RioTinto

Compliance Report

Proposal: Yandicoogina Junction South West and Oxbow Iron Ore Project, WA (EPBC 2011/5815)

Report period: 1 January – 31 December 2018

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1 Proposal and proponent details

Proposal Title	Yandicoogina Junction South West and Oxbow Iron Ore Project, WA (EPBC 2011/5815)
Decision Number	EPBC 2011/5815
Proponent Name	Hamersley Iron – Yandi Pty Limited
Reporting Period	1 January to 31 December 2018
Implementation phase(s) during reporting period	Operational

2 Audit table

Details of compliance with each condition under decision notice EPBC 2011/5815 are presented in Table 1 and Key Characteristics in Table 1.

Table 1 Audit table for EPBC 2011/5815 - Yandicoogina

[1] C = Compliant, NR – Not Yet Required, PNC – Potentially Non-Compliant, CLD - Completed

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
1	To protect habitat for the **Northern Quoll** and **Pilbara Olive Python disturbance** of vegetation must: a) not exceed a total of 2,200 hectares and must only occur within the **development footprint**; and not exceed 40 hectares within the floodplain and riparian vegetation zone associated with **Marillana Creek** located within the **development footprint**.	Disturbance mapping carried out by RTIO GIS team.	Annual clearing data for JSW & Oxbow reconciled though survey pick up and/or aerial survey.	Overall	C	Up to 31 December 2018 649.47 hectares (of maximum permitted 2,200 hectares) has been cleared within the development footprint and 8.65[1] hectares (of maximum 40 hectares) cleared within Marillana Creek.
2	The person taking the action must establish and maintain an **EPBC Act listed threatened species** register on a publicly available website. The Register must record any sightings of **EPBC Act listed threatened species**, alive or dead, in the **project area** no less than every three months during **construction**, and no less than every 12 months during **operation**. The web address of the register must be provided to the **department** within 30 days of establishment.	Yandicoogina Operations EPBC Act listed threatened species register. Advise SEWPaC in writing within 30 days of being established.	http://www.riotinto.com/documents/Yandi_EPBC_National_Matters_of_Environmental_Significance_Register_2013_Q3.pdf	Register updates is ongoing. Update every 3 months during construction. Update annually during operation Advise SEWPaC in writing of the RTIO web address within 30 days of the register being established.	C	A threatened species list is maintained on the Rio Tinto Iron Ore website and as the project is in an operational phase, the register is updated annually: http://www.riotinto.com/documents/Threatened%20Species%20Register.pdf

[1] The 2017 report stated 23.02Ha, however this number was incorrect. Higher quality imagery was available in 2018, which enabled refinement of the hectare allocation to the restricted area clearing.

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
3	The person taking the action must develop a staff environmental induction to be undertaken by all staff, including contractors, prior to the **commencement** of their duties and annually thereafter. The induction material must include, but not necessarily be limited to: a) clear colour images and simple descriptions of the ecology and diagnostic features of **EPBC Act listed threatened species** and their habitat; b) protocols for reporting sightings, including vehicle strike (including GPS coordinates), of **EPBC Act listed threatened species** within seven days to the officer in charge of implementing the **EPBC Act listed threatened species** Register described in condition 2); c) reference to the penalties imposed for causing intentional harm to **EPBC Act listed threatened species**; and d) legal and on site environmental responsibilities.	All new starters engaged by operations are required to undergo a Yandicoogina Operations site induction, which includes an EPBC awareness session All personnel engaged by Expansion Projects to undergo the Calibre site induction and annual refresher. MNES educational information is included in regular site-wide communication forums.	Personnel records to be provided upon request RTIO EPBC Act Induction	Prior to project commencement. Ongoing during the life of the operations.	C	Mandatory annual refresher inductions have been completed by personnel at Yandicoogina Operations. Site wide communications are shared each year to maintain staff awareness of the EPBC Act listed threatened species. Reports of sightings were received by the environment team and updated in the EPBC sightings register (Our ref: RTIO-HSE-0163656). Staff have access to the Yandicoogina EPBC species reporting procedure on the Health, Safety, Environment and Quality intranet (Our ref: RTIO-HSE-0169976).
4	The person taking the action must display the information required in condition 3) a) on signs or posters around staff amenities, construction camps and material/equipment depots, and on laminated cards for all staff vehicles. The signs, posters and laminated cards must also state that the **Pilbara Olive Python** is slow moving and highly susceptible to road strike.	Produce and display signs or posters in designated locations.	Signs located in the camp, administration offices, and on laminated cards in RTIO site vehicles.	Overall	C	Yandicoogina MS1038 EPBC Act vehicle information card (Our ref: RTIO-HSE-0163384). Yandicoogina MS1038 EPBC Act poster (Our ref: RTIO-HSE-0163382).

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
5	In the event one or more **Northern Quoll** and/or **Pilbara Olive Python** individuals are detected within the **development footprint**, the person taking the action must limit vehicle speeds outside the **active pit areas**, excluding automated haulage machines, to 40 km per hour on all roads within the **development footprint** between dusk and dawn until no **Northern Quolls** and/or **Pilbara Olive Python** individuals are sighted for a continuous period of four weeks.	Once species has been confirmed, a site wide notification will be distributed, indicating that reduced speed limit is enforced.	Site wide notification indicating reduced speed limit is enforced.	As required and within 48 hours of the species being confirmed.	NR	No Northern Quolls or Pilbara Olive Pythons were detected in the development footprint during the reporting period. Personnel have access to the Yandicoogina EPBC species reporting procedure on the Health, Safety, Environment and Quality intranet (Our ref: RTIO-HSE-0169976).
6	The person taking the action must ensure that all vehicles, machinery, and equipment remain within the **development footprint**, and must prevent off road driving, unless in case of an emergency.	Designated light vehicle and heavy vehicle haul roads. RTIO Vehicles and Driving Work Practice.	RTIO-HSE-0049645 - Iron Ore (WA) Vehicles and Driving Work Practice. RTIO HSE induction.	Overall	C	All vehicles, machinery, and equipment remained in the development footprint as per Iron Ore (WA) Vehicles and Driving Work Practice (Our ref: RTIO-HSE-0049645).
7	The person taking the action must ensure that all vehicles, machinery and equipment are prevented from accessing known locations of the **Hamersley Lepidium**, as seen in Annexure 1 during **construction** and **operation.**	Demarcated and/or barricade known locations of *Hamersley Lepidium.*	MapInfo Avoidance layer in GIS System and in earthmoving equipment Internal ground disturbance and approval request system	Overall	C	Vehicles, machinery and equipment did not access known locations of *Hamersley Lepidium* during the report period. The internal ground disturbance and approvals request system includes an avoidance layer in GIS (MapInfo) which covers locations where *Hamersley lepidium* has been recorded. This system highlights the areas that cannot be disturbed by personnel without prior government approval.

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
8	The person taking the action must implement measures to prevent the spread or establishment of feral animal species populations within the **project area** in a manner that is sympathetic with the conservation of **EPBC Act listed threatened species**. Measures must include, but not necessarily be limited to: a) appropriate waste management associated with staff amenities, **construction** camps and material/equipment depots; b) a control program which is consistent with current national guidelines for pest control; and c) annual monitoring, reporting and evaluation of the measures.	Implementation of feral animal control measures.	Pilbara Operations feral animal trapping register. (Our ref: RTIO-HSE-0230450)	Overall	C	Waste is managed in accordance with DWER Licence: L7340. Trapping of feral cats was conducted in line with the Yandicoogina Feral Animal Management Plan (Our ref: RTIO-HSE-0187214). Cat trapping occurred throughout the year and resulted in 0 cats being euthanized. Personnel reported cat sightings to the environment team.

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
9	The person taking the action must implement measures to prevent the spread or establishment of invasive weeds within the project area in a manner that is sympathetic with the conservation of EPBC Act listed threatened species. Measures must include, but not necessarily be limited to: a) baseline surveys and Geographical Information System mapping of target weed species, as determined by a suitably qualified expert; b) a targeted control program; c) weed hygiene measures for vehicles and mining equipment and machinery; and d) annual monitoring, reporting and evaluation of the measures identified in conditions 9 a) to 9 c).	Implement a weed management strategy.	Yandicoogina PER and PD Documents, including: • Baseline surveys (including weed mapping in the Vegetation mapping reports). • Vegetation transect surveys.	Overall	C	The Yandicoogina Weed Monitoring Plan was established in 2013 (Our ref: RTIO-HSE-0188629). A Yandicoogina weed baseline survey was also completed (Our ref: RTIO-HSE-0186283). Weed layer in GIS (MapInfo) includes location of weeds found during surveys and locations of weeds sprayed. All machinery and equipment complete the relevant weed hygiene as per RTIO Equipment hygiene inspection procedure (Our ref: RTIO-HSE-0036005). Targeted weed mapping was completed in 2018 (Our ref: RTIO-HSE-0331317). Weeds were not found at any of the known Lepidium locations on site.
10	The person taking the action must implement measures to prevent and/or control the spread of fires caused by any component of construction and operation.	Implement the Yandicoogina Local Emergency Management Plan (LEMP)	Yandicoogina Environment (Fire) Management Plan.	Overall	C	Response procedures to fire scenarios are detailed in the Yandicoogina Emergency Response Plan (Our ref: RTIO-HSE-0186219). Rio Tinto Iron Ore: Hot Work Standard (Our ref: RTIO-HSE-0049936).
11	In the event the person taking the action becomes aware of new information regarding the presence of any EPBC Act listed threatened species within the development footprint, that information must be reported to the Minister within seven business days of becoming aware of the new information.	If applicable, report new information to the Minister	Correspondence to the Minister advising of new, relevant information. EPBC threatened species register	As required, within seven days of being made aware of the new information.	NR	No EPBC Act listed threatened species were sighted within the development footprint during the reporting period.

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
12	The person taking the action must implement measures to minimise potential impacts from dewatering and discharge of surplus water on habitat for the Northern Quoll and Pilbara Olive Python along Marillana Creek and Weeli Wolli Creek, both in the dewatering and surplus water discharge impact areas. Measures must include, but not necessarily be limited to: a) baseline data surveys to be undertaken prior to dewatering and the discharge of surplus water, for Northern Quoll and Pilbara Olive Python habitat, including vegetation abundance, health, foliage cover and diversity; b) appropriate monitoring (including annual surveys) to detect changes, occurring as a result of the action, to Northern Quoll and Pilbara Olive Python habitat, including vegetation abundance, health, foliage cover and diversity; c) thresholds appropriate for the changes determined for condition 12) b) that establish when the action is resulting in degradation of habitat taking into consideration climatic variability, seasonal variation and discharge volumes from other relevant mines; d) contingency measures to be implemented, should the thresholds identified in condition 12) c) be exceeded as a result of the action, for addressing current and future exceedances and remediation of habitat degraded by dewatering and discharge activities; and	Undertake baseline vegetation health monitoring data. Undertake annual monitoring of vegetation health in the JSW/Oxbow project area. Undertake monitoring of creek profile surveys and erosion assessments at discharge outlets	Baseline vegetation health monitoring data as outlined in the Surface Water Discharge Monitoring and Management plan and the Vegetation and Groundwater Dependent Ecosystem Monitoring and Management Plan including: • Annual DMSI, • Quarterly DCP, • Biannual Mattiske Vegetation Transects across Marillana and Weeli Wolli creeks. • Biannual creek profile surveys.	Overall	C	The condition of flora and vegetation along Marillana and Weeli Wolli creek lines was monitored in May and September 2018 (Our ref: RTIO-HSE-0330987). No adverse impacts to the Northern quoll and Pilbara olive python habitats were observed. Digital canopy photography was used to monitor foliage cover of mature eucalypts along Weeli Wolli and Marillana Creeks on a quarterly basis (Our ref: RTIO-HSE-0188667). Broad scale Digital Multi Spectral Imaging of creekline areas is undertaken on an annual basis. Results are stored in the company's GIS database. Erosion assessments at the discharge outlets were completed during the reporting period. Creek profile surveys were not completed in the reporting period as the requirement is currently being removed from the Yandicoogina Environmental Management Plan. Monitoring programmes and results are managed in accordance with the *Water and Discharge Monitoring and Management Plan* and

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
	e) protocols for reporting to the Minister within seven days if the thresholds developed for condition 12) c) are exceeded, within 30 days for contingency measures implemented and within 6 months on the success the contingency measures.					*Vegetation and Groundwater Dependent Ecosystems Monitoring and Management Plan* (RTIO-HSE-165556).
13	The person taking the action must rehabilitate all potentially suitable habitat for EPBC Act listed threatened species that is disturbed during construction and operation. The rehabilitation must be developed in consultation with a suitably qualified expert and must include, but not necessarily be limited to: a) baseline data of the characteristics of the pre-mining ecosystems within the development footprint; b) use of plant species of local provenance that are compatible with land system units that provide suitable habitat for EPBC Act listed threatened species; c) rehabilitation must be monitored, and evaluated annually for three years or until establishment	Review the rehabilitation and closure plans to incorporate the Junction South West and Oxbow proposal. Where possible, identify areas that are suitable for progressive rehabilitation.	Rehabilitation projects active in the reporting period. Monitoring of rehabilitated areas conducted in the reporting period.	Overall	C	The Yandicoogina Decommissioning and Rehabilitation Plan was reviewed in March 2017 as per the requirements of Ministerial Statement 1038. (Our ref: RTIO-HSE-0208486). No suitable areas were identified in the reporting period for progressive rehabilitation within the project area. In August 2015 a wetland rehabilitation trial commenced and concluded in 2017. This trial proposed to test the growth of vegetation species in different materials (direct mineral waste, topsoil and subsoil) at different elevations above a simulated water table. Outcomes will be used to inform the seed mix selection for rehabilitation of areas near the water table.
14	To compensate for the residual impacts of the action and for the better protection and long-term conservation of the Northern Quoll and Pilbara Olive Python, a Threatened Species Offset Plan (TSOP) must be submitted to the Minister for	Make a contribution of no less than $3,000,000 (GST exclusive) to fund, extend or expand a land management program within the Pilbara bioregion.	Receipt of payment from the WA OEPA. Threatened Species Offset Plan (TSOP).	Within 18 months of the TSOP being approved. Prior to 31 December 2013.	C	Delay to strategic offset fund and subsequent delay to offset funding requirement (OEPA ref: CA03-2013-0027, Our ref: RTIO-HSE-0208390).

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
	approval. The TSOP must include, but not necessarily be limited to: a) a contribution of no less than $3,000,000 (GST exclusive) to fund, extend or expand a land management program within the Pilbara bioregion for a period of no less than five years; i) details of measures to control and/or manage, for the benefit of the Northern Quoll and Pilbara Olive Python: ii) introduced predators; iii) feral herbivores; iv) wild fires; and v) invasive weeds. b) for each threat identified in condition 14) b), the TSOP must define: i) how the control/management measures are expected to benefit the Northern Quoll and Pilbara Olive Python: ii) details of the location and area of land to be managed which must be mapped and provided to the department in a shapefile(s); iii) details of methodology, timing, frequency and intensity (effort) of management measures;	Prepare a Threatened Species Offset Plan (TSOP).	Correspondence from Minister approving the TSOP.	Post 31 December 2013.		A biodiversity offset fund has been established with $3 million deposited into the trust account on 18 February 2014. Extension of TSOP submission granted for 31 December 2014 (DoE ref: 2013-9250, Our ref: RTIO-HSE-0206795). Signed variation notice – Condition 14: TSOP extension (Our ref: RTIO-HSE-0206794). TSOP submitted on 23 December 2014 (Our ref: RTIO-HSE-0245553). TSOP approved by the Minister on 5 March 2015 (DoE ref: 2011/5815, Our ref: RTIO-HSE-0275796). Variations to the TSOP were approved 30 May 2017 to remove the requirements for Pilbara Olive Python abundance monitoring, fire management and weed monitoring to focus efforts on the introduced predator control program for the Northern Quolls (our ref: RTIO-CR-0260147).

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
	iv) responsibility of management measures; and c) details of how the management actions identified for condition 14 b) will be undertaken in a manner that is sympathetic with the conservation of other relevant threatened species listed under the EPBC Act known to occur in the area identified under 14 c) ii). d) details of a monitoring program, including but not necessarily limited to: i) methodology, timing, frequency, scope and survey effort for/of monitoring; ii) baseline surveys of the area to be managed; iii) monitoring during and post land management actions to determine the effectiveness of land management actions; iv) performance indicators, which will determine the effectiveness of the land management program; and v) measures to make the results of the monitoring made publically available. The TSOP must be submitted to the Minister for approval by 31 December 2013. Should the TSOP be approved then the approved TSOP must be implemented.					

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
15	Documentary evidence must be submitted to the department showing that payments of the total amount required in condition 14) a) have been made to the person(s) responsible for implementation of the land management program within 18 months of the date of approval of the TSOP.	Provide the receipt of contribution payment to SEWPaC.	Receipt of contribution payment.	Within 18 months of the TSOP being approved.	C	A biodiversity offset fund has been established with $3 million deposited into the trust account on 18 February 2014 (Document number 110319419). TSOP approved by the Minister on 5 March 2015 (DoE ref: 2011/5815, Our ref: RTIO-HSE-0275796).
16	Annually on 30 April, after commencement of the action, a report must be submitted to the Minister detailing how condition 14) is, or has been, met including: a) whether the timeframes for undertaking the management actions identified in condition 14) c) and d) have been met; and b) whether the performance indicators required for condition 14) c) have been met.	Prepare and submit annual compliance report to the Minister.	Annual compliance report.	On or before 30 April annually, reporting on the previous year (January to December)	C	The program successfully completed year 4 of monitoring and management actions to stay on target to satisfy performance indicators. This report and associated appendices detail the actions against each of the threats listed in Condition 14.
17	Within 10 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.	Advise SEWPaC of the action commencement date.	Record of correspondence to SEWPaC advising on commencement date.	Within 10 days of commencement of action.	CLD	Notice of project commencement to SEWPaC - EPBC Condition 17 on 3 December 2012 (Our ref: RTIO-HSE-0165415).

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
18	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the plans required by this approval, and make them available upon request to the department. Such records may be subject to audit by the department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the department's website. The results of audits may also be publicised through the general media.	Maintain records in the Rio Tinto Document Management System	Rio Tinto Document Management System	Overall.	C	Environmental Approvals register (Our ref: RTIO-HSE-0070635). Rio Tinto Document Management System. No requests for information were received and no audits were conducted by the DoE during the report period.
19	Annually on 30 April, after commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the department at the same time as the compliance report is published.	Prepare an annual compliance report. Annual compliance report to be published on the Rio Tinto Iron Ore website (www.riotintoironore.com)	Annual compliance report Rio Tinto Iron Ore website (www.riotintoironore.com)	On or before 30 April annually, reporting on the previous year (1 January to 30 December)	C	2014: http://www.riotinto.com/documents/Yandicoogina%20Operations%20%E2%80%93%20EPBC%20Annual%20Compliance%20Assessment%20Report%202014.pdf 2015: http://www.riotinto.com/documents/_Iron%20Ore/Yandicoogina%202015%20Compliance%20Report%20EPBC%202011_5815.pdf 2016: http://www.riotinto.com/documents/EPBC%20Compliance%20Assessment%20Report.pdf 2017: http://www.riotinto.com/documents/RT_Yandicoogina_EPBC_Compliance_Report_2017.pdf

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
20	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Engage independent person to conduct compliance audit.	Independent compliance report	Upon request by the Minister.	NR	No requests received from the Minister during the report period.
21	If the person taking the action wishes to carry out any activity otherwise than in accordance with the plan(s) as specified in the conditions, the person taking the action must submit to the department for the Minister's written approval a revised version of that plan(s). The varied activity shall not commence until the Minister has approved the varied plan(s) in writing. The Minister will not approve a varied plan(s) unless the revised plan(s) would result in an equivalent or improved environmental outcome over time. If the Minister approves the revised plan(s), that plan(s) must be implemented in place of the plan(s) originally approved.	As required, submit revised version of project to the Minister for approval.	Written correspondence submitting the revised project version.	As required.	NR	No variation requested during the report period.
22	If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and communities to do so, the Minister may request that the person taking the action make specified revisions to the plan(s) specified in the conditions and submit the revised plan(s) for the Minister's written approval. The person taking the action must comply with any such request. The revised approved plan(s) must be implemented. Unless the Minister has approved the revised plan(s), then the person taking the action must continue to implement the plan(s) originally approved, as specified in the conditions.	Revise specific plan(s) as requested by the Minister. Provide revised plan(s) to the Minister for approval, as required.	Revised plan(s) Correspondence from the Minister approving revised plan(s)	As required.	NR	No requests were received from the Minister during the report period.

Condition	Requirement	How	Evidence	Timeframe	Status[1]	Information
23	If, at any time after five (5) years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.	Advise SEWPaC of the action commencement date.	Written correspondence advising SEWPaC of commencement date.	Within 10 days of commencement of action.	NR	Project substantially commenced in 2013. Notice of project commencement to SEWPaC - EPBC Condition 17 (Our ref: RTIO-HSE-0165415).
24	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all plan(s) referred to in these conditions of approval on their website. Each plan must be published on the website within 1 month of being approved.	Relevant management plans to be published on the Rio Tinto Iron Ore website	Rio Tinto Iron Ore website (www.riotintoironore.com)	Within 1 month of the plan approval date	C	TSOP report has been published on the Rio Tinto website (http://www.riotinto.com/documents/Threatened%20species%20offset%20plan.pdf).

Table 2 Definitions

Active pit areas	means the area identified as 'JSW & Oxbow Conceptual Mine Pits' in **Annexure 3.**
Commencement of the action (except in the sense of substantial commencement)	means the **commencement** of **construction**.
Construction	means the undertaking of any activity including preparatory works, clearance of vegetation, the erection of any onsite temporary structures and the use of heavy duty equipment for the purpose of breaking the ground for buildings or infrastructure within the **development footprint** excluding **minor and preliminary works and investigation work** and works associated with the **existing mining operation**.
Department	means the Australian Government Department administering the *Environment Protection and Biodiversity Conservation Act 1999*.
Development footprint	means the area identified as "JSW & Oxbow proposed mining and infrastructure" in Annexure 1 excluding the areas associated with the **existing mining operation**.
De-watering	means the removal of water by pumping, drainage, or evaporation.
Diagnostic features	mean physical features or distinguishing characteristics which may aid in species identification.
Disturb or **disturbance**	of vegetation means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation, this also includes any activities associated with earth moving.
EPBC Act Listed threatened species	means the **Northern Quoll**, the **Pilbara Olive Python** and the **Hamersley Lepidium**.
Existing mining operation	means the area identified as "disturbed or cleared – associated with MS417, 523 & 695" in Annexure 1.
Hamersley Lepidium	means *Lepidium catapycnon*.
Marillana Creek	means the creek line identified as "Marillana Creek" in **Annexure 2**.
Minister	means the Minister administering the *Environment Protection and Biodiversity Conservation Act 1999* and includes a delegate of the Minister.
Minor and preliminary works and investigation work	means minor and preliminary works and investigation works as defined in the Western Australian Environmental Protection Authority Environmental Protection Bulletin No. 16.
Northern Quoll	means *Dasyurus hallucatus*
Operation	includes any activities associated with the extraction and transportation of iron ore.
Pilbara Olive Python	means *Liasis olivaceus barroni*
Project area	means the area identified as "Overall project area" in Annexure 1.
Shapefiles	means an ESRI ArcGIS Shapefile, containing '.shp', '.shx.' and '.dbf' files and other files. Shapefiles must include appropriate metadata capturing attributes including but not limited to the EPBC reference number of the approved action and details of the EPBC protected matters present within the offset, covenant or legal protection details, including type and identification. The **department** prefers **shapefiles** using the Geocentric Datum of Australia (GDA) 94.
Substantially commence	means the erection of any permanent infrastructure, excluding signage and fences, associated with the action.
Suitably qualified expert	means a suitably qualified botanist, ecologist, or environmental scientist with demonstrated expertise in the survey, management and, if need be, translocation in the relevant **listed threatened species**.
Weeli Wolli Creek	means the creek line identified as "Weeli Wolli Creek" in **Annexure 2**.

3 Appendix 1: Threatened Species Offsets Plan

Yandicoogina JSW and Oxbow Iron Ore Project

TSOP 2018 Compliance Report

EPBC 2011/5815 Condition 14: Threatened Species Offset Plan

MS 1038 Condition 7: Offsets

April 2019

Hamersley Iron-Yandi Pty Limited
152-158 St Georges terrace, Perth
GPO Box A42, Perth WA 6837

RTIO-HSE-0330919

Disclaimer and Limitation

This report has been prepared by Rio Tinto Iron Ore (**Rio Tinto**), on behalf of Hamersley Iron-Yandi Pty Limited (the **Proponent**), specifically for the Yandicoogina JSW and Oxbow Project. Neither the report nor its contents may be referred to without the express approval of Rio Tinto, unless the report has been released for referral and assessment of proposals.

Document Status					
Rev	**Author**	**Reviewer/s**	**Date**	**Approved for Issue**	
				To Whom	**Date**
1	S. Gerritzen	S. Rusbridge	1 April 2019	OEPA/DoE	April 2019

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CONTEXT

The Yandicoogina Junction South West and Oxbow Project is subject to both Western Australian State and Commonwealth environmental approval via Ministerial Statement 1038 and EPBC Decision Notice 2011/5815, both of which include offset conditions:

- Condition 7-1 of MS 1038 requires the contribution of $3M AUD towards an offset for clearing completed under MS 914.

- Condition 7-3 of MS 1038 requires the contribution of funds for the clearing of 'Good to Excellent' condition vegetation towards an offset, to be distributed via conditions 7-5, 7-6 and 7-7.

- Condition 14 of EPBC 2011/5815 requires the submission of a Threatened Species Offset Plan (**TSOP**) which includes a contribution of no less than $3M over five years (Condition 14a).

Both agencies have agreed that the State offset requirement could be used to fund the development of the Commonwealth required TSOP.

Specifically, the TSOP is required to offset significant residual impacts to biodiversity and to two Matters of National Environmental Significance: the northern quoll and the Pilbara olive python; by managing threatening processes (identified in Condition 14b EPBC 2011/5815) as:

1. introduced predators;

2. introduced herbivores;

3. wildfire; and

4. weeds.

The TSOP (Rio Tinto 2015; RTIO-HSE-0274440) was approved by the Office of the Environmental Protection Authority on 19 January 2015 (RTIO-HSE-0248720) and by the Department of the Environment (DoE) on 5 March 2015 (RTIO-HSE-0275796).

Management actions have been prioritised following consultation with the Department of Biodiversity, Conservation and Attractions (DBCA) and a Biodiversity Offsets Advisory Panel comprising independent experts. On their advice, the TSOP prioritises resources and expenditure towards the delivery of a landscape-scale Introduced Predator Control Program (Action #1) and associated monitoring. As a result, a relatively small proportion of the overall funds and resources are directed towards managing the remaining three actions on introduced herbivores, wildfire and invasive weeds. In 2017 it was agreed with the DoE that as a part of adaptive management, the best environment outcomes would be to concentrate funding on the Predator Control Program (*Eradicat)* and remove the requirement to complete further weed monitoring and a fire management plan as it is unlikely to result in improved environmental outcomes for the Northern Quoll and Pilbara olive python.

The Introduced Predator Control Program was designed collaboratively by the DBCA, Rio Tinto (on behalf of the Proponent, Hamersley Iron-Yandi Pty Limited) and the Biodiversity Offsets Advisory Panel and commenced in 2015 as the Northern Quoll *Eradicat*® Cat Bait Uptake and Survivorship Study. The aim of the Survivorship Study was to determine the impact of feral cat baiting on northern quolls and thus inform the scope of the operational predator control program for subsequent years. The survivorship was approved by the Parks and Wildlife Animal Ethics Committee (Approval # 2014/11).

ANNUAL REPORTING

The table below highlights the progress of all projects in the TSOP in 2018.

Management program	Action	Details of work progressed	Status / Comments
Introduced Predator Control Program	2	Eradicat® baiting program	Completed. **Appendix 1**
		Feral cat monitoring program	Completed. **Appendix 1**
		Northern quoll monitoring program	Completed. **Appendix 1**
Introduced Herbivore Management	3	Mustering of cattle across the Yarraloola land management area (Yarraloola LMA), inclusive of the section of unallocated Crown land to the east of Yarraloola Station.	Completed.
		Vegetation cover change assessment on Yarraloola and Red Hill.	Completed. **Appendix 4: RTIO-HSE-0331892 2018 Vegetation cover change assessment on Yarraloola and Red Hill**
Fire Management	5	Annual desktop fire regime monitoring: Yarraloola and Red Hill.	Completed **Appendix 2: RTIO-HSE-0331889 2018 Annual desktop fire regime monitoring Yarraloola** **Appendix 3: RTIO-HSE-0331890 2018 Annual desktop fire regime monitoring Red Hill**
Weed Management	6	Vegetation cover change assessment on Yarraloola and Red Hill.	Completed **Appendix 4: RTIO-HSE-0331892 2018 Vegetation cover change assessment on Yarraloola and Red Hill**
Offset Funds		Condition 14a and 15 of EPBC 2011/5815 and Condition 7 of MS1038	Completed.

1 INTRODUCED PREDATOR CONTROL

GOAL: *To enhance northern quoll and Pilbara olive python populations (and populations of other native fauna) and their habitat through a reduction in introduced predators (principally feral cats but also foxes and wild dogs) within the LMA*.

1.1 ACTION 1: NORTHERN QUOLL SURVIVORSHIP STUDY

1.1.1 Management Objective

To assess the field uptake of feral cat baits Eradicat® by northern quoll and its impact on their survivorship and reproduction, and to subsequently develop an effective introduced predator control strategy that will benefit the northern quoll and other threatened fauna in the LMA.

The 2015 northern quoll bait uptake and survivorship study found that there was no observable impact from the *Eradicat*© baiting trial on local northern quoll populations and concluded that baiting with *Eradicat*® in winter is unlikely to have a detrimental impact on northern quolls in the Yarraloola LMA. As such, the Introduced Predator Control Program (proposed as Action 2[1] in the TSOP) was implemented starting in 2016 across the LMA. This action is considered closed.

[1] RTIO-HSE-0279071 Introduced Predator Control Program 2015-2019, Parks and Wildlife (Morris and Thomas 2014)

1.2 ACTION 2: INTRODUCED PREDATOR CONTROL PROGRAM

1.2.1 Management Objective

To improve northern quoll and Pilbara olive python habitat within the LMA through reduction in the abundance of introduced predators.

1.2.2 Proposed Method

A detailed description of the predator control program is outlined in the TSOP, with the following high level commitments:

- The program will be undertaken by DBCA within the LMA, covering an area of approximately 100,000 ha.
- Baiting will be conducted in the cool and dry mid-winter, at a time when bait uptake by feral cats is maximised due to the low activity and abundance of prey.
- Based on a heat map analysis of camera trap detections of cats from 2016-2017, a large area of the Hamersley Ranges was excluded from the bait cell, and added three smaller parcels of cat preferred Sherlock and Urandy plains habitat, to maximise the uptake of baits.

1.2.3 2018 Eradicat® Baiting Program Output

The introduced predator control program in 2018 baited 141,594 ha of the Yarraloola land management area. The outputs of the program are detailed in Appendix 1 and summarised below:

- 71,000 Eradicat® baits were dropped over the 141,594 ha bait area between 9-10 July 2018 (cool, dry period) as depicted in Appendix 1. Key exclusion areas were the mine sites at Mesa A and Mesa J, public roads and waterholes along the Robe River. The 500m wide aerial exclusion zone along Pannawonica road was hand baited.
- Baits used at Yarraloola were impregnated with non-toxic biomarker rhodamine B, which has been shown to be an effective indicator of bait consumption in quoll species.
- No carcasses of feral cats or non-target species were observed following the baiting on the field trips undertaken post-baiting.

1.2.4 2018 Analysis and Outcomes

The Eradicat® Baiting Program provides for the following outcomes:

- The 2016 study shows that quolls were not impacted by the implementation of toxic *Eradicat*® baits in the Yarraloola LMA. Quolls avoid the lethal dosage by quickly regurgitating the bait after ingestion.
- The abundance of quolls pre and post baiting (mean number of quoll detection events per 100 cat trap nights) showed no evidence of declining following baiting programs in the three years within Yarraloola. A decline in quoll detection rates did occur in the unbaited Red Hill site in both years where there were more cats present.
- Sub-lethal exposure to 1080 can pass through milk, which could lead to death of young marsupials, which could lead to smaller litter sizes in the females exposed to the bait for the last two years. However, it was found that quolls on Yarraloola had significantly larger litters. This supports the outcomes from 2016 report that indicates the quolls are “bait-shy” after exposure to a bait, and will not ingest further baits. Cameras showed that most quolls, even if they encountered a dried out bait still present from the winter program, would not ingest it.

- Baiting efficacy rate based on the mortality of radio-collared cats attributed to bait consumption was approximately 25%, with two of the eight collared cats dying. There was a slight discrepancy between cat trap methods and radio-telemetry of baiting efficacy, however camera trap monitoring is considered to better reflect the level of knockdown achieved (57% reduction in cat numbers compared to 25%).

- Bait mortality amongst first and second year cats is expected to be higher than the older, more experienced cats.

1.3 FERAL CAT MONITORING

1.3.1 Proposed Method

To determine the impact of the baiting program under the TSOP, Morris and Thomas (2014) recommended the use of the feral cat monitoring methods DBCA have developed and used to measure site occupancy pre- and post-baiting. The cat cameras were set in mid-June, allowing for 20 to 23 nights of monitoring before the baiting commenced on the 9 July. Three weeks following baiting, cat cameras were redeployed (2-9 August) and then collected in August – September. A high level description of the methods includes:

- Camera trap monitoring arrays were established using Hyperfire™ PC900; Reconyx cameras (Wisconsin, USA). 60 cameras were set horizontally, attached to a peg approximately 30cm off the ground and oriented to face south.

- A lure pole with visual and olfactory lures for feral cats was set 3m in front of the camera. The lure pole contained 15 mL of 'Catastrophic' scent oil, and had three turkey feathers and silver tinsel attached at the mid-point of a 1.5 m bamboo pole.

- Cameras were set up based on the existing road network, with sites set up within 50-400 m off the roads, and at least 3 km apart from other camera locations.

- For the baited site at Yarraloola, cameras were located at least 2 km inside the bait cell boundary and there was a buffer of ~14km between the bait cell and the nearest cat camera on Red Hill.

Feral cat trapping was also conducted following standard techniques between 24 April to 4 May on Yarraloola and 8 – 17 May on Red Hill. A high level description of the method includes:

- Victor 'Soft Catch' padded leg-hold traps with cat faeces as the attractant.

- All traps were set more than 500m from preferred quoll habitat, in shaded locations along the edge of tracks, 0.5 – 1km apart.

- Open ended traps were used consisting of two traps positioned lengthwise. 76 trap locations were set on Yarraloola and 78 trapping locations on Red Hill

- Each cat caught over 1700g was fitted with a GPS/VHF radio-telemetry collar with mortality signal. The collars were programmed to go into mortality mode following 12 hours of inactivity.

1.3.2 2018 Feral Cat Monitoring Output

The outputs from the feral cat monitoring is detailed in Appendix 1, with a high level summary below:

- Total cat detections were higher in 2018 compared with previous years, with cats being recorded on multiple nights at individual camera sites during both monitoring sessions for Yarraloola and Red Hill.

- Baiting had a significant impact reducing cat abundance by 57% to 0.7 cats per 100 CTN, which is not as low as previously measured following baiting in 2016 and 2017. On Red Hill there was a slight increase in cat detections after the scheduled baiting program on Yarraloola.

- A large proportion of cats radio-collared were adults, which may have been resident animals within Yarraloola and had previous exposure to cat baiting programs and therefore possibly learnt to avoid baits. Alternatively, the older cats may be proficient hunters of preferred live prey and therefore not interested in eating baits when they were exposed to them in July or August when live-prey is particularly abundant.

1.3.3 2018 Analysis and Outcomes

- There has been a "re-invasion" of cats within Yarraloola following the post baiting low (0.4 cats 100CTN) in August 2017 to a new peak of 1.7 cats 100 CTN in June 2018. Five cat scats found close to Quoll Trap sites contained quoll remains raising concerns over cat reinvasion and the localised impacts of cats in gorge systems.

- Reinvasion has been linked to natural recruitment and immigration of younger animals from outside the baited area. During the 2018 trapping, nine of the twenty-two cats were either juveniles or sub-adults, suggesting strong recruitment from the recent spring/early summer breeding season.

- The level to which the cat population was reduced by baiting in 2018 was not as low as the two previous winter baiting programs, however is comparatively low to cat populations elsewhere.

- Systematic surveys (May and September) along fixed tracks on Yarraloola and Red Hill will be introduced into the study in 2019 for cat scat monitoring to allow for better understanding of the prey buffering/deflecting role common rock rats may play.

1.4 NORTHERN QUOLL MONITORING PROGRAM

1.4.1 Proposed Monitoring Program

The following changes were made to the 2016 monitoring program (and continued to be implemented in 2018) from the proposed monitoring in the TSOP:

- Because quolls were found to occur in low densities in areas of core habitat across the study area, modifications to the recommended standardised quoll monitoring procedures for the Pilbara were deemed necessary. Instead of using 50 cage traps at 50m spacing, 20 traps at 25m spacing for four nights was implemented. This reduced trapping effort was shown to be as effective at trapping all the quolls in the immediate area, but with less effort.

- All trapped quolls were scanned for presence of passive integrated transponder (PIT) implants. Each new quoll was implanted with a unique PIT to enable identification. Upon first capture in 2017, individual quolls were given unique ear tags (females tagged in the right ear, males in the left) to enable better identification on camera traps.

- Northern quoll scats were collected from cage traps and the camera trap locations, while dingo and cat scats were collected during targeted searches of road sides. Scats provide information on the interactions between predators and build a clearer picture of ecosystem dynamics.

- Data is collected at two different times; once in September to coincide with the birth of quoll pouch young, and once in July-August to capture data of male populations before the die-off after mating season.

1.4.2 2018 Northern Quoll Monitoring Output

Outputs of the monitoring are available in Appendix 1, with the high level outputs described below:

- 2018 had 1440 trap nights across the 18 transects at Yarraloola and Red Hill. There was a further increase in the total number of individual quolls captured on Yarraloola, predominantly for male numbers (33 males in 2017 compared to 47 males in 2018). The number of quolls captured on Red Hill remained largely unchanged.

- The detection rates of quolls were higher than cats on the Yarraloola cameras. Quolls were found on 63 nights at 18 cameras before baiting and 50 nights at 15 cameras after baiting. On Red Hill, it was 31 nights at 11 cameras before and 16 nights at 12 cameras after baiting.

- The survival rate for tagged females from September 2017 to 2018 was 30% for both sites (12 out of 40 for Yarraloola and 9 of 30 from Red Hill). None of the 54 marked males across both sites from previous years were recaptured in 2018.

- The mean body mass of both males and females was slightly less on Yarraloola than on Red Hill in 2018

- Pouch young were only present in eight of the 40 individual female quolls (20%) from Yarraloola. Female quolls on Red Hill bore the signs of recent mating activity but none of the 33 individuals had given birth yet.

- Scat analysis has indicated that Quolls within Yarraloola are eating less protein poor food (fruits) in exchange for a higher diet in rodents. In comparison, diets of Quolls within Red Hill have remained consistent in composition.

1.4.3 2018 Analysis and Outcomes

- Capture rates of females remained higher within the cat baited treatment (Yarraloola) compared with the reference site. The lack of any substantial change in female abundance across sites from 2017 to 2018 contrasts the strong population increase from 2016 to 2017. These two periods experienced contrasting patterns of summer precipitation (above average in 2017, below average in 2018). Female quolls within Yarraloola appeared to benefit strongly from the combined influence of high summer rainfall and cat control in 2017 with strong recruitment and high survivorship of adult females (50%).

- Higher capture rates of males has occurred since 2016, however in 2018 male capture rates continued to climb (from 33 to 47 at Yarraloola) even though seasonal conditions were not as favourable as 2017. Numbers of males captured on Red Hill remained stable (20 in 2017, 20 in 2018). These results indicate that cat baiting may have improved the survival of males as they undertake risky behaviours during the mating season which increases their exposure to cat predation.

- Various quoll monitoring metrics (capture rates, survivorship, and detection on CTN) were all higher within the cat baited area this year, suggesting the quolls are responding favourably to the lower densities of cats within Yarraloola. Additional monitoring is required to determine the nature of this trend.

- There were no indications that northern quoll populations were adversely impacted by the baiting program in 2018.

- Spatial response to cat baiting (quolls moving from rocky habitats to more open land spaces due to a reduction in cat predation) is to be explored more in 2019, however visits by quolls to cat camera traps located in open habitats on Yarraloola has continued to increase.

Based on these outputs and outcomes the Proponent considers that the objective of Action 2 has been met.

2 INTRODUCED HERBIVORE MANAGEMENT

Goal: *To enhance northern quoll and Pilbara olive python habitat through a reduction in feral cattle within the LMA.*

2.1 ACTION 3: MUSTER TO REMOVE FERAL CATTLE ACROSS THE LMA

2.1.1 Management Objective

Reduce the number of feral cattle and their impacts within the LMA through periodic mustering.

2.1.2 Proposed Method

The following measures were proposed in the TSOP:

- Aerial mustering will be supported by a ground-based team using vehicles (buggy and motorcycle). Cattle will be mustered to existing paddocks and yards within Yarraloola Station or Red Hill Station.
- Areas of good or moderate pastoral potential will be targeted as well as areas proximal to surface water and/ or offering protection and shade.
- Yarraloola Station mustering activities will be expended to incorporate UCL in the southeast as well as parts of Yarraloola Station that are otherwise considered un-economical to muster.
- Musters will be planned in consultation with station management, mustering contractors and in collaboration with neighbouring stations as appropriate.

2.1.3 2018 Program Output

The outputs from the 2018 muster are detailed below:

- Mustering in 2018, focusing within the Yarraloola LMA. A total of 815 cattle were mustered, of these, 615 were released back onto the land, with the other 200 removed to market.

2.1.4 2018 Analysis and Outcomes

There was an increase in cattle mustered in 2018 compared to 2017, however total cattle removed decreased. Based on the 2018 outputs, the 2019 muster will be of similar extents, continuing to focus predominantly on riparian vegetation areas and including the extra UCL.

The Proponent completed the Land Condition Monitoring survey in 2018 to identify changes to vegetation cover from baseline levels across Yarraloola and Red Hill stations using Landsat satellite data. This identified that large percentage of the land has remained stable over this time, particularly within the northern quoll and Pilbara olive python habitats. This information is presented as Figure 7 in Appendix 4 and below in Table 1.

Table 1: Percentage area of vegetation cover change from baseline values from northern quoll and pilbara olive python habitat on Yarraloola and Red Hill

	Red Hill – NQ and POP habitat		Yarraloola – NQ and POP habitat	
Class	sq km	Area %	sq km	Area %
Large increase	1.58	0.23	0.34	0.05
Moderate increase	27.44	4.07	10.85	1.69
Stable	609.61	90.30	595.97	92.99
Moderate decrease	33.66	4.99	30.54	4.77
Large decrease	2.82	0.42	3.20	0.50
Water	0.00	0.00	0.01	0.00

2.2 ACTION 4: CULL OF FERAL INTRODUCED HERBIVORES

No cull was required or initiated within the LMA during 2018 as the muster undertaken was successful in removing 200 cattle from Yarraloola Station to market.

Based on these outputs and outcomes the Proponent considers that the objective of Action 4 has been met.

3 WILDFIRE MANAGEMENT

Goal: *To monitor and, where necessary, manage fire in the LMA in a manner that maintains or enhances its current relatively benign impacts on northern quolls, Pilbara olive pythons and their habitats.*

3.1 ACTION 5: FIRE REGIME MONITORING

3.1.1 Management Objective

To monitor the frequency and extent of fire within the LMA and, if necessary, to undertake measures which reduce the risk of fire disproportionally affecting northern quoll and Pilbara olive python habitat within the LMA.

3.1.2 Proposed Method

The following measures were proposed in the TSOP:

- Fire monitoring across the LMA will utilise a combination of desktop-based GIS analysis of remotely sensed data and field monitoring methods.
- Monitoring of fire-related parameters planned as part of the TSOP will build a high resolution picture of key fire history parameters across the LMA and will seek to elucidate the relative contribution of natural, accidental and prescribed ignition to the fire regime within the LMA (of critical importance in determining the required patterns of any future prescribed burning).
- Monitoring will facilitate the development of targeted management actions if monitoring demonstrates such actions are required.
- If monitoring demonstrates actions are required, Rio Tinto (on behalf of the Proponent) will consult with relevant stakeholders to develop a Fire Management Plan with an objective of reducing the risk of a single wildfire affecting a large proportion of the LMA.

3.1.3 2018 Program Output

In 2017 it was agreed with the DoE that as a part of adaptive management, the best environment outcomes would be to concentrate funding on the Predator Control Program (*Eradicat)* and remove the requirement to complete a fire management plan as it is unlikely to result in improved environmental outcomes for the Northern Quoll and Pilbara olive python.

Monitoring between 2015-2017 has indicated that a fire management plan would not be required as it will not benefit the Northern Quoll/Pilbara olive python, and habitat homogenising fires occurring within the land management area (LMA) remains low. As outlined in communication with DoE, fire scar analysis will not be continued in 2018 unless a fire is suspected to have had an impact on the Quoll populations.

In 2018, monitoring showed the percentage of Pilbara Olive Python and Norther Quoll habitat burnt was similar to previous years. However, Yarraloola showed the largest percentage burnt since 2014. Even with a considerable increase, percentage of habitat burnt didn't seem to impact Quoll detection rates.

Fire management controls were implemented at Red Hill and Yarraloola through a systematic burning programme in 2018. This consisted of small, mosaic patterns of fire to act as fire breaks to prevent much larger fires that could threaten the northern quoll through consequential changes in habitat structure and composition. A similar programme will be implemented in 2019.

Based on these outputs the Proponent considers that the objective of Action 5 has been met.

4 WEED CONTROL

Goal: *To understand the diversity and distribution of weeds within the LMA and the potential implications for the management of northern quoll and Pilbara olive python habitat.*

4.1 ACTION 6: MONITORING OF WEEDS OF LAND MANAGEMENT AREA

4.1.1 Management Objective

To monitor the diversity and extent of weeds and, if necessary, undertake measures to minimise their impact on northern quoll and Pilbara olive python habitat within the LMA.

4.1.2 Proposed Method

The following weed monitoring measures were proposed in the TSOP:

- Weed monitoring will be undertaken across the LMA in order to track changes in the richness and extent of exotic plant species. Monitoring effort will be focused within habitats important for Pilbara olive python and northern quoll and known to be susceptible to weed establishment (e.g. riparian habitats).
- Weeds will be monitored as a component of the suite of land condition parameters.
- Photo reference points and point-intercept transects will be the primary methods used to monitor changes in weed diversity and cover/abundance over time.
- Weed Record Points (WRP) will be completed opportunistically as a means of recording new weeds or new occurrences of weed species across the LMA. WRPs will consist of a 5 x 5 m quadrat within which the cover of all weed species will be recorded.
- The results of monitoring will be evaluated to determine whether active control is warranted in priority areas of northern quoll and Pilbara olive python habitat.

In 2017 it was decided to change to rangeland condition monitoring as the mechanism to evaluate improvements in habitat condition as the vegetation condition for the Northern quoll habitat was generally found to be “good to excellent”.

4.1.3 2018 program output

As discussed with the DoE in 2017, rangeland vegetation condition monitoring was completed to evaluate the habitat condition of the northern quoll. Results of this monitoring are discussed in Section 2.1.4 of this report, and in Appendix 4: RTIO-HSE-0331892 2018 Vegetation cover change assessment on Yarraloola and Red Hill

Based on these outputs the Proponent considers that the objective of Action 6 has been met.

5 TSOP EXPENDITURE

In accordance with Condition 15 of EPBC 2011/5815 and Condition 7 of MS 1038, the Proponent provides the following breakdown of expenditure regarding the implementation of the TSOP over 2014 – 2018:

Itemised Expenses	**2014 expenditure**	**2015 expenditure**	**2016 expenditure**	**2017 expenditure**	**2018 expenditure**	**Total**
RTIO employee related costs	$258.50	$490.00	$0	$0	**$0**	**$748.5**
Contractors	$1,109.09	$110,031.33	$25,427.45	$0	**$1,950.00**	**$138,517.87**
External Services	$135,420.00	$204,970.00[2]	$604,803.13	$419,907.05	**$654,899.17**	**$2,147,439.35**
Travel and related expenses	$3,951.62	$48,922.64	$44,301.86	$12,554.12	**$60,917.89**	**$170,648.13**
Other operating costs		$6,148.80	$612.12	$140	**$0.00**	**$6,900.92**
Total	**$140,739.21**	**$370,562.77**	**$675,144.56**	**$432,601.17**	**$717,767.06**	**$2,336,814.77**

[2] There was an incorrect accrual of $85,020 accounted for in previously reported 2015 External Services spend which has also been accounted in 2016's spend. Data has been corrected and total spend is correct in this report.

6 REFERENCES

Morris K, Thomas N (2014) Operational introduced predator control program – Yarraloola Offset Area, Pilbara Region, WA 2015-2019. Unpublished Report, Department of Parks and Wildlife, Perth WA. (RTIO-HSE-0279071)

Rio Tinto (2015). Yandicoogina JSW and Oxbow Project, EPBC 2011/5815 Condition 14: Threatened Species Offset Plan. Hamersley Iron Pty Ltd, Perth. (RTIO-HSE-0274440)

7 APPENDICES

Appendix 1**:** RTIO-HSE-0331891 2018 Predator Control Baiting and Monitoring Program

Appendix 2: RTIO-HSE-0331889 2018 Annual desktop fire regime monitoring Yarraloola

Appendix 3: RTIO-HSE-0331890 2018 Annual desktop fire regime monitoring Red Hill

Appendix 4: RTIO-HSE-0331892 2018 Vegetation cover change assessment on Yarraloola and Red Hill