

Pro Forma: Advice for Native Vegetation Clearing Permit amendment pathway

Application to extend ‘no clearing after’ and expiry date (Administrative amendments)

Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) requires that amendments to clearing permits, including administrative amendments, be reviewed. The purpose of the review is to clarify whether there have been any substantial changes in conservation values and/or impacts within the application area since the original assessment. Such changes may result in supporting surveys no longer being adequate to support the revised assessment and/or change the outcomes when assessed against the 10 Clearing Principles listed under Schedule 5 of the *Environmental Protection Act 1986*.

The purpose of this pro forma is to provide DEMIRS with information on:

- changes in conservation values since the original assessment.
- the significance of those changes; and
- the appropriate approval pathway for the area in question.

Where demonstrated through this pro forma, that previous survey information meets current regulator expectations and no substantial changes to known conservation values and/or clearing impacts exist, Rio Tinto Iron Ore (RTIO) would not pursue further survey work to support the administrative amendment.

Where previous supporting surveys are no longer adequate to meet current regulator expectations, or there have been significant changes to the known conservation values since assessment was made, supplementary supporting information will accompany an amendment to the NVCP or new clearing permit application. Rio Tinto will seek confirmation from DEMIRS on the appropriate pathway.

Current		Proposed	
CPS#	4343/3	CPS#	4343/4
No clearing after date	31/12/2024	No clearing after date	31/12/2029
Expiry date	31/12/2029	Expiry date	31/12/2034
Clearing approved (ha)	46 ha		
Clearing carried out to date (ha)	43.16 ha		
Rehabilitation carried out to date (ha)	42.44		
Justification of extension:	An extension of the no clearing after date is required to support exploration activities and the maintenance of access tracks within the permit area.		

Bio Input/Desktop assessment	
Assessor: Bridget Duncan, Botanist	
Date/s of field surveys:	<p>(Biota, 2014): 2nd, 3rd, 5th September 2014 (Biologic, 2014): 9th – 16th December 2013 (Eco Logical Australia, 2015): N/A (MWH, 2015a): 18th – 31st May 2015, 1st – 11th September 2015 (MWH, 2015b): 18th – 31st May 2015 (Bat Call, 2016): 11th – 14th July 2016 (MWH, 2016): 8th – 21st June 2015, 2nd – 8th September 2015, 3rd – 8th May 2016 (Astron, 2017b): 3rd – 9th June 2016 (Astron, 2017a): 13th, 14th, 17th September 2017 (Rio Tinto, 2017a): 17th – 19th October 2015, 4th – 24th May 2016, 11th – 15th July 2016, 8th – 9th September 2016 (Rio Tinto, 2017b): 17th – 19th October 2015, 14th – 15th January 2016, 4th – 24th May 2016, 26th – 27th May 2016, 14th – 15th July 2016, 30th April – 1st May 2017, 29th – 31st May 2017, 10th – 12th July 2017 (Biota, 2018): N/A (Biologic, 2023): 24th – 31st October 2022, 6th – 10th February 2023, 8th – 15th March 2023, 28th March – 4th April 2023, 6th – 12th June 2023, 27th June – 4th July 2023, 11th – 20th July 2023</p>
Survey type/s:	<p>(Biota, 2014): reconnaissance flora and vegetation survey, basic fauna survey (Biologic, 2014) : targeted fauna survey (Eco Logical Australia, 2015) : desktop assessment to support a NVCP application (MWH, 2015a): detailed fauna survey (MWH, 2015b): mesa façade ecological value assessment (Bat Call, 2016): cave assessment (MWH, 2016): detailed flora survey (Astron, 2017b): targeted fauna survey (Astron, 2017a): targeted fauna survey (Rio Tinto, 2017a): targeted fauna survey (Rio Tinto, 2017b): targeted fauna survey (Biota, 2018): desktop assessment to support a NVCP application (Biologic, 2023): detailed flora survey (interim report)</p>
Constraints / limitations:	<p>(Biota, 2014): the survey was undertaken during adequate seasonal condition, however the main flowering season had already passed. Two vegetation units were restricted in size and/or difficult to access due to terrain, therefore they were unsuitable for the establishment of the desired minimum of three flora sites; however, the two vegetation units were adequately described based on the information recorded. (Biologic, 2014): the DNA quality of six samples from the survey were considered poor, with one sample failing the analysis and the remaining five being degraded. (Eco Logical Australia, 2015): no limitations reported. (MWH, 2015a): rainfall and low temperatures impacted trap capture rates during the first field survey. Parts of the survey area were recently burnt. (MWH, 2015b): no limitations reported.</p>

	<p>(Bat Call, 2016): safety restrictions in place meant the rear extent of some caves could not be completely searched.</p> <p>(MWH, 2016): part of the survey area were recently burnt, resulting in this area being sampled through relevés and mapping notes rather than quadrats due to the limited extent of native vegetation.</p> <p>(Astron, 2017b): heavy rainfall was experienced on three of the six survey nights, which affected the SM2 unit's ability to record Ghost Bats. While not preferred conditions, the rain did not fall during all post dusk and pre-dawn periods and that allowed an adequate chronology of the emergence of the bat species to be recorded. Abundance data was lost from two locations when a rockfall crushed one of the SM2 units. A portion of the caves could not be assessed due to health and safety limitations.</p> <p>(Astron, 2017a): seasonal conditions were dry with no seeding spinifex and very little seed remaining in the seed-heads of spinifex and other grasses. Although the conditions were not optimal for Night Parrot occurrence, these were not considered a major limitation due to this species is generally accepted as an arid and semi-arid specialist and would be adapted to long periods of drought.</p> <p>(Rio Tinto, 2017a): no limitations reported.</p> <p>(Rio Tinto, 2017b): no limitations reported.</p> <p>(Biota, 2018): no limitations reported.</p> <p>(Biologic, 2023): interim report.</p>
<p>Have any additional field surveys been undertaken within the Permit area since the original application was submitted?</p>	<p>Yes, the following surveys have been undertaken:</p> <ul style="list-style-type: none"> • Biota (2014) Mesa C Native Vegetation Clearing Permit Report • Biologic (2014) Yarraloola - Northern Quoll, Pilbara Olive Python and Pilbara Leaf-nosed Bat Targeted Survey • Eco Logical Australia (2015) Desktop Flora, Vegetation and Fauna Habitat Assessment at Robe Valley • MWH (2015a) Level 2 Terrestrial Fauna Surveys: Mesa B-C, Warramboe BWT and Highway to Tod Bore • MWH (2015b) Mesa Facade Assessment - Mesas B and C, August 2015 • Bat Call (2016) Mesa B and C Ghost Bat Roost Cave Assessment July 2016 • MWH (2016) Level 2 Flora and Vegetation Survey : Mesa B-C, Warramboe BWT, Highway to Tod Bore and Mesa A Extension • Astron (2017b) Mesa H – Ghost Bat, <i>Macroderma gigas</i> – Contextual Study, September 2017 • Astron (2017a) Mesa A Hub – Targeted Night Parrot Fauna Assessment, September 2017 • Rio Tinto (2017a) Rio Tinto Ghost Bat surveys conducted in the vicinity of Mesa B and C, June 2017 • Rio Tinto (2017b) Rio Tinto Pilbara Leaf-nosed bat surveys conducted in the vicinity of Mesa B and C • Biota (2018) Mesa F and G Drilling Native Vegetation Clearing Permit Supporting Report • Biologic (2023) Robe Valley Next Steps Targeted Flora and Vegetation Report: Survey Trip 6
<p>Presence of Threatened flora/fauna?</p>	<p>No Threatened flora species have been recorded within the clearing permit boundary, nor do any occur within a 20 km radius.</p> <p>Three Threatened fauna species have been recorded within the clearing permit boundary:</p> <ul style="list-style-type: none"> • Ghost Bat, <i>Macroderma gigas</i> (VU, VU): this species was known to occur within the clearing permit boundary at the time CPS 4343/1 was granted, although it was listed as a Priority 4 species at the time. This species was listed as Vulnerable under the EPBC Act in 2016.

	<p>Twenty-four caves have been recorded within the clearing permit boundary: three were assessed as Category 2 caves, nine as Category 3, 11 as Category 4, and one was not assessed due to safety concerns. Exclusion zones are applied to the caves according to their assigned category.</p> <ul style="list-style-type: none"> Northern Quoll, <i>Dasyurus hallucatus</i> (EN, EN): this species was known to occur within the vicinity of the clearing permit boundary at the time CPS 4343/1 was granted, however not within the boundary. The clearing permit boundary contains foraging habitat for Northern Quolls and has potential denning habitat. This species has since been recorded within the clearing permit boundary in 2015, 2016, 2018, 2019, 2020 and 2021 as part of detailed fauna surveys and annual monitoring programs. Pilbara Leaf-nosed Bat, <i>Rhinoicteris aurantia</i> (VU, VU): this species was known to occur within the clearing permit boundary at the time CPS 4343/1 was granted. Of the 24 caves recorded within the clearing permit boundary, only one was assigned a Category 3 and supporting Pilbara Leaf-nosed Bats and Ghost Bats. The remaining 23 caves were assessed as not being used by Pilbara Leaf-nosed Bats. Exclusion zones are applied to the caves according to their assigned category. <p>Two additional Threatened fauna species occur within 5 km of the clearing permit boundary:</p> <ul style="list-style-type: none"> Blind Cave Eel, <i>Ophisternon candidum</i> (VU, VU): this species was recorded in 2018 approximately 4.2 km east of the clearing permit boundary. The Blind Cave Eel inhabits subterranean caves, fissures and wells. It is unlikely that this species occurs in the clearing permit boundary due to the lack of suitable habitat (permanent pools, alluvial plains, Robe River). Pilbara Olive Python, <i>Liasis olivaceus barroni</i> (VU, VU): six records of this taxon are located within 5 km of the clearing permit boundary, the closest of which is 527 m south of Mesa G. It is likely that this species occurs in the clearing permit boundary due to the presence of suitable habitat (breakaways).
<p>Presence of Priority flora/fauna?</p>	<p>Two Priority flora taxa have been recorded within the clearing permit boundary:</p> <ul style="list-style-type: none"> <i>Rhynchosia bungarensis</i> (P4) is a compact, prostrate shrub, to 0.5 m high with yellow flowers that grows on pebbly, shingly coarse sand amongst boulders (Western Australian Herbarium, 1998-). The Western Australian Herbarium (WAH) has 95 specimens of this species, which are located across the Carnarvon, Gascoyne, Pilbara and Tanami regions (Western Australian Herbarium, 1998-). The Rio Tinto database has records of 13,673 individuals with a range of approximately 365 km within the Pilbara region. This taxon was recorded during the latest surveys by Biologic (2023) with one record within the clearing permit boundary. This species was not known to occur within the clearing permit boundary prior to this survey. <i>Triodia pisoliticola</i> (P3) is a hummock grass with non-resinous foliage that occurs on ironstone mesas, slopes and gullies, or sometimes on flat loam (Lucidcentral, 2017). The WAH has 64 specimens of this species, which are located across the Chichester and Hamersley subregions (Western Australian Herbarium, 1998-). The Rio Tinto database has records of 326,788 individuals with a range of approximately 148 km within the Pilbara region. A total of 5,555 individuals are recorded within the clearing permit boundary. This taxon was known to occur within the clearing permit boundary at the time CPS 4343/1 was granted.

An additional five Priority flora taxa occur within 5 km of the clearing permit boundary:

- *Dolichocarpa* sp. Hamersley Station (A.A. Mitchell PRP 1479) (P3) is a small herb that flowers between March and May, or July. This taxon grows in flat crabhole plains and cracking clay (Western Australian Herbarium, 1998-). The WAH has 38 specimens of this taxon, which are located across the Chichester, Fortescue, Hamersley and Roebourne subregions of the Pilbara (Western Australian Herbarium, 1998-). The Rio Tinto database has records of 11,784 individuals with a range of approximately 411 km within the Pilbara region. One record of this taxon is located 4.2 km north of Mesa F, in the Robe River. The occurrence of this taxon within the clearing permit boundary is unlikely due to the lack of suitable habitat.
- *Eragrostis crateriformis* (P3) is an annual grass that flowers January to May or July and occurs on clayey loam in creek banks and depressions (Western Australian Herbarium, 1998-). The WAH has 53 specimens of this taxon, which are located across the Carnarvon, Great Sandy Desert, Pilbara and Tanami regions (Western Australian Herbarium, 1998-). The Rio Tinto database has records of 10 individuals with a range of approximately 69 km within the Pilbara region. One record of this taxon is located 1.3 km north of Mesa G. The occurrence of this taxon within the clearing permit boundary is possible in areas where the boundary intersects drainages.
- *Indigofera rivularis* (P3) is a shrub that flowers in May to July and grows in drainages and high-energy creeklines in coarse alluvium and skeletal soils (Western Australian Herbarium, 1998-). The WAH has 62 specimens of this taxon, which are restricted to the Hamersley subregion (Western Australian Herbarium, 1998-). The Rio Tinto database has records of 29,792 individuals with a range of approximately 380 km within the Pilbara region. One record of this taxon is located 3.2 km west of the clearing permit boundary. The occurrence of this taxon within the clearing permit boundary is possible in areas where the boundary intersects drainages.
- *Livistona alfredii* (P4) is a palm to 10 m high that flowers between July to September and grows on the edges of permanent pools (Western Australian Herbarium, 1998-). The WAH has 36 specimens of this taxon, which are located across the Carnarvon and Pilbara regions (Western Australian Herbarium, 1998-). The Rio Tinto database has records of 926 individuals with a range of approximately 111 km in the Pilbara region. One record of this taxon is located 3.6 km east of the clearing permit boundary, in the Robe River. It is unlikely that this species would occur within the clearing permit boundary due to lack of permanent pools.
- *Solanum* sp. Red Hill (S. van Leeuwen et al. PBS 5415) is a shrub that flowers between March and October and grows high in the landscape, on the summit of hills in skeletal red brown gritty soil over banded ironstone formation or shale (Western Australian Herbarium, 1998-). The WAH has 19 specimens of this taxon, which are located across the Hamersley and Chichester subregions (Western Australian Herbarium, 1998-). The Rio Tinto database has records of 18 individuals with a range of approximately 38 km in the Pilbara region. One record of this taxon is located less than 1 km from the clearing permit boundary associated with Mesa F. This taxon is considered likely to occur within the clearing permit boundary due to the presence of suitable habitat, and nearby previous records.

Two Priority fauna taxa have been recorded within the clearing permit boundary:

- Brush-tailed Mulgara, Ampurta, *Dasycercus blythi* (P4): a single record of this taxon as secondary evidence (a mound/burrow) was

	<p>detected in 2018 (Biologic, 2022). This taxon was not previously known to occur within the clearing permit boundary. As this record was reported in 2022, it was not known at the time CPS 4343/3 was granted.</p> <ul style="list-style-type: none"> Western Pebble-mound Mouse, Ngadji, <i>Pseudomys chapmani</i> (P4): three records of this taxon as secondary evidence (a mound) were detected in 2014 and 2015. Two of these mounds were known at the time CPS 4343/2 was granted. <p>An additional two Priority fauna taxa have been recorded within 5 km of the clearing permit boundary:</p> <ul style="list-style-type: none"> Fortescue Grunter, <i>Leiopotherapon aheneus</i> (P4): the Rio Tinto database has 85 records of this species within 5 km of the clearing permit boundary. All records are located within the Robe River. The occurrence of this species within the clearing permit boundary is unlikely due to the lack of permanent water pools and major drainages. Lined Soil-Crevise Skink, <i>Notoscincus butleri</i> (P4): one record of this species is located 3.9 km east of the clearing permit boundary. It is possible that this species would occur within the clearing permit boundary due to the presence of suitable habitat (stony plains).
Presence of Threatened Ecological Communities?	No Threatened Ecological Communities (TECs) occur within the clearing permit boundary. The closest TEC is the <i>Themeda</i> grasslands on cracking clays (Hamersley Station, Pilbara) (Vulnerable), which is located 126 km southeast of the clearing permit boundary.
Presence of Priority Ecological Communities?	<p>Two Priority Ecological Communities occur within the clearing permit boundary:</p> <ul style="list-style-type: none"> Subterranean invertebrate communities of mesas in the Robe Valley region (Priority 1). <i>Triodia pisolitica</i> (previously <i>Triodia</i> sp. Robe River) assemblages of mesas of the West Pilbara (Priority 3). <p>Both were known to occur within the clearing permit boundary at the time CPS 4343/1 was granted.</p>
Have there been any changes to the conservation rank of species or communities identified in previous surveys?	No changes in conservation rank of species or communities have occurred since CPS 4343/3 was granted.
Have any new species, communities or habitats of elevated environmental value been identified within the boundary of the clearing permit?	No new species, communities or habitat of elevated environmental value have been identified within the clearing permit boundary.
Other changes relevant to conservation of significant biological values in the context of the impact assessment (e.g., changes in known species distributions, new threats etc.)?	<p>Yes:</p> <p>(Biota, 2011) recorded <i>Triodia</i> sp. Robe River (M.E. Trudgen et al. MET 12367) which is now known as <i>Triodia pisolitica</i>. The conservation status of this species has not changed and remains listed as Priority 3.</p>

<p>Is a field survey required to validate desktop assessment? Why / why not?</p>	<p>A field survey is not required. The desktop assessment has indicated good overall coverage with few survey limitations.</p>
<p>Is a new survey required? Why / why not?</p>	<p>A new survey is not required. The current survey coverage provides a sufficient level of environmental information for the Application Area.</p>

Based on the above information the risk of significant impacts to ecological values (flora, fauna, and ecological communities) due to extending the 'no clearing' and expiry date, is low.

RTIO proposes an administrative amendment to extend the 'no clearing after' date and the expiry date.

Desktop Assessment Completed by:

Name: Bridget Duncan

Title: Advisor Flora, Pilbara Environment and Cultural Knowledge

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