

Greater Paraburdoo Iron Ore Hub Proposal

Part IV Assessment *Environmental Protection Act 1986*

Clarification of Cultural Heritage Sites and Sites and Places of Special Significance

Purpose

To support the assessment of the Greater Paraburdoo Iron Ore Hub Proposal the Department of Water and Environmental Regulation, Environmental Protection Authority (EPA) Services Branch requested further clarification relating to the impacts to Cultural and Heritage Values which is summarised below.

Further Information – Impacts to Heritage Sites

Impacts to Heritage Sites

- The Western Range is a diverse heritage landscape, with four hundred and twenty-eight (428) cultural heritage sites recorded to date including artefact scatters, ceremonial sites, stone and ochre quarries, waterholes and Rockshelters. The Proponent has worked closely with the Yinhawangka People to identify sites of greater significance and avoid where practicable. Of four hundred and twenty-eight (428) sites, eighty-seven (87) cultural heritage sites will potentially be impacted (directly or indirectly) by the Proposal.
- Six (6) sites within the Development Envelope have been registered with the Department of Planning, Lands and Heritage (DPLH). The Proposal will directly impact four (4) Registered sites within the Development Envelope; the four (4) Registered sites will be subject to s18 applications. Table 1 outlines the known Registered sites within the Development Envelope and whether they will be directly impacted by the Proposal.
- Previously, the Environmental Review Document (ERD) (Rio Tinto, 2020) stated that there will be direct impact to four (4) Registered heritage sites as a result of the Proposal. Since the release of the ERD for Public Review (3-27 May 2020), the mine design and associated engineering designs have progressed, the locations of existing Registered sites have been clarified and further Registered sites identified. The Proposal will no longer impact two of the sites previously identified in the ERD (Site ID: 30489 and Site ID: 30490, these sites were incorrectly included in the ERD); Site ID: 17006 and Site ID: 30491 will be subject to s18 applications, along with other Registered sites identified in Table 1 as directly impacted by the Proposal.

Table 1 - Registered cultural heritage sites within the Development Envelope

Site Identification	Name	Type	Directly Impacted (Y/N)
17005	Para-A-01	Artefacts / Scatter, Rockshelter	Yes
30491	PB10-07	Artefacts / Scatter, Rockshelter	Yes
22378	WR02-RS03	Artefacts / Scatter, Midden / Scatter	No
22482	WR01-A18	Artefacts / Scatter	Yes

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22379	WR02-RS04	Artefacts / Scatter, Grinding Patches / Grooves, Rockshelter, Arch Deposit, Water Source	No
17006	PARA-A-02	artefact/midden scatters	Yes

* Site ID: 30489 and Site ID: 30490 were incorrectly included in the ERD (Rio Tinto 2020) and will not be impacted by the Proposal.

- In addition to the six (6) known Registered sites, thirty-three (33) sites have been lodged with the DPLH for registration; a further thirty-seven (37) sites impacted (directly or indirectly) by the Proposal will be lodged for registration. All sites that will be potentially impacted by the Proposal, and have not so far been registered or lodged, will be lodged with the DPLH for assessment and registration.
- The number of cultural heritage sites within the Development Envelope or potentially impacted by the Proposal may change further following additional surveys and ongoing engagement with the Yinhawangka People. The Proponent will lodge sites for assessment with the DPLH at the same time as s18 applications; the number of registered sites within the Development Envelope or potentially impacted by the Proposal will not be determined until the ACMC assessment processes are complete.

Management

- All sites potentially impacted will be managed in accordance with the *Aboriginal Heritage Act 1972* (AH Act) (in accordance with transition protocols of the *Aboriginal Cultural Heritage Act 2021*).

Consent under s18 of the AH Act will be required for disturbance of the registered sites and potentially other sites that are yet to be assessed by the DPLH, in consultation with the Yinhawangka People.

- Mitigation strategies such as salvaging of heritage sites that are subject to sections 16 and 18 of the AH Act will be undertaken in consultation with the Yinhawangka People, and if culturally appropriate, stored in the Keeping Place currently housed at Paraburdoo Operations.
- Aboriginal Cultural Heritage Management Plans (ACHMPs) will be prepared as a supporting submission for all s18 applications during the Aboriginal Cultural Heritage Act 2021 (ACH Act) transition period.

Further Information – Indirect Impacts to Sites and Places of Significance

Since the public release of the ERD, RTIO and Yinhawangka have undertaken field work to support social surroundings mapping of cultural values. As noted in the Social Cultural and Heritage Management Plan (SCHMP), Yinhawangka Common Law Holders (CLHs) have their own cultural determination of what constitutes impact on a site or cultural value and undertook their own impact assessment process for these to identify management outcomes to mitigate the impacts. The management outcomes are described in the Provision tables of the SCHMP.

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Yinhawangka identified nine (9) Sites and Places of Special Significance. These are referred to as 'identified' culturally significant sites and places in the SCHMP, and are:

- Gardagarli (Registered Site ID: 7287; also referred to as Johnny's Gorge and Ratty Springs) located along Pirraburdu Creek north of Western Range; and
- Garabagarrangu (Registered Site ID: 19444; Red Ochre Quarry) located south of the Western Range 36W deposit.
- waterholes WR01-W05 & WR01-W06 (WR Gorge 3)
- waterhole WR02-RS04 (WR Gorge 13D)
- rock shelter WR18-008 (located north of Garabagarrangu)
- Pirraburdu Creek
- 6 Mile Creek
- Wanu Wanu (7 Mile Creek).

Indirect impacts to Sites and Places of Special Significance and heritage sites will be managed in accordance with the provisions in the SCHMP, which sets out the agreed framework and processes for management of cultural heritage matters in consultation with Yinhawangka Traditional Owners.

Summary of Cultural Heritage information as of April 2022:

- Surveys completed to date have identified four hundred and twenty-eight (428) cultural heritage sites within the Development Envelope, of which eighty-seven (87) will potentially be impacted (directly or indirectly) by the Proposal.
- Six (6) of the four hundred and twenty-eight (428) sites have so far been registered with the Department of Planning, Lands and Heritage (DPLH). The Proposal will directly impact four (4) Registered sites within the Development Envelope. An additional thirty-three (33) of the four hundred and twenty-eight (428) sites have so far been lodged with the DPLH for registration. A further thirty-seven (37) sites potentially impacted (directly or indirectly) by the Proposal will be lodged for registration. All sites that will be potentially impacted by the Proposal, and have not so far been registered or lodged, will be lodged with the Department for assessment and registration.
- During the social surroundings surveys, Yinhawangka identified nine (9) 'Sites and Places of Special Significance', including two Registered sites; neither of these two Registered sites will be directly impacted by the Proposal.
- Note: the number of cultural heritage sites within the Development Envelope or potentially impacted by the Proposal is subject to change following further surveys and ongoing engagement with the Yinhawangka People. The Proponent will lodge sites for assessment with the DPLH at the same time as applications under section 18 (s18) of the *Aboriginal Heritage Act 1972*; the number of Registered sites within the Development Envelope or potentially impacted by the Proposal will not be determined until the APMC assessment process is complete.

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Table 2. Application of Mitigation Hierarchy for Social Surroundings

Impact	Avoidance	Minimisation	Rehabilitation	Predicted Outcome
Disturbance of sites of cultural heritage significance.	<p>The Proponent is committed to avoiding heritage sites, wherever practicable.</p> <p>No direct impacts to Gardagarli and Garrabagarrangu (Red Ochre Quarry)</p> <p>Waste dump design at Western Range has been modified to allow for the provision of an exclusion zone around Garrabagarrangu and a 200 m wide corridor to ensure the site can continue to be accessed both during and on cessation of operations.</p> <p>Modification of pit crest (36W) and waste dump locations (WD1 and WD2) to reduce visual impact and sediment risk to Garrabagarrangu.</p> <p>Removal of pits 14-16W and 20W to avoid sediment and blasting and visual amenity impacts at Gardagarli.</p> <p>Alignment of conveyor, haul road, services corridor and waste dump WD2 to avoid direct impacts to men’s sites WR19-15, WR19-07, PB13-10/22.</p> <p>Rockshelters</p> <p>Pit Crest at 36W had been modified to reduce risk of impacts due to blasting, ex-pit riling and sedimentation to rock shelter WR18-006 and WR18-008.</p> <p>Modification of satellite pit 66W and waste dump WD4 to reduce visual impact at rockshelter. WR02-RS04.</p> <p>Modification of pit crest (36W – 40W) and IMA Ramps to avoid direct impacts to rock shelter WR01-A18.</p> <p>Removal of satellite pit (55W) to avoid blasting impact to rock shelter WR02-RS03.</p> <p>Modification of waste dump (WD5) to avoid direct impact and flooding to Rockshelter WR02-RS05).</p> <p>Modifications to waste dumps (WD2, WD3 and WD4) to maintain watercourse flow path downstream of pit in gorges 3, 4, 7, 13D and 14.</p> <p>Modification of ROM location to avoid blasting impacts and visual impacts to Rock Shelter WR19-45.</p>	<p>Mitigation strategies such as salvaging of heritage sites that are subject to s 16 and 18 of the AH Act will be undertaken in consultation with the Yinhawangka People, and if appropriate, researched to gain further knowledge and stored in the Keeping Place currently housed at Paraburdoo Operations until long term strategies are agreed.</p> <p>An inventory of salvaged material is maintained and managed by Rio Tinto’s Heritage Team. Consultation is ongoing with the Yinhawangka People to discuss the timings and procedures of repatriation of cultural materials currently held by Rio Tinto and will be formalised over the coming years once Yinhawangka have established their own Keeping Place facility.</p> <p>The Proposal has been designed to minimise impacts to pools and catchments where practicable through physical engineering controls.</p> <p>SCHMP Management Action 2A – blasting activities within 70 metres of land clearing within 20 metres of culturally significant ‘identified’ sites will be inspected. By YAC nominated person.</p> <p>SCHMP Management Action 2C provides for the identification and recording of ‘Heritage Restriction Zones’.</p> <p>SCHMP Management Action 2D provides for a co-designed cultural management system with associated policies and procedures to minimise impacts to culturally significant sites.</p> <p>SCHMP Management Action 2E provides for the inspection and audit by Yinhawangka CLHs of significant sites.</p> <p>SCHMP Management Actions 3A and 3B provide for management of indirect impacts to cultural significant sites in collaboration with Yinhawangka CLHs.</p> <p>Dust suppression will be undertaken onsite to minimise ambient dust.</p> <p>SCHMP Management Actions 3A and 3B provide for assessment and management of indirect impacts to cultural significant sites in collaboration with Yinhawangka CLHs.</p>	<p>SCHMP Management Action 2F, 2G, 2I provides for collaboration with Yinhawangka CLHs in relation to mine closure and rehabilitation, including access, waste dump design, backfill.</p>	<p>There will be no direct impacts to; Gardagarli and Garrabagarrangu (Red Ochre Quarry).</p> <p>The Proposal is expected to result in disturbance to some sites of ethnographic and / or archaeological significance to the Yinhawangka People. (Potentially up to 87 heritage sites).</p> <p>However, impacts to heritage values will be appropriately managed via existing legislation. Any disturbance will be in accordance with approval under s16 and/or s18 of the AH Act and will have the support of the Yinhawangka Traditional Owners.</p> <p>Ongoing engagement with the Yinhawangka Traditional Owners is managed through the SCHMP and engagement frameworks established through existing agreements.</p> <p>It is noted that the Yinhawangka Aboriginal Corporation provided a letter of support for the proposed mine design in January 2022.</p> <p>The Proponent considers that the Proposal meets the EPA’s objective for this factor.</p>

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Impact	Avoidance	Minimisation	Rehabilitation	Predicted Outcome
	<p>Modification of alignment of 66W Light vehicle road to avoid blasting impacts to rockshelter WR18-007.</p> <p>Three Mining Exclusion Zones (MEZ) have been applied to the catchments of three waterholes at the request of Yinhawangka. All mining activity is excluded from within a MEZ.</p>			
<p>Changes to local landforms may result in altered visual landscape in the region.</p>	<p>Removal of pits 14 – 16W and 20W to avoid physical and visual impacts to Pirraburdu Creek and Gardagarli.</p>	<p>Mineral waste dumps will be designed to consider:</p> <ul style="list-style-type: none"> • minimisation of dump height; • shaping of dumps to blend in with the surrounding natural topography; • construction to meet the requirements of the final rehabilitation design; and • drainage and erosion management features. <p>During closure the land will be reshaped to be compatible with the adjacent landscape to minimise long term visual impacts.</p> <p>SCHMP Management Actions 2F, 2G and 2I provides for collaboration with Yinhawangka CLHs in relation to mine closure and rehabilitation, including waste dump volumes and design and backfill.</p>	<p>Progressive backfilling will be implemented as far as practicable.</p> <p>Progressive rehabilitation with local native vegetation has been, and will continue to be, undertaken where practicable.</p> <p>Self-sustaining ecosystems are intended to be re-established.</p>	<p>The Proponent considers that the Proposal meets the EPA’s objective for this factor. The development of the Proposal will result in permanent changes to the landforms and general landscape.</p> <p>As disturbance associated with the Proposal will occur predominantly on the south side of Paraburdoo Range, the impact to visual amenity when viewed from Paraburdoo town and other sites of local significance will be similar to the existing operations. Additionally, the Proponent has removed pits 14 – 16W and 20W from the design to avoid visual and physical impacts to Pirraburdu Creek and Gardagarli as per consultation with the Yinhawangka People.</p> <p>Ongoing engagement with the Yinhawangka Traditional Owners is managed through engagement frameworks established through existing agreements.</p> <p>In addition, the Yinhawangka Aboriginal Corporation provided a letter of support for the proposed mine design in January 2022.</p> <p>Ongoing engagement with the Yinhawangka Traditional Owners is managed through the SCHMP and engagement frameworks established through existing agreements.</p> <p>Therefore, the Proponent considers that the Proposal meets the EPA’s objective for this factor.</p>
<p>Changes to the physical and biological attributes of the environment which may impact the values associated with significant heritage sites and cultural values.</p>	<p>The Proponent will avoid, as far as practicable, any sites of archaeological significance.</p> <p>Major Creeks</p> <p>Given historical landscape and riparian vegetation modification in Wanu Wanu (7 Mile Creek), proposed dewatering and discharge activities are unlikely to have any significant impact on cultural heritage associated with this watercourse.</p> <p>Catchments and Pools</p>	<p>The Proposal has been designed to minimise impacts to pools and catchments where practicable. This is addressed further in Section 8 of the ERD.</p> <p>Modification of pit 40W to reduce sedimentation of persistent waterhole Gorge 4 waterhole (WR01-W03).</p> <p>Modification of pit crest (36-50W and 55-66W) and water dump WD5, to reduce sediment to waterhole Gorge 7 waterhole WR01-W01</p> <p>Consultation has been undertaken with Yinhawangka on acceptable impacts to catchments and pools.</p>	<p>The Closure Plans regarding operations within the Development Envelope consider the long-term access to heritage sites which will be further refined during life of mine, as well as how salvaged artefact material (as a result of direct impacts) will be managed.</p>	<p>The Proponent will ensure that the Proposal:</p> <ul style="list-style-type: none"> • minimises impacts on sites of archaeological and cultural significance • does not affect safe site access for the Yinhawangka Traditional Owners • the ability of the Traditional Owners to use the area for cultural purposes. <p>In addition, the Yinhawangka Aboriginal Corporation provided a letter of support for the proposed mine design in January 2022.</p>

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	<p>The Proposal has been designed to minimise impacts to pools and catchments where practicable.</p> <p>Modification pit crest (36W – 40W) and IMA Ramps to avoid direct impacts to Gorge 3 Waterhole (WR01-W06) and increase catchment retention.</p>	<p>Surface water management will be implemented to minimise disruption to natural flows, minimise erosion and prevent contamination of surface and groundwater where practicable.</p> <p>SCHMP Management Actions (4C and 4D) provides for consultation on planned obstructions of major creeks and water management with Yinhawangka CLHs.</p> <p>SCHMP Management Action (1A) provides for safe access to places of cultural significance.</p> <p>Sediment traps and diversion drains will be constructed to minimise potential sedimentation impact to pools.</p> <p>Dust suppression will be undertaken onsite to minimise ambient dust.</p> <p>SCHMP Management Actions 3A and 3B provide for assessment and management of indirect impacts to cultural significant sites in collaboration with Yinhawangka CLHs.</p>		<p>The Proponent considers that the Proposal meets the EPA's objective for this factor.</p>