EPBC Act referral

Australian Government
Department of Agriculture, Water and the Environment

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Title of proposal	2021/9097 - Richmond – Julia Creek Vanadium Project

Section 1

Summary of your proposed action

1.1 Project industry type Mining

1.2 Provide a detailed description of the proposed action, including all proposed activities

The Richmond-Julia Creek Vanadium Project (the Project) is an open-cut, free-dig mining operation located within an indicative Mining Lease application area (the Proposed Action area) covering a 6,401 hectare (ha) area. Richmond Vanadium Technology Pty Ltd is the Proponent for the Project.

The Project is located on a greenfield site approximately 45 km (measured from the Proposed Action area access point) northwest of the town of Richmond, in Queensland (refer Att C_Figure 1 Regional Location).

The Proposed Action area is located on Lot / Plans:
Lot A on AP5737 (Strata)
Lot 25 on B157119
Lot 30 on B157120
Lot 27 on B157119
Lot 26 on B157119
Lot 33 on B157119
Lot 7 on SP317969
Lot 5 on YP28

The Project would involve the development of an open-cut vanadium mine that could produce up to 4.2 million tonnes per annum (tpa) Run of Mine (ROM) ore processed onsite to produce 790,000 tpa of vanadium concentrate over an initial 20 year life of mine (LOM).

Mining inventory would be drawing from a Mineral Resource Estimate (compliant with the JORC 2012 code) of 560 Mt with an average grade of 0.48 percent vanadium pentoxide (V_2O_5). The Project resource is located relatively close to the surface and mining would occur at depths of 1-20 m. The mining method would involve open-cut sequential mining using trucks and excavators. Development of mine pits would be staged with progressive rehabilitation and back-filling where practicable.

The mine pit and on-lease Project infrastructure will be located within the Proposed Action area and will include a Mine Infrastructure Area (MIA) for processing infrastructure and general mine service facilities, a waste rock dump, tailings dam, water supply dams, truck load-out facilities and ROM pad / stockpiles.

Off-lease infrastructure that may be required to support the Project include a number of facilities / services outside of the Proposed Action area such as power lines, road and/or rail network, Port of Townsville facilities (or alternative port if not suitable), potential water storage facility, accommodation village and telecommunications.

At this stage of the Project all environmental investigations have been undertaken at a desktop level; with the exception of terrestrial ecology. A post wet season five day fauna survey (including trapping and observation) was undertaken from 20 to 24 March 2021 with a flora survey completed over a four day period from 7 to 10 April 2021. A spring survey for both flora and fauna was undertaken from 3 to 7 September 2021. Based on these surveys it was identified that the Project has potential to cause impacts such as introduction / spread of weed and feral animal species, vegetation clearing, direct mortality to fauna through clearing, altered fire regimes and loss of potential habitat for Julia Creek Dunnart (refer Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Section 6, Pages 46-52).

Although there is no evidence of Julia Creek Dunnart in the ecology survey study area, there is suitable habitat, albeit degraded, with the assessment indicating the presence of 254.75 ha of poor habitat value and 299.44 ha of moderate habitat value. It is also noted that there are two records of the species approximately 20 km south of the Project. An assessment of the Project's potential to cause significant residual impacts to Julia Creek Dunnart has been carried out using the criteria described in the Matters of National Environmental Significance Guidelines (refer Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Section 8, Pages 54-60). Under the nine-part test it is considered the Project is unlikely to cause a significant residual impact on Julia Creek Dunnart, however this will be assessed further as part of the Environmental Impact Statement (EIS).

The nature of the Project means that existing land uses within the Proposed Action area will be directly impacted. However,

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once operational activities have ceased in parts of the Proposed Action area, land will be progressively rehabilitated and made stable, safe, and non-polluting.

It is noted that Project activities have potential to lead to degradation and erosion of soils. Baseline soil surveys would be undertaken for the EIS to determine the physical and chemical characteristics of soils on site, and to inform mitigation and management measures to be implemented throughout the construction, operation, and rehabilitation phases. A geochemical assessment would also be undertaken for the EIS to identify the characteristics of waste materials and suitable management measures to be implemented, including requirements for rehabilitation activities.

Other potential impacts that could arise will also be assessed as part of the EIS with appropriate mitigation / management measures recommended.

1.3 What is the extent and location of your proposed action?

See Appendix B

1.5 Provide a brief physical description of the property on which the proposed action will take place and the location of the proposed action (e.g. proximity to major towns, or for off-shore actions, shortest distance to mainland)

The Proposed Action area is a greenfield site located in a rural area approximately 45 km north-west of Richmond within Richmond Shire Council Local Government Area. The site is relatively flat as a whole. Topography across the Proposed Action area ranges from approximately 200 to 210 m Australian Height Datum (GDA94) from west to east, consistent with broader topographical trends in the area. Underlying land tenure comprises freehold, lands lease and reserve holdings. The Proposed Action area has been historically used for pastoral activities, predominantly cattle grazing on native vegetation.

1.6 What is the size of the proposed action area development footprint (or work area) including disturbance footprint and avoidance footprint (if relevant)?

The Proposed Action area is approximately 6,401 ha. Within this area, the Project disturbance footprints are comprised of the mine (life of mine pit area) – 2,905 ha, MIA (including rock dump and tailings dam) – 72 ha, and internal access roads – 1 ha. Cumulatively this accounts for a 2,978 ha disturbance footprint under the current mine layout.

The avoidance footprint area is the balance of land remaining within the Proposed Action area and (approximate only at this stage) is 3,423 ha.

The estimated disturbance and avoidance footprints are based on the preliminary mine layout. The mine layout will continue to undergo review as the Project design phase progresses, with the final layout to be presented in the EIS.

1.7 Proposed action location

Lot - Access is from Frontage Road, Richmond QLD

1.8 Primary jurisdiction	Queensland

1.9 Has the person proposing to take the action received any Australian Government grant funding to undertake this project?

☐ Yes ☑ No

1.10 Is the proposed action subject to local government planning approval?

☐ Yes ☑ No

1.11 Provide an estimated start and estimated end date for the proposed action	Start Date	01/06/2022
	End Date	01/06/2050

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1.12 Provide details of the context, planning framework and state and/or local Government requirements

The Proponent is seeking to develop the Project to produce vanadium products for emerging vanadium redox flow batteries (VRFB) and the steel manufacturing industry in addition to producing the standard, widely traded form of vanadium, vanadium pentoxide (V2O5). Vanadium redox flow batteries function by using electric charge to alter the oxidation state of the electrolyte (containing vanadium pentoxide) when charging and discharging the battery.

By providing a stable supply of cleaner, lower cost vanadium, the Proponent aims to establish Australia as a core supplier of vanadium and assist grid-scale battery makers to unlock the potential of VRFBs in supplying efficient and reliable renewable energy to consumers.

The Richmond area has been identified as serving an important role in the mining and extractive resources sector. The Project would allow the goals of the regional plan and the strategic blueprint for Queensland's 'North-west Minerals Province' to be met by facilitating continued resources sector development, diversifying the regional economy, creating employment opportunities, and working with local businesses and the community. Growth in mining for base metals in the north-west has the potential to produce state-wide social and economic benefits.

In terms of the likely assessment process, the Proponent considers that the Project meets the criteria for a Coordinated Project declaration, requiring an EIS under the State Development and Public Works Organisation Act 1971 (SDPWO Act). An Initial Advice Statement was submitted to the Queensland Office of Coordinator-General (OCG), Department of State Development, Infrastructure, Local Government and Planning (DSDILGP) on 12 November 2021. If declared a Coordinated Project, the EIS will address the Terms of Reference to the satisfaction of the OCG.

Should this Project be determined a controlled action by the Commonwealth Department of Agriculture, Water and Environment (DAWE), then the assessment and approval process will commence. The Australian Government has bilateral agreements with all state and territory governments to accredit environmental assessment processes that meet set standards. If EPBC Act approval is needed, it may be possible to do a single assessment, avoiding duplication by undertaking a bilateral assessment process.

Where there may be a significant residual impact on a protected matter, an offset will be required in accordance with the EPBC Act and the EPBC Environmental Offsets Policy 2012. Where this is the case, an Offset Strategy will be included in the EIS. Following DAWE's assessment of the EIS, an Offset Management Plan may be required to be developed and approved by DAWE.

A site-specific Environmental Authority application (EAA) for a new resource activity under the Environmental Protection Act 1994 (EP Act) will be prepared for the Project and lodged with the Queensland Department of Environment and Science (DES). Around the same time, a Progressive Rehabilitation and Closure Plan (PRC Plan) will be lodged with DES to describe and plan for how and where activities will be carried out on the land in a way that maximises progressive rehabilitation of the land to a stable condition. The PRC Plan will include a proposed schedule outlining management milestones, criteria, and completion dates for rehabilitation.

A mining lease application (MLA) will subsequently be lodged with the Queensland Department of Resources (DoR). The grant of the Mining Lease to which the MLA relates (equivalent to this Proposed Action area) will be subject to the approval of the EA application.

With regards to cultural heritage, a Cultural Heritage Management Plan will be in place and approved under the Aboriginal Cultural Heritage Act 2003. This is a pre-requisite to the grant of any lease, licence, permit, approval, or other authority required under any legislation for the Project. A CHMP will be developed for the Project and will be registered with the Queensland Department of Aboriginal and Torres Strait Islander Partnerships.

Beyond these core approval / government requirements additional, secondary approvals may be required. These approvals will be determined as part of the EIS process.

1.13 Describe any public consultation that has been, is being or will be undertaken, including with Indigenous stakeholders

The Proponent has been undertaking exploration activities at the Proposed Action area since 2013 and during this time have engaged with key stakeholders including the owner and manager of Lilyvale Station, Richmond Shire Council, McKinlay Shire Council, local community members and relevant State and Commonwealth Government departments.

A search of the National Native Title Tribunal register has not identified any areas of Native Title within the Proposed Action area and it is noted that consultation with Indigenous stakeholders has not yet been undertaken. This consultation would commence during the next development phase of the Project with the aim to develop an Indigenous engagement strategy, targeting Indigenous businesses and training facilities and during formal notification of the Mining Lease and Cultural Heritage

Management Plan.

To support the environmental approvals process, a draft Community and Stakeholder Engagement Strategy (CSES) has been developed, consistent with the requirements of the Strong and Sustainable Resource Communities Act 2017 (SSRC Act) and the Social Impact Assessment Guidelines published by the Department of State Development, Manufacturing, Infrastructure and Planning (DSDMIP). The CSES was implemented prior to this referral and will continue through the entire assessment process. To-date, the following consultation activities have been undertaken:

Town hall meeting in Richmond (2019)
Ongoing meetings with State and Federal government representatives
Distribution of introductory letters and Q&A sheets for local landowners
Attendance at Richmond Field Day (2019)
Sponsorship of community events, e.g. Richmond races
Follow up community meetings which were planned however due to COVID-19 travel restrictions had to be postponed. Contact has been maintained with the local community via Richmond Shire Council through email and telephone

Largely neutral comments regarding the Project have been received from adjoining landholders, and the community generally supports the development of the Project and the future opportunities it is likely to bring to the region. Emphasis was placed on a largely local workforce and this has been carried forward into options studies.

Moving forward, community and stakeholder engagement objectives for the Project are to:

Ensure disadvantaged and hard to reach stakeholders and groups are identified and included in community engagement activities
Include Indigenous stakeholders / businesses in community engagement
Identify opportunities to work together with stakeholders to develop strategies that maximise Project benefits and minimise adverse impacts
Raise stakeholder awareness of the Project, and its potential impacts and timelines
Initiate engagement as early as possible in the EIS process to ensure stakeholders have sufficient time to consider the Project's potential impacts and provide input into mitigation strategies
Understand and address stakeholder concerns, issues and interests

A range of engagement and communication tools would be utilised throughout the environmental approvals process, including but not limited to:

Project newsletters and factsheets
Project email and 1800 community information line
Regular updates to the Proponent's website
Face-to-face meetings
Council briefings
Government briefings
Community roadshows and public information sessions
Business briefings
Media releases

Additionally, engagement will be undertaken as part of the development of the PRC Plan. This is being incorporated into the Project's engagement program to ensure stakeholders are consulted about rehabilitation outcomes for the Project.

Community and stakeholder engagement will be used to identify community and social values, understand and analyse baseline data, inform impact assessment and develop appropriate mitigation measures and management plans as part of the SIA / EIS process.

1.14 Describe any environmental impact assessments that have been or will be carried out under Commonwealth, State or Territory legislation including relevant impacts of the project

Terrestrial ecology assessments have been completed within a Study area over March/April 2021 and September 2021. The Study area and survey effort is detailed in the Project Terrestrial ecology technical report (refer Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Sections 1 and 3, Pages 1-4 and 7-17, respectively) which has been included in this referral and covers both field surveys, their results, potential impacts, and proposed management/mitigation measures.

Other impact assessments, e.g., water, land, noise, air quality, traffic, social impacts etc will be undertaken throughout the EIS process in accordance with Commonwealth and State legislation, clearly outlining both potential impacts and proposed management measures.

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1.15 Is this action part of a staged development (or a component of a larger project)?

☐ Yes ☑ No

1.16 Is the proposed action related to other actions or proposals in the region?

☐ Yes ☑ No

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Section 2

Matters of national environmental significance

2.1 Is the proposed action likely to have any direct or indirect impact on the values of any World Heritage properties?

☐ Yes ☑ No

2.2 Is the proposed action likely to have any direct or indirect impact on the values of any National Heritage places?

☐ Yes ☑ No

2.3 Is the proposed action likely to have any direct or indirect impact on the ecological character of a Ramsar wetland?

☐ Yes ☑ No

2.4 Is the proposed action likely to have any direct or indirect impact on the members of any listed species or any threatened ecological community, or their habitat?

☑ Yes ☐ No

Species or threatened ecological community

Grey Falcon (Falco hypoleucos) – Vulnerable (potential to occur).

Grey falcon is considered to occupy the arid and semi-arid zone of Australia where annual rainfall is <500 mm. The species preferred habitat includes sparsely timbered lowland plains, particularly Acacia shrublands that are crossed by tree-lined water courses. The species is recorded hunting in treeless areas and frequents tussock grasslands and open woodland, particularly in winter (TSSC 2020). The species probably requires large home ranges.

The overall population size is currently thought to be less than 1,000 mature individuals (Schoenjahn 2018, TSSC 2020). The breeding range has contracted to the arid parts of its range since the 1950s (OEH 2017). Younger individuals may disperse outside of this habitat in drought years that follow wet years in inland Australia.

Impact

There are two records of Grey Falcon within 50 km of the Study area. Both are located to the south-east with the nearest being approximately 40 km away from the Study area. One record is undated and the other is from 2005 (ALA 2021).

Other raptor species are often misreported as Grey Falcon (Schoenjahn 2010) and the validity of the above records is unknown. Nonetheless, Grey Falcon may occur in the area but any such occurrence is likely to be transient and may be of dispersing young birds.

The species nests in old nests of other species, usually selected in tall trees on watercourses (usually River Red Gum or Coolibah) and sometimes on artificial structures such as telecommunications towers (Schoenjahn 2018).

The Proposed Action area is dominated by grasslands with small areas of sparse woodland and areas of the introduced Prickly Acacia. There are no watercourses within the Proposed Action area and no suitable breeding habitat for the species is present. Should Grey Falcon be found to be present at the time of any vegetation clearing, the species will simply move away from the disturbance area to adjacent undisturbed habitat. Any possible impact to this species would be negligible at worst.

Species or threatened ecological community

Julia Creek Dunnart (Sminthopsis douglasi) – Vulnerable (potential to occur).

Julia Creek Dunnart is a small, cryptic marsupial found only in Queensland. It is a nocturnal predator with a diet

predominantly comprising insects (particularly crickets, cockroaches, and spiders) and to a lesser extent some reptiles. It is heavily associated with tussock grasslands on cracking clay soils of the Mitchell Grass Downs bioregion. During the day, the species shelters in soil cracks (dry periods) or in surface vegetation (following rain and when soil cracks close). The species has a patchy distribution and low abundance. Recent surveys have shown it to be patchily distributed in the downs country east of Cloncurry extending southeast to Barcaldine (BAAM 2011). Most survey records indicate the species occurs in small dispersed populations and local abundance can fluctuate significantly in relation to seasonal conditions (Mifsud 2001 in DERM 2009).

Impact

The species has not been recorded within the Project site during targeted surveys for the Project (refer Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Section 5.2, Pages 37-46) or from database records. There are six database records located within 50 km of the Study area (although none are located within 20 km). None of the records are more recent than the year 2000.

The species may be nomadic within its home range, sheltering at the end of their night-time foraging in any nearby crack or hole. Breeding activity peaks in spring / summer and two litters may be raised per year (Mifsud 1999; Woolley 2008). Given that breeding occurs during the wet season, when cracks and holes may close, females may continue to be nomadic and use temporary nests, perhaps in vegetation (Woolley 2017). As such, habitat suitability appears to increase with more grass cover and increasing density of soil cracks and holes (DERM 2009).

Commonwealth habitat mapping for the species indicates the Study area is on the northern edge of its distribution in an area where the 'species or species habitat may occur' (DAWE 2021). Vegetation mapping indicates the vegetation communities within the north of the Proposed Action area comprise woodland / open woodland communities on sandy soils that are not suitable for the species occurrence. Within the Study area and surrounds potential habitat for the species may occur on a number of Mitchell grassland vegetation communities or Regional Ecosystems (REs): RE 4.9.1, 2.4.2, and 2.3.3.

Based on field-verified vegetation mapping 2,703.65 ha of grassland REs occur within the Project footprint. However, the available habitat has generally been severely degraded to a large degree by the known threatening processes to the species: high grazing pressure (causing trampling of soil cracks and poor grass cover) and Prickly Acacia infestation. The level of Prickly Acacia infestation is generally quite low through much of the Study area being restricted to old bore drain lines, areas associated with surface mudstone, and the north central paddock. Habitat assessments were carried out within the Study area based on the known structural requirements of the species (presence of soil cracks in clay soils, amount of grass cover and lack of Prickly Acacia). The assessment indicated the presence of 254.75 ha of poor habitat value and 299.44 ha of moderate habitat value as present within the current Project footprint. The majority of the Study area comprised habitats that were not suitable for the species (woodlands and Prickly Acacia on stony soils and heavily degraded grasslands with little grass cover and soil cracking evident). A further 186.03 ha of grassland REs occurs outside of the Study area and was not subject to site habitat assessments due to site access constraints. Analysis of Queensland Government vegetation mapping indicates there is 27,828 ha of potentially suitable grassland habitat mapped within a 10 km radius of the Proposed Action area. The overall area of occurrence of the species is estimated 6,000,000 ha (Woinarshi et al. 2014; TSSC 2016).

A detailed assessment of the Project's potential to cause significant residual impacts to Julia Creek Dunnart has been carried out using the criteria provided in the MNES Significant Impact Guidelines 1.1 (DE 2013) (refer Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Section 8, Pages 54-60). An important population of Julia Creek Dunnart or habitat considered critical to the survival of the species (as defined in the MNES Guidelines) is not present on the site. The Proposed Action area is on the edge of the species distribution, has been heavily degraded by current land use and represents a very small portion of the species overall distribution. The species has not been recorded within 20 km of the Project and there are no records since 2000 within 50 km of the Project. It is considered the Project is unlikely to cause a significant residual impact on Julia Creek Dunnart.

2.4.2 Do you consider this impact to be significant?

☐ Yes ☑ No

2.5 Is the proposed action likely to have any direct or indirect impact on the members of any listed migratory species or their habitat?

☑ Yes ☐ No

Migratory species

Fork-tailed Swift (Apus pacificus) (potential to occur).

In Australia, Fork-tailed Swift is almost exclusively an aerial species, probably even sleeping on the wing, though individuals are occasionally recorded roosting in trees. Foraging occurs over a wide variety of habitats including towns and cities, open

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areas, farmland, coastal areas and sometimes forest. Fork-tailed Swifts breed in Asia and occur throughout Australia from September/October to April, with some records in May. The species is widespread in Australia (Higgins 1999).

Impact

There is one record from WildNet (1973) approximately 40 km south-east of the Study area and another record from eBird Australia (2000), approximately 32 km south-west of the Study area (ALA 2021). The species has potential to occur over almost any habitat within its range.

Given the species occurs as a dispersed population across much of Australia and is an aerial foraging species that may occur over almost any habitat, it is inconceivable the Project would have an impact on this species.

Migratory species

Oriental Pratincole (Glareola maldivarum) (potential to occur).

Oriental Pratincole occurs in open country, often near water. It is usually found on plains, floodplains or grassland with little vegetation. It also uses agricultural land, airfields and mudflats and occurs around the margins of wetlands, including artificial waterbodies. The species takes insects in flight but also feeds on the ground. Oriental Pratincole is a non-breeding visitor and is present in Australia between December and February. It is widespread north of Julia Creek but occurs only sporadically further south (Lane 1987; Higgins & Davies 1996). The species is occasionally killed by vehicles on roads and by aircraft on airfields, sometimes in large numbers. In Australia, Oriental Pratincoles occur mostly in sparsely settled areas and have no immediate threats to their survival (Higgins & Davies 1996).

Impact

There is a historical record from 1900 at Wyangarie Station, Richmond approximately 17 km south of the Study area (DES 2021). There are several other historical records greater than 100 km from the Study area (DES 2021):

1982 record from Hillview, >145 km south-east of the Study area, 20 km south of Hughenden
1984 record from Julia Creek, >100 km south-west of the Study area
1973 record from Oorindi, >177 km south-west of the Study area
1880 record from Leilavale, Cloncurry, >200 km south-west of the Study area.

There is suitable habitat present within the Study area, although the species would only very occasionally occur (if at all). Should they be found to be present at the time of any vegetation clearing, Oriental Pratincole will simply move away from the disturbance area to adjacent undisturbed habitat. No impact considered likely on the species.

2.5.2 Do you consider this impact to be significant?

☐ Yes ☑ No

2.6 Is the proposed action to be undertaken in a marine environment (outside Commonwealth marine areas)?

☐ Yes ☑ No

2.7 Is the proposed action likely to be taken on or near Commonwealth land?

☐ Yes ☑ No

2.8 Is the proposed action taking place in the Great Barrier Reef Marine Park?

☐ Yes ☑ No

2.9 Is the proposed action likely to have any direct or indirect impact on a water resource from coal seam gas or large coal mining development?

☐ Yes ☑ No

2.10 Is the proposed action a nuclear action?

☐ Yes ☑ No

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2.11 Is the proposed action to be taken by a Commonwealth agency?

☐ Yes ☑ No

2.12 Is the proposed action to be undertaken in a Commonwealth Heritage place overseas?

☐ Yes ☑ No

2.13 Is the proposed action likely to have any direct or indirect impact on any part of the environment in the Commonwealth marine area?

☐ Yes ☑ No

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Section 3

Description of the project area

3.1 Describe the flora and fauna relevant to the project area

Desktop assessments, including searches of publicly available databases were undertaken to identify any MNES with potential to occur in the Proposed Action area. Site assessments were carried out in March 2021 (fauna), April 2021 (flora) and September 2021 (both flora and fauna) by Epic Environmental Pty Ltd.

The results of the desktop and field assessments are provided in the Project Terrestrial ecology technical report (Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Sections 4 and 5, Pages 19-29 and 30-46, respectively). A likelihood of occurrence assessment was carried out on MNES predicted as present from the desktop review based on the results of the field surveys. The MNES which are predicted as potentially occurring within the Proposed Action area are described in Section 2.4 and 2.5 of this referral.

The Proposed Action area is within the Central Downs subregion of the Mitchell Grass Plains bioregion, immediately south of the Gulf Plains bioregional boundary. As such the northern part of the Study area is dominated by Gulf Plains habitat.

Flora Assessment:
A total of 91 plant species was identified during the two site surveys. No flora species listed as threatened under the EPBC Act were identified in the Study area and none are considered as potentially occurring. Of the species recorded, 16 were introduced, three of which are scheduled as both Weeds of National Significance and Restricted Class 3 Invasive Plants under the Biosecurity Act. No flora species listed as critically endangered, endangered, vulnerable, near threatened (CEEVNT) and/or Special Least Concern under the EPBC Act and/or the Queensland NC Act was identified in the Proposed Action area.

The Proposed Action area is dominated by grassland communities. Eight vegetation communities (REs) were verified as present during the surveys. These REs were:

RE 2.3.3 – Mitchell Grass dominated grassland on alluvial plains (849.87 ha);
RE 2.4.2a – Mitchell and Flinders Grass dominated grassland on clay plains (4,373.38 ha);
RE 2.4.5 – Very sparse open woodland on boundary of Mitchell grassland (62.18);
RE 2.5.1a – Mixed woodland (143.46 ha);
RE 2.9.4x1 – Mixed low woodland on plains and low rises (290.9 ha);
RE 4.9.11x2 – Acacia species low open woodland on undulating plains (4.0 ha);
RE 4.9.12x8 – Isolated patches of very sparse woodland (8.19 ha);
RE 4.9.1c - Mitchell and Flinders Grass dominated grassland on undulating downs (650.75 ha); and
Non remnant habitats (18.18 ha).

Fauna Assessment:
The post-wet season survey recorded a total of 61 species while 78 species were recorded during the Spring survey (92 species in total). There was a noted increase in bird and mammal activity (largely associated with the woodland areas in the northern extent of the Proposed Action area) between the two surveys. The fauna assemblage comprised one amphibian, 11 reptile, 66 bird and 14 mammal species. Four introduced species were recorded. No threatened species were recorded.

Mitchell Grass grasslands are relatively depauperate for vertebrate fauna, though species richness may have been greater in the past, before the impact of increasing grazing pressure and the introduction of feral predators (Wilson 1999). The faunal community was generally representative of the Mitchell Grass Downs region, with most species widespread across the bioregion.

At the time of the fauna surveys the Study area was very dry and conditions to support fauna were poor. There is little variation in vegetation structure across much of the Proposed Action area and there are no sources of permanent or semi-permanent water (including farm dams). Cattle on the site are watered via artesian water pumped into troughs. Much of the grassland vegetation communities, particularly in the southern half of the Study area, appeared subject to heavy grazing with only low, dry grass clumps present.

3.2 Describe the hydrology relevant to the project area (including water flows)

Watercourses:
The Proposed Action is located within the Flinders River Catchment. Several watercourses are located across the wider area, surrounding the Proposed Action area, including Flagstone Creek, Flinders River, Hazlewood Creek, Rathole Creek, and the Stawell (Cambridge Creek) River. All watercourses are non-perennial. There are no watercourses mapped within the Proposed Action area.

Fisheries Waterways:
No mapped waterways intercept the Proposed Action area.

Wetlands:
There are a number of mapped wetlands across the wider area mainly associated with the Stawell River, Flinders River and Hazlewood Creek. It is noted there are no mapped wetlands within the Proposed Action area, which is the area of interest.

Flooding:
Queensland Flood Plain Assessment Overlay mapping indicates an estimate of areas at threat of inundation by flooding. This data considers historical flood records, contours, soil and vegetation mapping and satellite imagery. No mapped watercourses or waterways intercept the indicative Proposed Action area and there is no floodplain assessment overlay over the Proposed Action area.

Detailed baseline and predictive flood modelling of levels, depths and velocities across the Project tenure will be undertaken to inform future mine planning and infrastructure siting. Potential mitigation for areas at threat of inundation by flooding will be identified following field studies and technical assessments undertaken in more detail as required as part of the EIS process.

Groundwater:
The Proposed Action is located within the area of the Water Plan GABORA (Great Artesian Basin and Other Regional Aquifers) 2017. The Proposed Action area is located within Eromanga Precipice, Hutton and Springbok Walloon zones and within the following groundwater units and sub-areas:

- Betts Creek Beds
- Winton Mackunda
- Rolling Downs
- Hutton
- Springbok Walloon
- Precipice
- Hooray
- Clematis

Queensland Government's registered groundwater database was used to identify any bores within and adjacent to the Proposed Action area. With progression of the Project, further investigations into potential impacts to groundwater and bores would be undertaken in order to determine which of these are currently in use.

Groundwater Dependent Ecosystems:
Groundwater Dependent Ecosystems (GDEs) as mapped by the State show a number of terrestrial GDEs occurring within the wider area. These are primarily associated with areas of remnant vegetation and watercourses / drainage lines. No subterranean GDEs are mapped as occurring in the Proposed Action area. There are also no active, inactive or GDE springs mapped within or close to the Proposed Action area.

3.3 Describe the soil and vegetation characteristics relevant to the project area

Soils:
There are three soil units mapped within the Proposed Action area. The soils are comprised of grey self-mulching cracking clays (associated with alluvial plains), brown and red self-mulching cracking clays (associated with undulating plains) and brown and red self-mulching cracking clays (associated with undulating clay plains and featuring areas of minor gilgai relief).

Acid sulfate soils are not expected to occur in the Proposed Action area due to the topography (i.e., not below 5 m AHD), geomorphic and soil characteristics, and lack of proximity to the coastline. A detailed soil survey and assessment will be undertaken as part of the EIS.

Vegetation characteristics:
The Proposed Action area is dominated by grassland communities. Ground-truthed vegetation communities include:

- RE 2.3.3 – Mitchell Grass dominated grassland on alluvial plains;
- RE 2.4.2a – Mitchell and Flinders Grass dominated grassland on clay plains;
- RE 2.4.5 – Very sparse open woodland on boundary of Mitchell grassland;
- RE 2.5.1a – Mixed woodland;
- RE 2.9.4x1 – Mixed low woodland on plains and low rises;
- RE 4.9.11x2 – Acacia species low open woodland on undulating plains;
- RE 4.9.12x8 – Isolated patches of very sparse woodland;
- RE 4.9.1c - Mitchell and Flinders Grass dominated grassland on undulating downs; and

Non remnant habitats.

For further details on vegetation characteristics, refer to the terrestrial ecology report (Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Section 5.1, Pages 30-37), attached to this referral.

3.4 Describe any outstanding natural features and/or any other important or unique values relevant to the project area

No outstanding natural features and/or any other important or unique values relevant to the Proposed Action area have been identified.

3.5 Describe the status of native vegetation relevant to the project area

The Proposed Action area is located in a modified landscape with large areas converted to agricultural purposes (predominately grazing) with some areas of remnant vegetation remaining. The Proposed Action area is largely mapped as comprising remnant vegetation listed as least concern under the Queensland Vegetation Management Act 1999. Refer to the Terrestrial ecology technical report (Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Section 5.1, Pages 30-37) for further details on native vegetation.

3.6 Describe the gradient (or depth range if action is to be taken in a marine area) relevant to the project area

The site is relatively flat as a whole. Topography across the Proposed Action area ranges from approximately 200 to 210 m Australian Height Datum (GDA94) from west to east, consistent with broader topographical trends in the area. There are some scattered patches in the northern half of the site featuring stony areas that are slightly raised in relief from the surrounding landscape.

3.7 Describe the current condition of the environment relevant to the project area

The Proposed Action area is dominated by grazing on native vegetation. Native grasslands appeared to be in poor condition at the time of the 2021 surveys due to a lack of recent rainfall and potential over-grazing in these areas. Multiple land uses currently exist within the broader landscape surrounding the Proposed Action area including livestock grazing on native vegetation, nearby areas of irrigated and non-irrigated cropping practices, residential and farm infrastructure, exploration activities, reservoir/dam and wetlands associated with nearby watercourses. Livestock grazing is however the dominant land use across the wider area.

Field surveys by Epic recorded a total of 16 non-native flora species across the Proposed Action area, of which Prickly Acacia (Vachellia nilotica) was the most widespread (although in highly variable density). Three of these species are classified as Weeds of National Significance (WoNS) and/or restricted invasive plants under Queensland's Biosecurity Act 2014. In addition to Prickly Acacia, the other WoNS were identified as Parkinsonia (Parkinsonia aculeata) which was widespread in sparse to mid-dense infestations and a single Athel Pine (Tamarix aphylla) tree was identified within a cattle holding yard.

Prickly Acacia is the most serious weed species. Prickly Acacia creates a woody overstorey stratum and substantially alters tussock grasslands by binding the soil and excluding some native plant species. It flourishes along watercourses and can out-compete native plants for water. Once established along watercourses and waterbodies such as dams, Prickly Acacia spreads into adjacent grasslands. Cattle preferentially graze the high protein seed pods, which can remain viable after passing through the digestive tract. Cattle spread the seeds as they move from infestations. Julia Creek Dunnart is known to be threatened by invasion of woody weeds, especially Prickly Acacia.

3.8 Describe any Commonwealth Heritage places or other places recognised as having heritage values relevant to the project

The Proposed Action area does not contain any Commonwealth Heritage Places. Other heritage places will be investigated as part of the EIS process.

3.9 Describe any Indigenous heritage values relevant to the project area

Indigenous cultural heritage tenement searches using the Queensland Government Department of Aboriginal and Torres Strait Islander Partnerships (DATSIP 2021) Aboriginal and Torres Strait Islander Cultural Heritage Database Search Request Form indicate no artefacts within the Proposed Action area or within a 1 km buffer. Further studies on cultural heritage values will be undertaken as part of the EIS process.

3.10 Describe the tenure of the action area (e.g. freehold, leasehold) relevant to the project area

The tenure of the various Lots occupied by the Proposed Action are:

Lot A on Plan AP5737 – Lands Lease (Strata)
Lot 25 on Plan B157119 – Freehold
Lot 30 on Plan B157120 – Freehold

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Lot 27 on Plan B157119 – Freehold
Lot 26 on Plan B157119 – Freehold
Lot 33 on Plan B157119 – Reserve
Lot 7 on Plan SP317969 – Freehold
Lot 5 on Plan YP28 – Freehold

3.11 Describe any existing or any proposed uses relevant to the project area

The existing land use throughout the Proposed Action area is predominantly comprised of cattle grazing. Exploration drilling has been undertaken throughout the Project area, with a mineral resource estimate in accordance with Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC 2012) totalling 560 Million tonnes (Mt) grading 0.48 percent V2O5 for 2.6 Mt V2O5 and 213 g/t Mo and 277 g/t Ni at a 0.30 percent V2O5 lower grade cut-off.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 4

Measures to avoid or reduce impacts

4.1 Describe the measures you will undertake to avoid or reduce impact from your proposed action

Following detailed environmental assessment of the Proposed Action during the EIS stage, site-specific environmental management/mitigation measures will be developed in consultation with the relevant stakeholders. Until then, preliminary mitigation measures have been identified as:

General:

Optimisation of mine layout to reduce impacts on environmental values
Progressive rehabilitation in accordance with an approved PRC Plan
Compliance with the Project's EA
Compliance with any conditions of approval issued by the OCG under the SDPWO Act, not otherwise included in the EA or other approvals
Compliance with any conditions of approval granted under the EPBC Act

Land:

Development of erosion and sediment controls and water management structures
Implementation of suitable topsoil management practices
Visual amenity screening
Staged disturbance planning and progressive rehabilitation
Rehabilitation landform modelling

Water resources:

Mine layout optimisation to minimise the requirement for any creek diversions and to provide a stable landform with the local hydrological regime
Preparation of water management plans and monitoring programs
Licensed extraction of water resources in accordance with the Queensland Water Act 2000
Minimise disturbance area/exposure of bare earth during construction activities
Water to be drawn from the raw water pond for dust suppression
Do not permit refuelling and/or servicing of vehicles and plant outside of designated areas
Implementation of a "clean water – dirty water" system to divert clean run-off around disturbed areas and direct run-off from disturbed areas to retention dams
Beneficial uses will be sought for surplus water if it is available
Water recycling at the process plant with process water from the plant dewatering, wet screening, thickening and filtering areas will be recycled to the process water pond. The process plant will recycle up to 90 percent of the raw water feed from the plant

Flora and Fauna:

Procedures for vegetation clearing and surface disturbance (e.g. pre-clearance surveys, fauna spotter catchers and salvaging of habitat features for use in rehabilitation)
Site induction program to include environmental obligations and compliance requirements
Ongoing habitat rehabilitation to reduce long-term environmental impact (habitat loss)
Dust suppressed using water trucks/wetting to keep dust related impacts to a minimum
Fire management regimes will require onsite staff to be vigilant of the potential for fire. Fire awareness training can be included in site induction process
Wastes disposed of appropriately and collected by a licensed waste contractor and taken to a licensed waste facility. Waste tracking certificates to be kept and maintained
Vehicle wash downs to ensure seeds are not spread onto site
Areas subject to progressive rehabilitation will be regularly inspected for weed presence, including Prickly Acacia
Weed and pest management measures

Air and Noise:

Dust suppression measures
Chemical surface suppressant e.g., salt, lignosulphonate or polymer to major haul road surfaces
Use of large haul trucks to reduce number of trips
Limiting vehicle speeds
Minimising drop heights
Use of filters and scrubbers within processing plant
Monitoring of greenhouse gas emissions through participation in the Australian Government's National Greenhouse and Energy Reporting Scheme

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Indigenous Cultural Heritage:

The undertaking of cultural heritage assessments and the implementation of site protection or remediation measures will be specified in the approved Cultural Heritage Management Plan (CHMP) as appropriate for the site. The Aboriginal Cultural Heritage Act 2003 (ACH Act) provides recognition, protection, and conservation of Indigenous cultural heritage. The ACH Act mandates that a CHMP or Native Title Agreement is required to be developed in accordance with Part 7 of the ACH Act when an EIS is required.

Consultation would commence during the next development phase of the Project with the aim to develop an Indigenous engagement strategy, targeting Indigenous businesses and training facilities which work to up-skill individuals throughout the region.

Waste Management:

The management of non-mineral waste would be governed by the EP Act, the EP Regulation, the Waste Reduction and Recycling Act 2011 and Queensland Waste Avoidance and Resource Productivity Strategy 2014 – 2024. Likely waste streams generated by the Project would comprise regulated waste, recyclable waste, general waste including decomposable and compostable putrescible wastes and general waste that is not compostable but may be recyclable. Any hazardous waste would be removed from the site by a licenced contractor and disposed of or recycled at appropriate off-site facilities.

4.2 For matters protected by the EPBC Act that may be affected by the proposed action, describe the proposed environmental outcomes to be achieved

The only MNES applicable to the Project area is potential habitat for fauna species listed under the EPBC Act. Four species listed as Endangered or Vulnerable are considered as potentially occurring. Three of these species, Grey Falcon, Fork-tailed Swift and Oriental Pratincole are expected to use the Project only very sporadically, if at all, based on known distribution, habitat use and the nature and condition of habitats onsite. Any possible impacts to these three species would be negligible at worst. Although there is no evidence of Julia Creek Dunnart in the Project area, there is suitable habitat present (albeit degraded) and there are two records of the species approximately 20 km south of the Project. Unlike the three highly mobile bird species, should Julia Creek Dunnart be present it is likely to be resident. The Project could contribute towards the loss of potential habitat for Julia Creek Dunnart (estimated at 554.19 ha), although the Proposed Action area represents a very minor proportion of the species distribution (refer Section 2.4.2).

An assessment of the Project's potential to cause significant residual impacts to Julia Creek Dunnart has been carried out using the criteria described in the MNES Guidelines. Under the nine-part test it is considered the Project is unlikely to cause a significant residual impact on Julia Creek Dunnart.

Environmental outcomes to be achieved:

Results from baseline assessments will guide the development of final mine layout and impact mitigation strategies for the Proposed Action. The Proponent will seek opportunities to minimise impacts to species and habitat areas. Where unavoidable impacts exist, and refined impact assessment indicates a significant residual impact is predicted, an offset strategy will be developed to counterbalance the impact.

The PRC Plan for the Project will ensure the Proposed Action area has an agreed post mining land use and describe how rehabilitation of the area will be carried out progressively over the life of mine. Following the removal of vanadium, the Project area will be returned to a locally native ecological community that is progressing towards a state resembling native grassland vegetation consistent with current land uses (analogous to surrounding unmined areas).

The rehabilitation activities within the PRC Plan will include active seeding and revegetation of the Project footprint. Further, removal of threatening processes on-site (e.g. Prickly Acacia, high intensity grazing and introduced predators such as cats) will be undertaken to facilitate the return of a functioning ecosystem post-mining.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 5

Conclusion on the likelihood of significant impacts

5.1 You indicated the below ticked items to be of significant impact and therefore you consider the action to be a controlled action

- ☐ World Heritage properties
- ☐ National Heritage places
- ☐ Wetlands of international importance (declared Ramsar wetlands)
- ☐ Listed threatened species or any threatened ecological community
- ☐ Listed migratory species
- ☐ Marine environment outside Commonwealth marine areas
- ☐ Protection of the environment from actions involving Commonwealth land
- ☐ Great Barrier Reef Marine Park
- ☐ A water resource, in relation to coal seam gas development and large coal mining development
- ☐ Protection of the environment from nuclear actions
- ☐ Protection of the environment from Commonwealth actions
- ☐ Commonwealth Heritage places overseas
- ☐ Commonwealth marine areas

5.2 If no significant matters are identified, provide the key reasons why you think the proposed action is not likely to have a significant impact on a matter protected under the EPBC Act and therefore not a controlled action

Three species (Grey Falcon, Fork-tailed Swift and Oriental Pratincole) are expected to use the Project area only sporadically, if at all, and are highly mobile. Any possible impacts to these three species would be negligible at worst and they are not assessed further. Should Julia Creek Dunnart be present it is likely to be resident and therefore impacted by the project.

There is no evidence of Julia Creek Dunnart occurring despite targeted surveys being carried out for the species for the Project. Potentially suitable habitat is present on the site, but is heavily degraded from grazing activities and weed infestation. Habitat assessment based on the species known structural requirements (presence of soil cracks, grass cover and lack of Prickly Acacia) indicates 554.19 ha of potentially suitable habitat may be impacted under the current project footprint (refer Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml, Section 8, Pages 54-60).

An assessment of the Project's potential to cause significant residual impacts on Julia Creek Dunnart using the criteria described in the MNES significant impact guidelines 1.1 (DE 2013) is summarised as follows and in detail in the attached Terrestrial ecology technical report. The assessment is informed by the National recovery plan for the Julia Creek dunnart (Sminthopsis douglasi) (DERM 2009).

The species has not been recorded onsite during targeted surveys for the Project and there are no database records of the species within 20 km of the mine site. There are no records more recent than the year 2000 within 50 km of the Proposed Action. There is no important population identified as occurring within the area (DERM 2009) and no evidence to suggest one may occur. Habitat assessments indicate the Project will result in the disturbance of 554.19 ha of habitat potentially suitable for the species. There is up to 27,828 ha of potentially suitable habitat for the species mapped within a 10 km radius of the mine site. The mine site area is surrounded by identical suitable grassland habitat to the west, south and east. Habitat within the Proposed Action area is a relatively minor proportion of the available habitat in the immediate surrounds. The overall area of occurrence of the species is estimated at 6,000,000 ha (Woinarski et al. 2014; TSSC 2016).

The mine site area is subject to ongoing grazing pressure which appears to be high and adversely impacting potential habitat for the species. Prickly Acacia is common in portions of the Proposed Action area. As noted in the Recovery plan for the species, freehold/leasehold lands where clay soils exist and grazing pressure and Prickly Acacia densities are low, is critical for the conservation of the species (DERM 2009). As such, it is unlikely the mine site area maintains habitat critical to the survival of the species and the Project will not impact such habitat.

It is accepted the Project may decrease the availability of habitat for the species, but it is considered very unlikely to be to the extent that the species is likely to decline.

Weed and pest control measures will be incorporated into the Project Weed and Pest Management Plan to control the introduction and spread of weed and pest species and novel diseases/pathogens across the mine site and surrounds. Invasive species known to be threats to Julia Creek Dunnart (feral Cat and Prickly Acacia) are already present.

The Recovery plan (DERM 2009) includes six specific objectives and 16 actions. The Project will not preclude or inhibit any the objectives and actions and may align with certain actions through implementation of weed and pest control programs and promoting awareness of the species (as per Actions 2.1, 3.2 and 5.1).

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Although it is considered that Julia Creek Dunnart has potential to occur in the Proposed Action area it is considered unlikely the Proposed Action will result in a significant residual impact to the species.

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 6

Environmental record of the person proposing to take the action

6.1 Does the person taking the action have a satisfactory record of responsible environmental management? Explain in further detail

Yes. The Proponent has never been convicted of an environmental offence under Queensland or other Australian Government legislation. Further, Dr Shuang Ren (CEO) has not been convicted of any offences under environmental legislation. The Proponent demonstrates their commitment to environment management through the development and implementation of policies and procedures that ensure environmental compliance.

6.2 Provide details of any past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against either (a) the person proposing to take the action or, (b) if a permit has been applied for in relation to the action – the person making the application

Not applicable. There are no past or present proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources.

6.3 If it is a corporation undertaking the action will the action be taken in accordance with the corporation's environmental policy and framework?

☑ Yes ☐ No

6.3.1 If the person taking the action is a corporation, provide details of the corporation's environmental policy and planning framework

Refer Att B_RVT-POL-ADM-004 Environmental for a copy of the Proponent's environmental policy.

6.4 Has the person taking the action previously referred an action under the EPBC Act, or been responsible for undertaking an action referred under the EPBC Act?

☐ Yes ☑ No

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 7

Information sources

Reference source

ALA 2021, Atlas of Living Australia, https://www.ala.org.au/.

Reliability

Collates species occurrence records from a variety of sources including government databases, museum records and uploaded independent citizen records. Includes some records with high spatial uncertainty and independent records may be of uncertain reliability - Medium

Uncertainties

Medium

Reference source

BAAM 2011, Copperstring Project SEIS Supplementary Terrestrial Ecology Assessment Report, Biodiversity Assessment and Management, Cleveland, report prepared for Copperstring Pty Ltd.

Reliability

Report compiled by an ecological consultancy ten years ago - Medium

Uncertainties

Low

Reference source

DATSIP 2021, Tenement Search, Department of Aboriginal and Torres Strait Islander Partnerships, viewed June 2021.

Reliability

Information provided by the Queensland Government - High

Uncertainties

Low

Reference source

DAWE 2021, Species Profile and Threats Database, Department of Agriculture, water and the Environment, Canberra, http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

Reliability

Information provided by the Australian Government - High

Uncertainties

Low

Reference source

DEE 2021a, Australia's National Heritage List, Department of the Environment and Energy, viewed 19 February 2021, https://www.environment.gov.au/heritage/places/national-heritage-list.

Reliability

Information provided by the Australian Government - High

Uncertainties

Low

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Reference source

DEE 2021b, Protected Matters Search Tool, viewed 16 February 2021, Department of the Environment and Energy, https://www.environment.gov.au/epbc/protected-matters-search-tool

Reliability

While based on some species records, PMST relies on predictive modelling of suitable habitats and does not necessarily reflect an actual record of the species in question for a particular location. In some instances, it generates predictions of species for which there are no records, based on habitat only - Medium

Uncertainties

Medium

Reference source

Department of the Environment (DE) 2013, Matters of National Environmental Significance Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999, Department of the Environment, Water, Heritage and Arts, Canberra.

Reliability

Information provided by the Australian Government - High

Uncertainties

Low

Reference source

DERM 2009, National recovery plan for the Julia Creek dunnart (Sminthopsis douglasi), report to the Department of the Environment, Water, Heritage and the Arts, Canberra. Queensland Parks and Wildlife Service, Brisbane.

Reliability

Information provided by the Queensland Government on a species that more research is required for - Medium

Uncertainties

Medium

Reference source

DES 2021, WetlandMaps – Interactive Maps and Wetlands Data in Queensland, WetlandInfo website, 3 March 2021, https://wetlandinfo.des.qld.gov.au/wetlands/facts-maps/get-mapping-help/wetland-maps/.

Reliability

Mapping from the Queensland Government - High

Uncertainties

Low

Reference source

Higgins, PJ (ed) 1999, Handbook of Australian, New Zealand and Antarctic birds, Volume 4: parrots to dollarbird. Oxford University Press, Melbourne.

Reliability

Handbook by reputable author - High

Uncertainties

Low

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Reference source

Higgins, PJ & Davies, SJJF (eds) 1996, Handbook of Australian, New Zealand and Antarctic birds, Vol. 3: snipe to pigeons, Oxford University Press, Melbourne.

Reliability

Handbook by reputable author - High

Uncertainties

Low

Reference source

Joint Ore Reserves Committee (JORC) 2012, Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code), Available from: http://www.jorc.org.

Reliability

Current code for reporting of exploration results, mineral resources and ore reserves - High

Uncertainties

Low

Reference source

Lane, BA 1987, Shorebirds in Australia, Nelson Publishers, Melbourne.

Reliability

Reputable source - Medium

Uncertainties

Low

Reference source

Mifsud, G 1999, Ecology of the Julia Creek dunnart Sminthopsis douglasi (Marsupialia: Dasyuridae), Masters Thesis, La Trobe University.

Reliability

Known expert on the species - High

Uncertainties

Medium

Reference source

Mifsud, G 2001, Monitoring of Julia Creek dunnart populations at Bladensburg National Park, April 2001, Report to the Queensland Parks and Wildlife Service, Brisbane.

Reliability

Known expert on the species - High

Uncertainties

Medium

Reference source

Office of Environment and Heritage (OEH) 2017. Grey Falcon – Profile. New South Wales Government. Available from: https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10330.

Reliability

Government department - High

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Uncertainties

Low

Reference source

QG 2019-2021, Queensland Globe, Queensland Government, viewed 12 December 2019 to 25 April 2021, https://qldglobe.information.qld.gov.au/

Reliability

Variety of information resources through online mapping provided by the Queensland Government - High

Uncertainties

Low

Reference source

QG 2021, Wildlife Online species extract, Queensland Government, viewed 16 February 2021, https://apps.des.qld.gov.au/report-request/species-list/

Reliability

Species information provided by the Queensland Government. Results based on species database records within 50 km buffered search area - High

Uncertainties

Low

Reference source

Schoenjahn, J 2010, 'Field identification of the grey falcon Falco hypoleucos', Australian Field Ornithology, vol. 27, pp. 49-58.

Reliability

Reputable source in a widely distributed publication - High

Uncertainties

Low

Reference source

Schoenjahn, J 2018, Adaptations of the rare endemic Grey Falcon Falco hypoleucos that enable its permanent residence in the arid zone of Australia. PhD Thesis. University of Queensland

Reliability

Reputable source reporting on the species in the area of interest - High

Uncertainties

Low

Reference source

Threatened Species Scientific Committee (TSSC) 2016, Conservation Advice Sminthopsis douglasi Julia Creek dunnart, Threatened Species Scientific Committee, Department of the Environment and Energy, Canberra, available from: http://www.environment.gov.au/biodiversity/threatened/species/pubs/305-conservation-advice-07122016.pdf.

Reliability

Committee established under the EPBC Act - High

Uncertainties

Low

Reference source

TSSC 2020, Conservation Advice Falco hypoleucos Grey Falcon. Department of Agriculture, Water and the Environment, Canberra. Accessed at: http://www.environment.gov.au/biodiversity/threatened/species/pubs/929-conservation-advice-09072020.pdf.

Reliability

Committee established under the EPBC Act - High

Uncertainties

Low

Reference source

Woinarski, JCZ, Burbidge, AA & Harrison, PL 2014, The action plan for Australian mammals 2012, CSIRO Publishing, Collingwood.

Reliability

Reputable source in a widely distributed publication - High

Uncertainties

Low

Reference source

Woolley, PA 2008, 'Julia Creek Dunnart Sminthopsis douglasi', in S Van Dyck & R Strahan, (eds), The mammals of Australia, Third Edition, Reed New Holland, Sydney.

Reliability

Known expert on the species - High

Uncertainties

Medium

Reference source

Woolley, PA 2017, 'Diurnal resting sites of the nocturnal dasyurid marsupial Sminthopsis douglasi in Bladensburg National Park, Queensland', Australian Mammalogy, vol. 39, pp. 121–126.

Reliability

Known expert on the species - High

Uncertainties

Medium

Reference source

Wilson, BA 1999. 'Mitchell Grass Downs'. Pages 4/1 – 4/29 in P. Sattler and R. Williams, editors. The Conservation Status of Queensland's Bioregional Ecosystems. Environmental Protection Agency, Brisbane.

Reliability

Reputable source in a Queensland Government based publication - High

Uncertainties

Low

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 8

Proposed alternatives

Do you have any feasible alternatives to taking the proposed action?

Yes ☑ No

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Section 9

Person proposing the action

9.1.1 Is the person proposing the action an organisation or business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	RICHMOND VANADIUM TECHNOLOGY PTY LTD
Business name	
ABN	63617799738
ACN	
Business address	Level 11, 251 Adelaide Terrace, Perth, 6000, WA, Australia
Postal address	
Main Phone number	(08) 6141 9500
Fax	
Primary email address	info@richmondvanadium.com.au
Secondary email address	

9.1.2 I qualify for exemption from fees under Regulation 5.23(1)(ii) of the EPBC Regulations because I am:

☑ Small business
☐ Not applicable

9.1.2.1 You must provide the date/income year that you became a small business entity:

07/03/2017

9.1.2.2 I would like to apply for a waiver of full or partial fees under Regulation 5.21A of the EPBC Regulations

☐ Yes ☑ No

9.1.3 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Shuang
Last name	Ren
Job title	Chief Executive Officer
Phone	(08) 6141 9500
Mobile	
Fax	
Email	info@richmondvanadium.com.au
Primary address	Level 11, 251 Adelaide Terrace, Perth, 6000, WA, Australia
Address	

Declaration: Person proposing the action (To be signed by the person at 9.1.3)

I, SHUANG KUI REN, **declare that to the best of my knowledge the information I have given on, or attached to the EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence. I declare that I am not taking the action on behalf or for the benefit of any other person or entity.**

Signature: ..... **Date:** 15/11/2021

I, SHUANG KUI REN, **the person proposing the action, consent to the designation of** Richmond Vanadium Technology Pty Ltd **as the proponent for the purposes of the action described in this EPBC Act Referral.**

Signature:..... **Date:** 15/11/2021

I have read the Department of the Environment and Energy's guidance in the online form concerning the definition of a small business entity and confirm that I qualify for a small business exemption.

Signature:..... **Date:** 15/11/2021

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Proposed designated proponent

9.2.1 Is the proposed designated proponent an organisation or business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	RICHMOND VANADIUM TECHNOLOGY PTY LTD
Business name	
ABN	63617799738
ACN	
Business address	Level 11, 251 Adelaide Terrace, Perth, 6000, WA, Australia
Postal address	
Main Phone number	(08) 6141 9500
Fax	
Primary email address	info@richmondvanadium.com.au
Secondary email address	

9.2.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Shuang
Last name	Ren
Job title	Chief Executive Officer
Phone	(08) 6141 9500
Mobile	
Fax	
Email	info@richmondvanadium.com.au
Primary address	Level 11, 251 Adelaide Terrace, Perth, 6000, WA, Australia
Address	

Declaration: Proposed Designated Proponent

I, SHUANG KUI REN **,the proposed designated proponent, consent to the designation of myself as the proponent for the purposes of the action described in this EPBC Act Referral.**

Signature: ..... **Date:** 15/11/2021

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Referring party (person preparing the information)

9.3.1 Is the referring party an organisation or a business?

☑ Yes ☐ No

Organisation

Organisation name (as registered for ABN/ACN)	EPIC ENVIRONMENTAL PTY LTD
Business name	
ABN	54169579275
ACN	
Business address	Level 17, 95 North Quay, Brisbane, 4000, QLD, Australia
Postal address	
Main Phone number	1800779363
Fax	
Primary email address	enquiries@epicenvironmental.com.au
Secondary email address	

9.3.2 Contact (for an organisation - the contact details of the person authorised to sign on behalf of the organisation)

First name	Mark
Last name	Breitfuss
Job title	Director / Principal Environmental Scientist
Phone	0400 412 212
Mobile	
Fax	
Email	mbreitfuss@epicenvironmental.com.au
Primary address	Level 17, 95 North Quay, Brisbane, 4000, QLD, Australia
Address	

Declaration: Referring party (person preparing the information)

I, Mark Breitfuss **, declare that to the best of my knowledge the information I have given on, or attached to this EPBC Act Referral is complete, current and correct. I understand that giving false or misleading information is a serious offence.**

Signature: ..... **Date:** 16.11.2021

Australian Government
Department of Agriculture, Water and the Environment

Note: PDF may contain fields not relevant to your application. These fields will appear blank or unticked. Please disregard these fields.

Appendix A

Attachment

Document Type	File Name
action_area_images	20211105_50mBufferZone_GDA20MGA54.shp
action_area_images	20211105_LOMPit_GDA20MGA54.shp
action_area_images	20211105_Mine Infrastrucure Area_GDA20MGA54.shp
action_area_images	20211105_StarterPit_GDA20MGA54.shp
action_area_images	Att C_Figure 1 Regional Location.pdf
flora_fauna_investigation	Att A_BE200088.01-RPT-Terrestrial Ecology-Rev0_sml.pdf
corp_env_policy_docs	Att B_RVT-POL-ADM-004 Environmental.pdf

Appendix B

Coordinates

Area 1
-20.498470875999,142.834477091
-20.512581900223,142.83255952297
-20.511580565954,142.82093842751
-20.506195178402,142.75583058452
-20.473726907343,142.75876971427
-20.438477674154,142.76213716718
-20.435086929658,142.76537163129
-20.431804954168,142.76850201795
-20.431804596999,142.81781023
-20.448471241,142.817810296
-20.448471086999,142.834476772
-20.498470875999,142.834477091