation clearing
- change in open pit dimensions

- removal of tailings storage facility
- change in pit dewatering volume
- change in surplus dewater management.

### Previously approved changes to the conditions

There has been one change to the implementation conditions of MS 892 approved under s. 46 of the EP Act. This change was to extend the Time Limit of Authorisation of the proposal. This approval extended the time limit for implementation of the proposal to 12 April 2022 and resulted in the publication of MS 1060 on 17 July 2017.

## 2. Requested Changes to the Conditions

In August 2020, the proponent requested the following changes to the implementation conditions of MS 892:

- to amend condition 8-4 to remove the reference to one single inactive malleefowl mound, thereby allowing for the removal of additional inactive malleefowl mounds.

In August 2020, the Minister for Environment requested that the EPA inquire into and report on the matter of changing the implementation conditions of MS 892 for the Parker Range (Mount Caudan) Iron Ore Project. This report satisfies the requirements of the EPA's inquiry.

### 3. Inquiry into Changing the Conditions

The EPA has discretion as to how it conducts this inquiry. In determining the extent and nature of this inquiry, the EPA had regard to information such as:

- the currency of its original assessment (Report 1410)
- the proponent's Public Environmental Review document (Cazaly 2010)
- subsequent s. 46 inquiry (Report 1596)
- MS 892 and MS 1060
- information provided by the proponent including:
  - Parker Range (Mt Caudan) Iron Ore Project - Request to amend MS 892 under s. 46 of the *Environmental Protection Act 1986* (MRL 2020a)
  - Parker Range Iron Ore Project MS 892 and EPBC 2010/5435 *Significant fauna management plan* (MRL 2020b)
  - Endorsement letter from Department of Agriculture, Water and the Environment, for the revised *Significant fauna management plan* (DAWE 2020)
- advice from relevant decision-making authorities
- any new information regarding the potential impacts of the proposal on the environment relevant to this inquiry.

#### EPA Procedures

The EPA followed the procedures in the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016* (State of Western Australia 2016) and the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual* (EPA 2020b).

## 4. Inquiry Findings

The EPA considered that Terrestrial Fauna is the key environmental factor relevant to the change to the conditions.

### 4.1 Terrestrial Fauna

The EPA's environmental objective for Terrestrial Fauna is *to protect terrestrial fauna so that biological diversity and ecological integrity are maintained*.

#### Conclusions from EPA Report 1410

In assessing the proposal, the EPA found that the construction and operation of the Parker Range Iron Ore Project had the potential to directly impact terrestrial fauna during vegetation clearing, through vehicle strikes along the haul road and as a result of the trenching required to lay pipelines. There was also potential for the proposal to indirectly impact fauna as a result of dust and potential increased predation.

The EPA noted that a number of conservation significant fauna including *Leipoa ocellata* (malleefowl) and *Platycerus icterotis xanthogenys* (western rosella) had been recorded in the project area and other species were thought likely to be present due to the existence of suitable habitat. The EPA noted that the implementation of the proposal would result in the loss of 414 hectares (ha) of malleefowl breeding, feeding and dispersal habitat within the 55,960 ha Parker Range Priority Ecological Community (PEC).

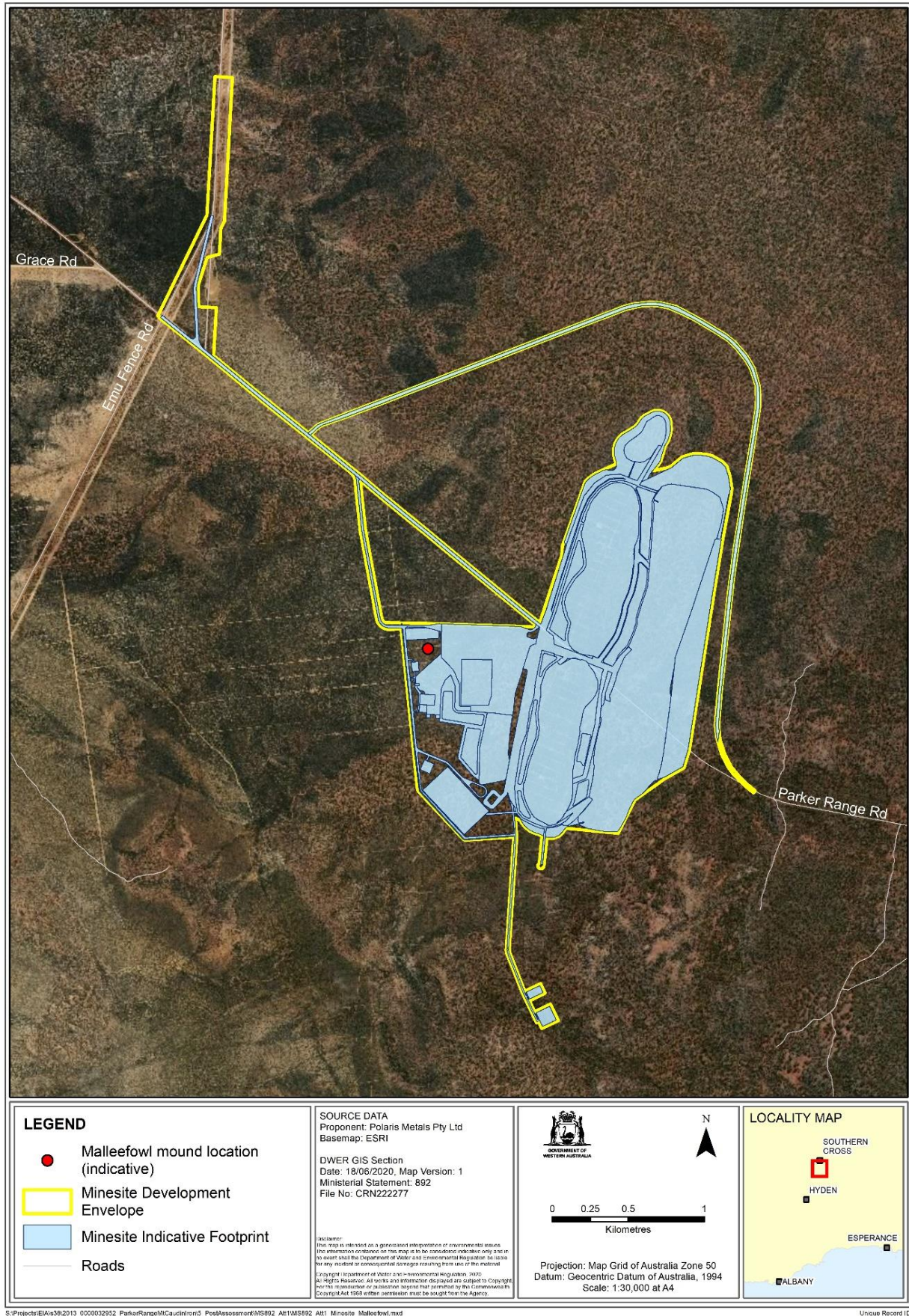
The proponent proposed to clear a malleefowl nesting mound which it considered to be long abandoned (Figure 1). All other active and inactive nesting mounds were outside the proposed project area and would not be cleared.

The EPA considered that the loss of one inactive malleefowl mound was not significant and recommended condition 8-4 to ensure the proponent was restricted to clearing the one inactive malleefowl mound identified during the surveys within its mine area.

The proponent committed to monitor trends in malleefowl abundance and distribution to assess threats and habitat under an Environmental Management Plan (EMP) however, this EMP did not:

- require consultation with the then, Department of Environment and Conservation, when developing the monitoring program
- define an area to be monitored
- provide contingency measures should it be demonstrated that the proposal is negatively impacting malleefowl populations.





**Figure 1: Indicative malleefowl mound location**

To ensure there would be no local impacts to malleefowl populations as a result of implementation of the proposal, and to ensure that the proponent's intention to monitor malleefowl populations was legally enforceable, the EPA recommended conditions 8-4, 8-5 and 8-6. These conditions required the proponent to undertake monitoring within a 1 km area surrounding the project area, which was the local area as defined by the proponent in their PER document (Figure 2). These conditions also required the proponent to undertake mitigation measures should a decline in malleefowl population be detected.

The former Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) required the proponent to provide offsets as a result of impacts to malleefowl - listed as "Threatened" under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

An *Environmental Offset Strategy* was provided by the proponent in response to the EPBC Act requirement. The *Environmental Offset Strategy* was consistent with the EPA offsets guidance and proposed to mitigate residual impacts that were identified for malleefowl and western rosella habitat, as well as vegetation.

The *Environmental Offset Strategy* included:

- the establishment of the Parker Range Conservation Trust, which would deliver a positive conservation outcome for the Southern Yilgarn region
- the acquisition and rehabilitation of 1,311 ha of farmland located between two nature reserves, potentially creating a larger linked ecosystem.

In the Report, the EPA commended the work done by the proponent in producing the generous residual impact strategy in response to the requirements of the DSEWPaC and to mitigate for residual impacts on vegetation.

In its conclusion, the EPA considered that direct and indirect impacts to terrestrial fauna species from clearing, traffic movements, trenching and increase in introduced fauna could be managed through the implementation of recommended conditions.

To manage these impacts, the EPA recommended the following conditions:

- ensure malleefowl monitoring and management measures are undertaken
- require trenching management and introduced fauna management is undertaken
- restrict the speed of vehicles on roads within the mine site.





**Figure 2: 1-kilometre malleefowl monitoring area**

## Assessment of the requested change to conditions

The EPA considers that the following current environmental policy and guidance is relevant to its assessment of the proposal for this factor:

- *Environmental Factor Guideline – Terrestrial fauna* (EPA 2016)
- *Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment* (EPA 2020c).

The proponent has proposed a change to the wording of condition 8-4 so that the condition may allow for the removal of additional inactive malleefowl mounds within the approved development envelope of the proposal.

The original baseline malleefowl mound dataset was collated via a series of terrestrial fauna surveys conducted by Keith Lindbeck and Associates from 2008 to 2010, the Malleefowl Preservation Group (2011), Specialised Zoological (2008) and Wilcox and Davis (2008).

Due to the age of this baseline dataset, a re-survey of the development envelope and surrounds was required. Additionally, the previous surveys were conducted on foot, which may have resulted in missing mounds that were obscured by vegetation. Light Detection and Ranging remote sensing (LiDAR)-based identification of malleefowl mounds, followed by ground truthing has demonstrated to be an effective method to monitor mounds over large areas (National Malleefowl Recovery Team (NMRT) 2019)).

A new survey commissioned by the proponent in 2020, extended the malleefowl monitoring area from 1 km to 2 km (Figure 3), to account for potential localised displacement of malleefowl immediately adjacent to the development envelope (Phoenix 2020). Field surveys were conducted from 15 to 26 January 2020. The scope of work included:

- undertaking ground truthing of potential malleefowl mounds detected by LiDAR surveys within the development envelope approved under the s. 45 C change to proposal (June 2020), and the 2 km malleefowl monitoring area
- assessing the status of known and potential new mounds within the development envelope and 2 km malleefowl monitoring area to establish a current Malleefowl Mound Register for the Project
- completing malleefowl habitat assessments at all mound sites to determine habitat type and quality.

Three inactive (sub-class 2) and eight long unused mounds were found within the development envelope. No active mounds were located within the development envelope. Eleven mounds identified in the desktop review had their status revised from active to inactive, as per the *National Malleefowl Monitoring Manual* (National Malleefowl Recovery Team 2019). No other mounds identified in the desktop review required a change in status.

Malleefowl mounds are used for nesting and breeding purposes only, with the breeding season occurring typically between September and March. During the breeding season, mounds may be described as being active based on NMRT methodology (Phoenix 2020). Predation by the introduced fox is thought to be limiting the abundance of Malleefowl and in many areas may be a major cause of decline.

Malleefowl mostly move about their home-range by foot, and rarely fly except when they are disturbed or to roost in the canopy. Breeding birds tend to be sedentary, nesting in the same general area year after year. Nonetheless, a pair sometimes moves several kilometres between nesting seasons for no apparent reason (Benshemesh, J. 2007).

The proponent has an approved *Significant fauna management plan* (MRL 2020), which was prepared and approved in accordance with condition 8-6 of MS 892, in 2020. This plan has been revised to address any potential impacts of the proposed change to condition 8-4, and to incorporate the changes recently approved under s. 45C of the EP Act (2020), which included a change to the approved development envelope and disturbance footprint.

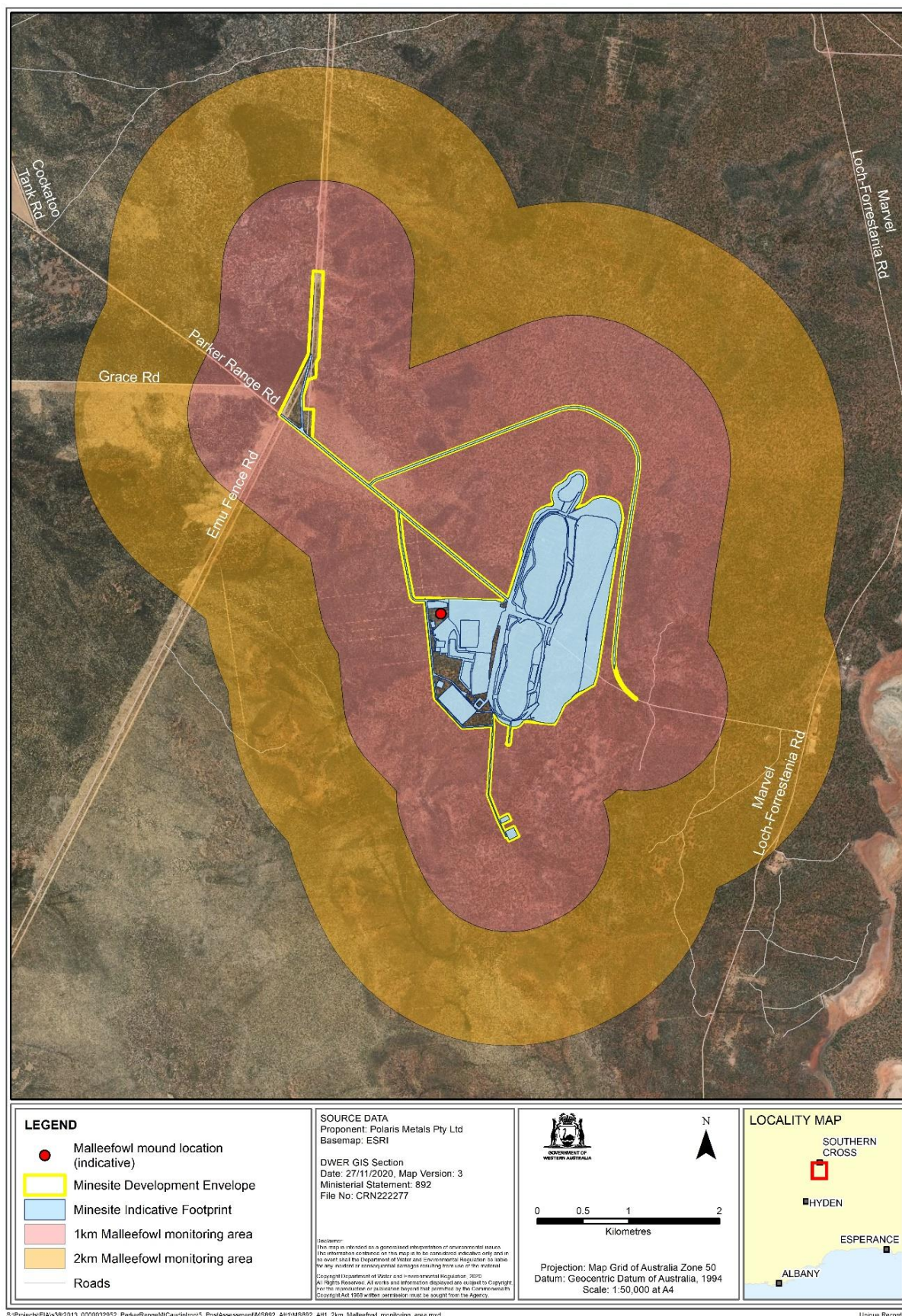
The *Significant fauna management plan* must be implemented in accordance with Condition 8-6 of MS 892. The plan contains triggers and thresholds associated with active mounds, and details the surveys, reporting and management measures that will be undertaken to ensure the objective of Condition 8 is met, which states:

*“avoid, or where this is unavoidable, minimise the loss of conservation significant fauna such as the Malleefowl (Leipoa ocellata), Western Rosella (inland form - Platycercus icterotis xanthogenys) and the White-browed Babbler (Pomatostomus superciliosus)”.*

The plan details the annual monitoring that will be undertaken to determine the level of impact, including the reduction in numbers of active Malleefowl mounds and number of Malleefowl deaths based on monitoring results, which would indicate an adverse impact to local Malleefowl populations.

The *Significant fauna management plan* includes a requirement that the Department of Water and Environmental Regulation consult with the Commonwealth Department of Agriculture, Water and the Environment (DAWE) when proposing the removal of any active mounds.





**Figure 3: Malleefowl monitoring areas – 1 km and 2 km buffer**

The Department of Biodiversity, Conservation and Attractions (DBCA) administers the *Biodiversity Conservation Act 2016*, which provides protection for threatened species and threatened ecological communities. DWER consulted with the DBCA on whether the proposed change to conditions would have implications for the conservation status of malleefowl in the region (listed as Vulnerable under the *Biodiversity Conservation Act 2016*). The DBCA advised that, based on the information provided, the change would be unlikely to have significant implications for conservation status of malleefowl in the region, or other matters relevant to the department's responsibilities related to the *Biodiversity Conservation Act 2016*.

The proponent has undertaken consultation with DAWE regarding the proposed change. The proposal was approved under the EPBC Act in 2010 and contained conditions relating to the protection of malleefowl (EPBC2010/5435).

The EPA notes that DAWE recently revoked condition 3 of EPBC2010/5435 in July 2020, which stated that:

*“The person taking the action may clear no more than one inactive Malleefowl (Leipoa ocellata) mound within the mine footprint located at the following coordinates 741160E and 6498677N”.*

Condition 4 of EPBC2010/5435 requires that the Commonwealth Minister for Environment approve a Malleefowl Management Plan prior to commencement of operations.

The DAWE has endorsed the revised *Significant fauna management plan* (MRL 2020), which has been updated to reflect the revised EPBC conditions, and therefore now satisfies the EPBC requirement (DAWE 16 November 2020).

The EPA has reviewed whether other condition changes are needed in relation to the proposed change which would allow the removal of inactive and long unused malleefowl mounds. The EPA considers that the remaining conditions applying to malleefowl (condition 8 of MS 892) are sufficient to ensure that the EPAs objective for terrestrial fauna, and the objective to avoid, or where this is unavoidable, minimise the loss of malleefowl, can continue to be met.

## 5. Conclusions and Recommendations

### *Change to condition 8-4*

The proponent has requested a change to condition 8-4 to allow removal of all inactive and long unused mounds. This would result in the removal of inactive and long unused malleefowl mounds based on the 2020 survey results.

The EPA considers its objective for terrestrial fauna could be met if the proposed change is made.

The EPA recommends the amended condition should state:

*“The proponent shall ensure there is no removal of active malleefowl mounds within the Parker Range (Mount Caudan) Iron Ore Project Minesite Development Envelope identified in Schedule 1 Figure 2 and the Upper Haul Road Development Envelope identified in Schedule 1 Figure 3, unless otherwise approved in writing by the CEO, on the advice of Department of Biodiversity, Conservation and Attractions”.*

### Conclusions

In relation to the terrestrial fauna environmental factor affected by the proposed condition change, and considering the information provided by the proponent and relevant EPA policies and guidelines, the EPA concludes that:

- there are no changes to the proposal associated with the request to change the condition. The change to proposal which was approved under section 45C (2020) determined there would be no significant impacts to terrestrial fauna which were additional to or different from the effect of the original proposal.
- there is no significant new or additional information that changes the conclusions reached by the EPA under any of the relevant environmental factors since the proposal was assessed by the EPA in Report 1410 (August 2011)
- no new significant environmental factors have arisen since the EPA's original assessment of the proposal relevant to this inquiry
- impacts to the terrestrial fauna environmental factor is considered able to be managed to meet the EPA's terrestrial factor objective, based on the requirements of the original conditions retained in MS 892, and the imposition of the attached recommended conditions (Appendix 1).
- The change is not likely to result in a significant impact on other environmental factors, or those factors identified in the EPA's original assessment of the proposal. Therefore, the EPA has determined that there are no other environmental factors which are inextricably linked to the change, and which warrant further holistic impact assessment.



## Recommendations

Having inquired into this matter, the EPA submits the following recommendations to the Minister for Environment under s. 46 of the EP Act:

1. While retaining the environmental requirements of the original conditions of MS 892, it is appropriate to change implementation condition 8-4, and replace it with a new implementation condition.
2. After complying with s. 46(8) of the EP Act, the Minister may issue a statement of decision to change condition 8-4 of MS 892 in the manner provided for in the attached recommended statement (Appendix 1).

# References

## Proponent documents

Cazaly 2010, *Parker Range Iron Ore Project Mt Caudan Deposit – Public Environmental Review*. Cazaly Resources Limited.

Cazaly 2011, *Parker Range Iron Ore Project Mt Caudan Deposit – Environmental Offset Strategy*. Cazaly Resources Limited, Revision D.

DAWE 2020, EPBC 2010/5435: *Parker Range Iron Ore Project – Mount Caudan Deposit – Significant Fauna Management Plan* - Endorsement letter. Department of Agriculture, Water and the Environment.

MRL 2020a, Parker Range (Mt Caudan) Iron Ore Project - Request to amend Ministerial Statement 892 under s45C of the *Environmental Protection Act 1986*, Revision 2.

MRL 2020b, Parker Range Iron Ore Project MS 892 and EPBC 2010/5435 *Significant fauna management plan*, Revision 5.

Phoenix 2020, *Baseline Malleefowl monitoring survey for the Parker Range Iron Ore Project*. Phoenix Environmental Sciences Pty Ltd. Unpublished report prepared for Mineral Resources Ltd.

## EPA Policies:

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

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

EPA 2020b, *Environmental Impact Assessment (Part IV Division 1 and 2) Procedures Manual*, Environmental Protection Authority, Perth, WA.

EPA 2020c, *Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment*, Environmental Protection Authority, Perth, WA.

State of Western Australia 2016, *Western Australian Government Gazette*, No. 223, 13 December 2016.

## Other:

Benshemesh, J. 2007, *National Recovery Plan for Malleefowl*. Department for Environment and Heritage, South Australia.

# Appendix 1: Identified Decision-Making Authorities and Recommended Environmental Conditions

## Identified Decision-Making Authorities

The decision-making authorities (DMAs) in the table below have been identified for the purposes of s. 45 as applied by s. 46(8) of the *Environmental Protection Act 1986*.

Decision-Making Authority	Legislation (and Approval)
1. Minister for Environment	<i>Biodiversity Conservation Act 2016</i> (Taking of flora and fauna)
2. Minister for Mines and Petroleum	<i>Mining Act 1978</i> (Mining Lease)
3. Minister for Aboriginal Affairs	<i>Aboriginal Heritage Act 1972</i> (Section 18 approval)
4. Minister for Water	<i>Rights in Water and Irrigation Act 1914</i> (Water abstraction licence)
5. Minister for Lands	<i>Land Administration Act 1997</i>
6. Chief Executive Officer, Department of Water and Environmental Regulation	<i>Environmental Protection Act 1986</i> (Works Approval and Licence)
7. Executive Director, Resource and Environmental Compliance Division, Department of Mines, Industry Regulation and Safety	<i>Mining Act 1978</i> (Mining proposal and mine closure plan)
8. Chief Dangerous Goods Officer	<i>Dangerous Goods Safety Act 2004</i> (Dangerous Goods license and approvals)
9. State Mining Engineer	<i>Mines Safety and Inspection Act 1994</i> (Project Management Plan)
10. Chief Executive Officer, Shire of Yilgarn	<i>Planning and Development Act 2005</i> (Planning approvals)  <i>Building Act 2011</i> (Decision maker for permits and development approvals)  <i>Local Government Act 1995</i>

Note: In this instance, agreement is only required with DMAs 1-5 as these DMAs are Ministers.

## Recommended Environmental Conditions

### STATEMENT TO CHANGE THE IMPLEMENTATION CONDITIONS APPLYING TO A PROPOSAL

(Section 46 of the *Environmental Protection Act 1986*)

#### PARKER RANGE (MOUNT CAUDAN) IRON ORE PROJECT

**Proposal:** The proposal is to develop and operate the Parker Range (Mount Caudan) Iron Ore Project located approximately 15 kilometres south-east of Marvel Loch in the Shire of Yilgarn. The proposal consists of a mining area and haul road area. The mining area includes an above and below the watertable iron ore mine, associated infrastructure and the Parker Range Bypass Road.

**Proponent:** Polaris Metals Pty Ltd  
Australian Company Number 085 223 570

**Proponent Address:** 1 Sleat Road  
APPLECROSS WA 6153

**Report of the Environmental Protection Authority:** 1696

**Preceding Statement/s Relating to this Proposal:** 892, 1060

Pursuant to section 45 of the *Environmental Protection Act 1986*, as applied by section 46(8), it has been agreed that the implementation conditions set out in Ministerial Statement No. 892, be changed as specified in this Statement.

**Condition 8-4 of Ministerial Statement 892 is deleted and replaced with:**

#### Malleefowl

8-4 The proponent shall ensure there is no removal of active malleefowl mounds within the Parker Range (Mount Caudan) Iron Ore Project Minesite Development Envelope identified in Schedule 1 Figure 2 and the Upper Haul Road Development Envelope identified in Schedule 1 Figure 3, unless otherwise approved in writing by the CEO, on the advice of Department of Biodiversity, Conservation and Attractions.

Note: "CEO" means the Chief Executive Officer of the Department of the Public Service which is responsible for the administration of section 48 of the *Environmental Protection Act 1986*, or his delegate.