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Environmental Impact Self-Assessment

Nolans Bore - Explosives Magazine and Gravel Pits

25 March 2024

PREPARED FOR:

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listen. think. deliver.

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Section 1 Assessment Overview

Arafura Rare Earths Limited (Arafura) propose gravel pits, explosives magazine and access for the Nolans Project (hereafter referred to as the 'development areas') – specifically ML33107, EMP33078, EMP33079, EMP33080, EMP33081, EMP33082, EMP33083, EMP33084, EMP33085, AA33279 and AA33280 (collectively referred to as the development area) (Figure 1-1). The proposed activities were included within the Environmental Impact Statement (EIS) assessed under the Northern Territory Environment Protection Act 2019 (EP Act) and the Commonwealth Environment Protection and Biodiversity Act 1999 (EPBC Act).

In the EIS the explosives magazine was proposed to be located near the southwest corner of WRD 1 whilst the location of the borrow pits were not specified, though the EIS stated that a range of raw material requirements for construction and operations, including gravel, would be sourced "either from within or near the Nolans site." These EIS references are presented in Appendix 1 of this document. Subsequent to approvals under both Acts, the locations of the gravel pits and explosives magazine (ie the development area) have been confirmed and assessing the environmental impacts associated with disturbance at these locations are the subject this self-assessment.

The intent of the self-assessment is to determine whether impacts on environment values specific to the development area (in addition to those assessed for the Nolans Project by the EIS) are considered significant or not, and whether they require referral for assessment to the Northern Territory Environment Protection Authority (NT EPA) and/or Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).

The assessment has taken into account the Environmental Impact Statement, Mine Management Plan, DCCEEW licence conditions and site-specific survey validating habitat assessments and protected species likelihood of occurrence assessment. An ecological survey of the explosives magazine and gravel pits was undertaken by EcOz Environmental Services in February 2024, it is noted that no significant values of concern or MNES were identified during the survey.

The project area has been extensively surveyed for cultural heritage artifacts (regulated under the Heritage Act 2011) and sacred sites (regulated under the Sacred Sites Act 1989). The project area has previously been subject to heritage surveys in conjunction with the Traditional Owners in 2006, 2010, 2012, and 2015.

Additionally, in 2022 and 2023, Extent Heritage conducted two heritage due diligence surveys to augment the historical surveys. These recent surveys covered these areas:

- Camp
- Pipeline
- Turkey's nest at the processing plan
- Gravel borrow pits (EMP 33078-33085)
- Site Access Road realignment (SAR)
- Borefield pipeline alignment
- Solar farm
- Mine Access Road (MAR)

The Traditional Owners (Anmatjere People) were invited to participate in these due diligence surveys, however, they declined because they stated that the area had been extensively surveyed by Traditional Owners in the past and conducting another survey in their company was not necessary.

Cultural heritage artifact scatters are common across the Project area, and all known scatters have either been avoided by the project designs, or where avoidance was not possible, have been authorised to be removed by Works Approvals issued by the NT Heritage Council in 2022 and 2023.

The Extent heritage surveys could only assess the archaeological (scientific) significance of these areas. Any assessment of the cultural significance would require the input of the Traditional Owners through the application of an Aboriginal

Areas Protection Authority (AAPA) Certificate issued by AAPA and a Sacred Sites Clearance Certificate (SSCC) issued by the Central Land Council (CLC).

The locations of Sacred Sites (as regulated under the Sacred Sites Act 1989) around and adjacent to the Project area are well known from the previous and current SSCC and AAPA certificates:

- AAPA Authority Certificate C2008-205 – issued for exploration of the mine ML.
- AAPA Authority Certificate C2013-205 - issued for exploration over the entire mining area and borefield.
- AAPA Authority Certificate C2024-012 – issued for the current operations and borefield (excluding the gravel pits, magazine and solar farm).
- CLC SSCC C2019-105 - issued for the current operations and borefield (excluding the gravel pits, magazine and solar farm).
- SSCC C2022-080v1 – issued for the current site access road and mine access road alignments.
- C2023-032v1 – issued for the production and monitoring bores in the borefield.

A CLC SSCC for the magazine, solar farm and gravel pit areas has been applied to from CLC and will be issued once a current update to the Project Native Title Agreement (NTA) is finalised. An AAPA certificate for these areas will be applied for once the NTA is finalised.

The magazine area will be surveyed for artifacts prior to any ground disturbance, and if located, the project design will be adjusted or a Works Approval application to the NT Heritage Council will be made to salvage any discovered objects.

Due to the number of SSCC and AAPA certificates both historical and current for the project, it is unlikely that a Sacred Site will be found in the magazine or gravel pit areas. Therefore, the potential to encounter previously unidentified sacred sites is very low.

All development activities will be conducted in accordance with the Arafura Cultural Heritage Management Plan approved under Mining Authority 1127-1. This includes conformance with the following procedures:

- Unexpected Finds Procedure – Historical and Cultural Heritage Items
- Unexpected Finds Procedure – Suspected Human Remains

The conclusion of the assessment is that the disturbance is not significant (noting the cumulative disturbance of threatened species habitat does not exceed that already approved for the development) and does not require further referral under the EP Act or EPBC Act for assessment. The mitigation of environmental impacts can be managed through amendments of the Mine Management Plan, the Nolans Construction Materials Mining Management Plan (NRE-0000-O-PLN-O-0002 Rev 1.3) and the DCCEEW approval.

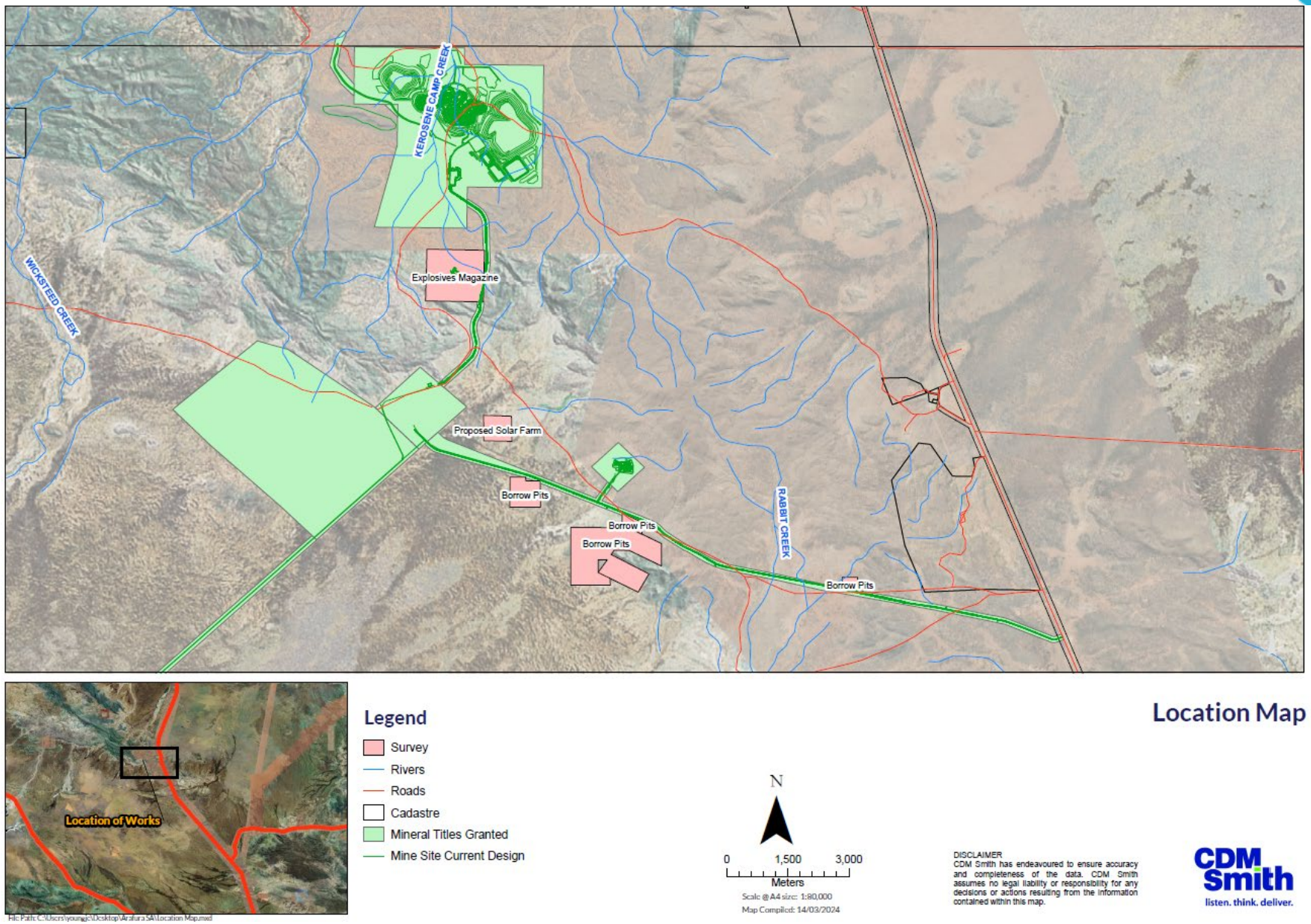

Figure 1-1 Location Map

Section 2 Referral Screening Tool

The Northern Territory Environmental Protection Authority (NTEPA) has developed a screening tool to assist proponents in determining whether a proposed action requires formal referral under the EP Act (NTEPA, 2021a). Likewise DCCEEW present guidance as it relates to the EPBC Act; https://www.dcceew.gov.au/environment/epbc/advice/self-assessments. A hybrid approach has been adopted for the self-assessment of the gravel pits and explosives magazine following both DCCEEW and NT EPA guidance.

The NT EPA screening tool is comprised of two parts namely, Part 1 (Screening questions) and Part 2 (Checklist). As the actions are related to a larger action, Part 1 has been presented here to inform the reader on the assessment considerations. However, note that due to the context of the activities being assessed (i.e. that the activities have been assessed under the EIA process and the areas are the subject of assessment) the applicability has been interpreted.

2.1 Part 1 – General Screening Questions

1	Is the industry type or activity proposed inherently hazardous with the potential to give rise to multiple or major impact sources and environmental stressors with the potential to impact on the environment? If so, does the nature of the industry preclude impact sources and stressors being substantively reduced?	YES	Refer action
	NO		
2	**Site selection**: Are any environmental values present, or likely to be present within the site/area that has the potential to be impacted by the proposal (either directly, indirectly, or cumulatively)? If so, is it considered impractical to change the locations or design of the action to avoid the environmental value/s?	YES	Refer action
	NO		
3	**Construction and operation**: Are any environmental values or sensitivities within the area of influence and the region in which the proposal is located likely to be impacted by methods of construction and operation, timing, or inputs (water, raw materials, machinery, chemicals, staff) and outputs (product, emissions, discharges, wastes) of the proposal?	YES	Refer action
	NO		
4	**End of life**: Are any environmental values or sensitivities likely to be impacted when the proposal finishes its functional life and closes? If so does the action have the potential to cause ongoing environmental impacts, or residual impacts?	YES	Refer action
	NO		
5	**Cumulative impacts**: At any stage of the life of the proposal, on its own or cumulatively with other proposals and actions, does the proposal have the potential to impact an environmental value? If so, referral is likely to be required.	NO	Referral may not be required

2.2 Part 2 – Checklist

Table 2-1 has been reviewed within the context and framework of the NTEPA's environmental factors and objectives (NTEPA, 2021b) and EPBC Matters of National Environmental Significance (MNES)[1].

The scope of the development in the context of the self-assessment includes:

- Disturbance associated with the construction and operation of gravel pits, explosives magazine and access roads.

The assessment provides a preliminary evaluation of whether the proposed activities in relation to the confirmed locations have the potential to result in a significant impact on the environment and if further referral to the NTEPA or DCCEEW is necessary. The assessment of impact takes into consideration the proposed mitigation measures and available site-specific information, as well as the existing licence conditions for the development that, for example, allow limited clearing of critical habitat.

To undertake a preliminary evaluation of impacts on the NT EPA and DCCEEW factors it is important to understand the definition of 'significant impact'. Refer to Section 2.3 for the definition of a 'significant impact' in relation to the Northern Territory Environment Protection Act 2019 (EP Act) and the NT EPA's contemporary guidance and the EPBC Act; https://www.dcceew.gov.au/environment/epbc/publications/significant-impact-guidelines-11-matters-national-environmental-significance.

***Explanation**: Use questions 1-5 from part 1 of the screening tool. Indicate answer to questions 1-5 in corresponding checkbox. The table below gives an indication of the possible environmental values for each environmental factor that should be considered when considering each question. If the answer to a question is 'yes', it is possible that the proposal may have the potential to have a significant impact on the environment and the proposal should be referred to the NT EPA (NTEPA, 2021a).*

[1] https://www.agriculture.gov.au/sites/default/files/documents/nes-guidelines_1.pdf

Table 2-1 Pre-Referral screen tool Part 2

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development areas	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
LAND	1) Landforms Objective: Conserve the variety and integrity of distinctive physical landforms.	▪ distinctive features in the landscape, either geological or anthropogenic ▪ subterranean karstic terrain and faults ▪ craters, gorges, ranges, caves, massifs, escarpments, plateaus ▪ monuments ▪ tourism related to landforms	▪ The development area is in the Burt Plain Bioregion and is broadly characterised by plains of acacia shrubland, tussock grassland and hummock grassland, acacia and eucalypt woodlands, and mountain ranges in the east, north and west of the bioregion ▪ The site is not in close proximity to National Parks nor high tourism areas.	N/A	N/A	N/A	N/A	N/A	**Potential impacts are not considered significant.** ▪ No key distinctive physical landforms relevant to the development area for the NT EPA 'Landforms' factor.
	2) Terrestrial environmental quality (TEQ) Objective: Protect the quality and integrity of land and soils so that environmental values are supportedand maintained.	▪ good quality soils, including chemical, physical, biological and aesthetic qualities thatsupport life ▪ the biological processes that depend on soil quality	▪ The site is located within the Southeastern Reynolds Range, which lies over the Arunta Province. The Arunta region is a basement inlier with a complex history of sedimentation, magmatism and tectonism. ▪ The surface geology, particularly within the northern parts of the resource area, comprise in-situ derived Quaternary sediments and minor alluvial and Aeolian sand sediments, with minor carbonate deposits. ▪ The dominant soil types within the development area are Rudosols, defined as minimally developed soils, with a generally thin A1 horizon and the occasional minor B horizon in fissures within the underlying parent rock or saprolite. ▪ There are no known areas of contaminated soils within the development area as it has not been previously developed. ▪ There has been limited previous disturbance to the area involving access tracks.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ Environmental values associated with TEQ at the site are highly limited. ▪ There is no known presence of contamination that could be mobilised to air or water during land clearing and construction.
	3) Terrestrial ecosystems Objective: Protect terrestrial habitats to maintain environmental values including biodiversity, ecological integrity and ecological functioning.	▪ 'sensitive or significant' vegetation or buffers (as defined in the NT Land Clearing Guidelines) ▪ vegetation that provides an important ecological function ▪ listed threatened species and their habitat (NT and Commonwealth) ▪ listed migratory species and their habitat (Commonwealth) ▪ listed threatened ecological communities (Commonwealth) ▪ locally endemic species or species with restricted habitat ▪ species of social, cultural, livelihood and/or economic significance ▪ species that are data deficient and their status is unknown ▪ protected area or reserve, including Indigenous Protected Area	▪ The development area is outside mapped mangroves and rainforests as per ecological surveys. ▪ The development area is outside mapped 'significant vegetation' as per DEPWS Natural Resource Maps (NR Maps) and ecological surveys. ▪ Several threatened fauna species listed under the Territory Parks and Wildlife Conservation Act 2001 (NT) (TPWC Act) with potential to occur within the area and surrounds (GHD 2016). ▪ Targeted surveys in 2010, 2011 and 2015, and NT Atlas records, confirm that Central Australian Rock-wallaby inhabits rocky ranges and hills located within and surrounding the Nolans development area. ▪ Southern Whiteface (*Aphelocephala leucopsis*) is listed a Vulnerable. Previous surveys have recorded Southern Whiteface in the area (GHD 2016). ▪ No protected areas or reserves occur within the vicinity of the development area. ▪ No nominated, provisional or declared heritage places located within, or directly adjacent to, the development area although there is a Traditional Owner Restricted Work Area to the west.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ A desktop threatened species likelihood of occurrence assessment was undertaken (EcOz 2024). No threatened flora species were identified within search area. ▪ Two threatened species (Central Australian Rock-wallaby and the Southern Whiteface) have a reasonable chance of occurring within the development area. Targeted field survey for the Rock wallaby confirmed that the species does not currently inhabit the lease areas, and that critical habitat is not present. Targeted field survey for the Whiteface did not record species presence however it has been recorded in the area. The low quality of habitat and vast areas of surrounding suitable habitat conclude any impacts are not significant. ▪ Pre-disturbance surveys will be conducted. ▪ Clearing of habitat for listed threatened species will be within the cumulative allowance by DCCEEW for the development area, as listed in EPBC 2015/7436 conditions of approval. ▪ Management Plans will be developed. and include controls for introduced species (weeds), biodiversity, waste, as part of the Mining Management Plan supporting documentation.

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development areas	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
		▪ existing conservation and management activities ▪ introduced species and/or invasive species ▪ integrity of terrestrial ecosystems and the ecological services they provide ▪ biological and functional diversity ▪ provision of refuge ▪ food supply							
WATER	1) Hydrological processes Objective: Protect the hydrological regimes of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	▪ the supply and quantity of water in surface water features including rivers, lakes, wetlands, swamps, creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines ▪ the supply and quantity of water in groundwater features including aquifers, aquitards and water tables ▪ declared beneficial uses ▪ present and future uses, and users of water ▪ current or potential water supplies, including regional scale aquifers ▪ culturally important water features or other features affected by water level	▪ There are no groundwater bores in the development area. ▪ The development area would only be subject to sheet flow during precipitation events. ▪ The development area is not within a Water Control District.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ No groundwater will be taken during construction activities. ▪ No permanent surface water features within the development area and surrounds. ▪ No mapped groundwater dependent ecosystems or springs and ground-truthed ecological surveys support the mapping. ▪ The development area is outside all use and management control areas. ▪ All activities will be undertaken in a limited disturbance footprint with limited scale and extent. There will be no significant changes to the surfaces and therefore no risk of significantly altering the existing hydrological regime.
	2) Inland water environmental quality Objective: Protect the quality of groundwater and surface water so that environmental values including ecological health, land uses and the welfare and amenity of people are maintained.	▪ the quality of water in surface water features including rivers, lakes, wetlands, swamps,creeks, billabongs, intermittent streams, floodplains, mangroves and drainage lines ▪ the quality of water in groundwater features including aquifers and water tables ▪ declared beneficial uses ▪ present and future uses and users of water ▪ current or potential water supplies, including regional scale aquifers ▪ potability / drinkability ▪ culturally important water features	▪ No permanent freshwater habitats in or surrounding the development area.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ No groundwater will be taken during construction activities. ▪ No permanent surface water features within the development area and surrounds. ▪ The development area is outside all use and management control areas. ▪ All activities will be undertaken in a limited disturbance footprint with limited scale and extent. There will be no significant changes to the surfaces and therefore no risk of significantly altering the existing hydrological regime. ▪ General construction environmental management controls will be developed and implemented (including erosion and sediment controls).
	3) Aquatic ecosystems	▪ threatened species	▪ Kerosene Camp Creek runs through the proposed mine site and directly across the proposed pit area. This creek is fed via a	N/A	No	No	No	No	**Potential impacts are not considered significant.**

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development areas	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
SEA	<u>Objective</u>: Protect aquatic habitats to maintain environmental values including biodiversity, ecological integrity and ecological functioning.	▪ the health of the biota in inland waterways ▪ the habitats that support the lifecycle of aquatic biota ▪ groundwater dependent ecosystems ▪ Ramsar wetlands ▪ species of social, cultural, livelihood and/or economic significance ▪ integrity of aquatic ecosystems and the ecological services they provide ▪ biological and functional diversity ▪ provision of refuge	number of tributaries. No aquatic fauna have been recorded from the development area. ▪ Kerosene Camp Creek is ephemeral with sporadic flow events. ▪ No inland aquatic habitats (i.e. lakes, wetlands, creeks) present within the development area and surrounds. ▪ No groundwater dependent ecosystems present. ▪ No Ramsar wetlands occur within the vicinity of the development area.						▪ There are no inland aquatic environments within the boundaries of the development area or in close proximity. ▪ With the implementation of standard construction and operational management controls there is little to no identifiable risk to downstream aquatic ecosystems values, should there be any that occur.
	1) Coastal processes <u>Objective</u>: Protect the geophysicaland hydrological processes that shape coastal morphology so thatthe environmental values of the coast are maintained.	▪ processes that support marine ecosystems (see Marine Ecosystems Factor below) such as coral reefs, mangroves, salt marshes, seagrass meadows and sponge gardens ▪ primary productivity ▪ nutrient cycling ▪ carbon storage ▪ climate regulation ▪ conservation significant low lying areas including tidal creeks, deltas and river mouths ▪ storm surge protection ▪ unique coastal landforms ▪ cultural and aesthetic values ▪ active or passive recreation	• NA	N/A	No	No	No	No	**NA**
	2) Marine Environmental Quality <u>Objective</u>: Protect the quality and productivity of water, sediment and biota so that environmental valuesare maintained.	▪ quality of the water, sediment and biota ▪ ecosystem health condition ▪ physical parameters that support fishing and aquaculture ▪ physical parameters that support recreation and aesthetics ▪ industrial water supply ▪ cultural and spiritual values	• NA	N/A	No	No	No	No	**NA**
	3) Marine ecosystems <u>Objective:</u> Protect marine habitats to maintain environmental	▪ conservation significant marine and coastal fauna and critical habitat such as nesting, breeding or foraging habitat ▪ conservation significant marine and coastal benthos, flora and vegetation (seagrass meadows,	• NA	N/A	No	No	No	No	**NA**

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development areas	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
	values including biodiversity, ecological integrity and ecological functioning.	sponge gardens, coral reefs, mangrove communities and salt marshes) ▪ groups of species (species richness and assemblages of species) ▪ ecological functions and processes ▪ species of social, cultural, livelihood and/or economic significance. ▪ integrity of marine ecosystems and the ecological services they supply ▪ biological diversity ▪ functional diversity ▪ provision of refuge ▪ food supply							
AIR	1) Air quality Objective: Protect air quality and minimise emissions and their impactso that environmental values are maintained.	▪ the chemical, physical and biological characteristics of quality air ▪ the biological processes that depend on the air quality	▪ There are no permanent sources of air pollution in the existing environment.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ Air emissions from vehicles will be localised and temporary (during construction) with no impact on the ambient air quality. ▪ Given the relatively remote location of the site air quality is expected to be good most of the year and the development area would not alter the local or regional quality. ▪ Appropriate dust control measures are considered to be effective in mitigating potential impacts.
	2) Atmospheric processes Objective: Minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions by 2050.	• a contribution to the NT's greenhouse gas emissions • adaptation to a changing climate • capacity of communities and country to respond or adapt to climate change	▪ Emissions from the development area will be minimal in a local scale greenhouse emissions context.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ Increase in greenhouse gas emissions associated with development related vehicle movements and construction will be minimal and certainly not significant. ▪ The development area would not exceed trigger values in the large emitter policy.
PEOPLE	1) Community and economy Objective: Enhance communities and the economy for the welfare, amenity and benefit of current and future generations of Territorians.	▪ dwellings, homelands, communities, towns and suburbs where people live ▪ liveable environment ○ good amenity – air quality, noise, aesthetics ○ access to natural resources including bush food ○ recreational use of the natural or built environment (e.g.	▪ Enhancement to communities and businesses as discussed in the EIS Economic Impact Report and Social Impact Assessment, and MMP Territory Benefits Plan	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ The are no existing commercial operations in the ▪ development area or that will be negatively impacted by the development. ▪ Community and amenity benefits from the mines development as referenced in the EIS and MMP

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development areas	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
		fishing, cycling, sports, picnics) ○ access to social infrastructure and services including transport and logistics ▪ Healthy lifestyles ○ sense of wellbeing ○ good mental health ○ community aspirations ▪ Financial security ○ affordable access to food, water, electricity, transport and communication networks ○ livelihoods ▪ participation in jobs, businesses and education ▪ existing industries such as agriculture, pastoralism, tourism, fisheries ▪ vulnerable sectors of the community ▪ connections to culture and community (that are not explicitly protected under culture and heritage legislation addressed in the Culture and heritage factor) ○ Aboriginal rights and interests, including right of access ○ cultural practices ○ sense of belonging, inclusion, connectedness and cohesion ○ healthy social relationships							
	2) Culture and heritage <u>Objective</u>: Protect sacred sites, culture and heritage.	▪ sacred sites ▪ historic heritage and places ▪ world heritage	▪ Anthropology surveys of the area have been completed and there are no sites of significance in the development area. Therefore, the potential to encounter previously unidentified heritage sites is very low. ▪ There are no significant European heritage sites within or in the vicinity of the site. ▪ There are no world heritage areas in or near the site.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ There are no Aboriginal sites of significance within the development area.

Theme	Environmental factor and objective	Indicative environmental values and sensitivities relevant to each environmental factor	Summary of key environmental values and sensitivities of relevance to the development areas	Proponent's answer to screening questions 1-5. If answer is 'yes' consider, justify or assess the significance (Yes/ No/ Uncertain or Not Applicable (N/A))					Preliminary evaluation of significance (Nature, scale, context and sensitivity; refer definition provided below table)
				Q1	Q2	Q3	Q4	Q5	
	3) Human health Objective: Protect the health of the Northern Territory population.	▪ drinking water ▪ recreational water ▪ air quality ▪ bush tucker ▪ radiological limits ▪ biting insects	▪ The site is not within a Public Drinking Water Area. ▪ Air quality in the area is anticipated to be relatively unimpacted from anthropogenic activities (i.e., no point source emissions as part of the development in the development area) ▪ Biting insects are prevalent on a seasonal and diurnal basis.	N/A	No	No	No	No	**Potential impacts are not considered significant.** ▪ The development area works are not expected to cause a significant long-term change to the existing activities/uses of the area and are therefore unlikely to impact on human health.

2.3 Definition of 'Significant Impact'

The Northern Territory Environment Protection Act 2019 (EP Act) defines a significant impact as:

> *"A significant impact of an action is an impact of major consequence having regard to:*
>
> *(a) the context and intensity of the impact; and*
>
> *(b) the sensitivity, value and quality of the environment impacted on and the duration, magnitude and geographic extent of the impact".*

The NT EPA guidance on referral of a proposal (NTEPA, 2021a) outlines how the NT EPA determines that environmental impact assessment of a proposal is not required. The NT EPA will consider the proposal in terms of its potential for significant environmental impacts. In its consideration, the NT EPA will examine:

- Context and intensity of the impact
- Duration, magnitude and geographic extent of the impact and
- Sensitivity, value and quality of the environment impacted on.

Environmental impact assessment is unlikely to be required where:

- The type of proposal is not considered hazardous in nature.
- Environmental impacts from activities associated with a proposal are readily understood.
- The potential impacts are limited in extent and duration.
- Environmental values and sensitivities are not present or are unlikely to be significantly impacted by proposed activities.
- Impact mitigation is readily available and proven to be effective in limiting significant impacts to the environment.
- Relevant stakeholders have been identified and engaged.

The proposed Arafura Explosives Magazine, gravel pits, and the activities undertaken to support the proposal are considered to align with the above Significant Impact criteria.

Section 3 Commonwealth Government - Matters of National Environmental Significance Screening

Under the EPBC Act an action will require approval from the Commonwealth Minister if the action has, will have, or is likely to have, a significant impact on a Matter of National Environmental Significance (MNES). The Project currently has a licence under the EPBC Act however a variation is required to reflect the development areas listed (i.e., explosives magazine, gravel pits and site access) and the associated revised development boundaries. A search of the Commonwealth Protected Matters Search Tool (PMST) was undertaken for the development areas (DCCEEW 2023). A summary of the results of the PMST are provided in Table 3-1 and Table 3-2. The full PMST results are provided in Appendix C. The MNES relevant to the development areas included listed threatened species and listed migratory species. An assessment of the likelihood of these threatened and migratory species to occur on site and an assessment of the action against Significant Impact Guidelines 1.1 criteria was undertaken.

Table 3-1 Matters of National Environmental Significance (5km buffer)

Matters of National Environmental Significance	Relevant	Description
World Heritage Properties	No	There are no world heritage properties in close proximity to the development area.
National Heritage Properties	No	There are no national heritage places in close proximity to the development area.
Wetlands of international importance/Ramsar wetlands	No	There are no wetlands of international importance / Ramsar wetlands in close proximity to the development area.
Great Barrier Reef Marine Park	No	The development area is not within the Great Barrier Reef Marine Park.
Commonwealth Marine Area	No	The development is not located within a Commonwealth marine area.
Nationally Threatened Ecological Communities	No	No threatened ecological communities have been identified in the development area and none are considered likely to occur.
Nationally Threatened Species	Yes	The PMST identified 12 threatened species as potentially occurring within the development area (refer to **Error! Reference source not found.**). No threatened flora or threatened ecological communities were identified on the development area.
Migratory Species	Yes	The development area is not listed on the Ramsar Convention, in which Australia has entered into international agreements to protect the breeding and summer grounds of migratory birds. A PMST showed there were nine (9) migratory species with the potential to occur within the development area (refer to **Error! Reference source not found.**A).
Nuclear Actions (including Uranium Mining)	No	Not applicable
A water resource, in relation to coal seam gas development and large coal mining development	No	Not applicable

Table 3-2 Likelihood of Occurrence of Threatened Species in the PMST

Common Name	Scientific Name	EPBC Status	Potential Occurrence	Species Summary
Birds				
Southern Whiteface	*Aphelocephala leucopsis*	V	Known	There are proximate records, including those from baseline studies. Suitable habitat is present within the development area, and the broader region. The development area could be used for foraging purposes; however, habitat is of marginal quality due to cattle grazing and fire impacts, and there are ample areas outside of the development area that also provide suitable foraging grounds. Potential habitat for roosting / nesting was not observed and is considered unlikely to occur within the proposed disturbance footprints due to absence of tree species that typically support tree hollows and crevices.
Sharp-tailed Sandpiper	*Calidris acuminata*	V, M	Low	Species requires wetland habitat which is not present within or adjacent to development area. No proximate records.
Curlew Sandpiper	*Calidris ferruginea*	E, M	Low	Species requires wetland habitat which is not present within or adjacent to development area. No proximate records.
Red Goshawk	*Erythrotriorchis radiatus*	V	Low	The development area is outside of known distribution in the Northern Territory. The development area does not support preferred habitat for the species (species prefers tall open Eucalyptus Forest and riparian areas. No proximate records.
Grey Falcon	*Falco hypoleucos*	V	Low	Species usually nests in the tallest trees along watercourses, particularly River Red Gum and Coolabah, and telecom towers. Foraging habitat is present within the development area (however foraging habitat is widespread and not specific to an area – hunting areas typically occur in response to small bird flocks)
Night Parrot	*Pezoporus occidentalis*	E	Low	Spinifex habitat on rocky hills could provide suitable roost habitat; however, fire history in the area has likely reduced habitat suitability (Night Parrot requires long unburnt areas of Spinifex for roosting in particular Bull Spinifex *Triodia longiceps* [DOE 2017; Murphy 2017] which is not known to occur in the area).
Princess Parrot, Alexandra's Parrot	*Polytelis alexandrae*	V	Low	There is no suitable breeding / nesting habitat within the development area (i.e., Marble Gum, River Red Gum and occasionally Desert Oak).
Australian Painted Snipe	*Rostratula australis*	E	Low	Species requires wetland habitat which is not present within or adjacent to development area. No proximate records.

Common Name	Scientific Name	EPBC Status	Potential Occurrence	Species Summary
Mammals				
Ghost Bat	*Macroderma gigas*	V	Low	The species has not been recorded in the southern NT since the early 1960s and is presumed to be regionally extinct/extirpated.
Warru, Central Australian Rock-wallaby	*Petrogale lateralis centralis*	V	Known	Numerous records in the general area. Previous targeted surveys in 2015 and 2022 did not detect the species within the current development area (noting that not all areas were checked). Potential for suitable habitat within the current development area (i.e. rocky hills) (requires site assessment to confirm habitat suitability). The isolated nature of the rocky hills within the current development area may reduce habitat suitability due to increase predation pressure from surrounding plains (cat and fox are known to occur in the area).
Central Rock-rat, Antina	*Zyzomys pedunculatus*	CE	Low	Species occurs in high altitude rugged quartzite peaks (now only known to occur in the MacDonnell Ranges to the south of the development area) (McDonald 2012) which is not supported within the development area or surrounds.
Reptiles				
Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu	*Liopholis kintorei*	V	Low	Species occurs in high altitude rugged quartzite peaks (now only known to occur in the MacDonnell Ranges to the south of the development area) (McDonald 2012) which is not supported within the development area or surrounds.

3.1.1 Migratory Species

Nine listed migratory birds (two threatened) have been listed under EPBC.

Under the EPBC Act, 'important habitat' is identified in EPBC Act Policy Statement 1.1 Significant Impact Guidelines – Matters of National Environmental Significance (DoE 2015a). Important habitats in Australia for migratory birds under the EPBC Act include those recognised as nationally or internationally important (DoE 2015b). Under the guidelines, habitat should be considered internationally important if it regularly supports:

- 1 percent (%) of the individuals in a population of one species or subspecies of waterbird; OR
- A total abundance of at least 20,000 waterbirds.

Nationally important habitat for migratory shorebirds can be defined using a similar approach to these international criteria, i.e. if it regularly supports:

- 0.1 % of the flyway population of a single species of migratory shorebird; OR
- 2000 migratory shorebirds; OR
- 15 migratory shorebird species.

Based on surveys conducted there is no suitable habitat within the development areas for these birds.

Section 4 Management Measures and Controls

Both desktop and field based studies have informed the self-assessment. The self-assessment assumes the accuracy of the information obtained in the field studies and is predicated on implementing both standard management and control measures, and those recommended in technical studies.

The Nolans Construction Materials Mining Management Plan (NRE-0000-O-PLN-O-0002 Rev 1.3) provides the overarching governance for management measures and controls for the development areas.

The compilation of specific measures that should be implemented are presented below. If the development inclusions or extents change, or the following management measures cannot be implemented, the conclusions in this self-assessment should be reviewed for accuracy:

- A site-specific Erosion and Sediment Control Plan shall be developed prior to undertaking any works in accordance with the MMP commitments and Mining Authorisation 1127-01.
- Follow the approved Biodiversity Management Plan to protect the Rock Wallaby, which includes regular species monitoring, the monitoring of access roads, and reduced driving speeds at night to minimise impacts on the species.

Section 5 References

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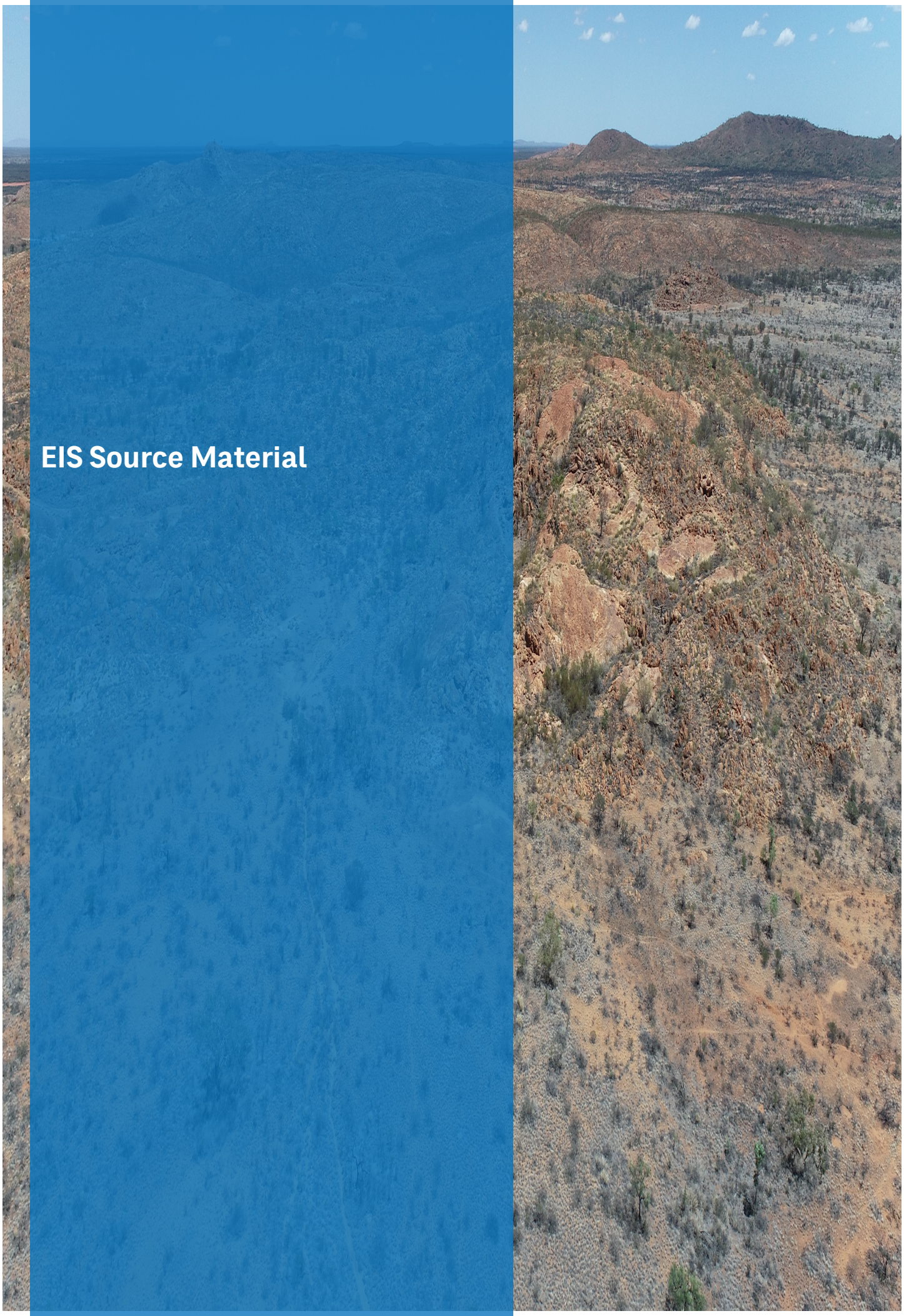
EIS Source Material



EIS Source Material

In the EIS the explosives magazine was proposed to be located near the southwest corner of WRD 1 (as shown in EIS Figure 3-1 as a small orange square.) The location of the borrow pits were not specified, though the EIS stated that a range of raw material requirements for construction and operations, including gravel, would be sourced "either from within or near the Nolans site." Subsequent to approvals under both Acts, the locations of the gravel pits and explosives magazine (i.e. the development area) have been confirmed. Inclusion of the explosives magazine and gravel borrow pits are located in the below sections of the EIS.

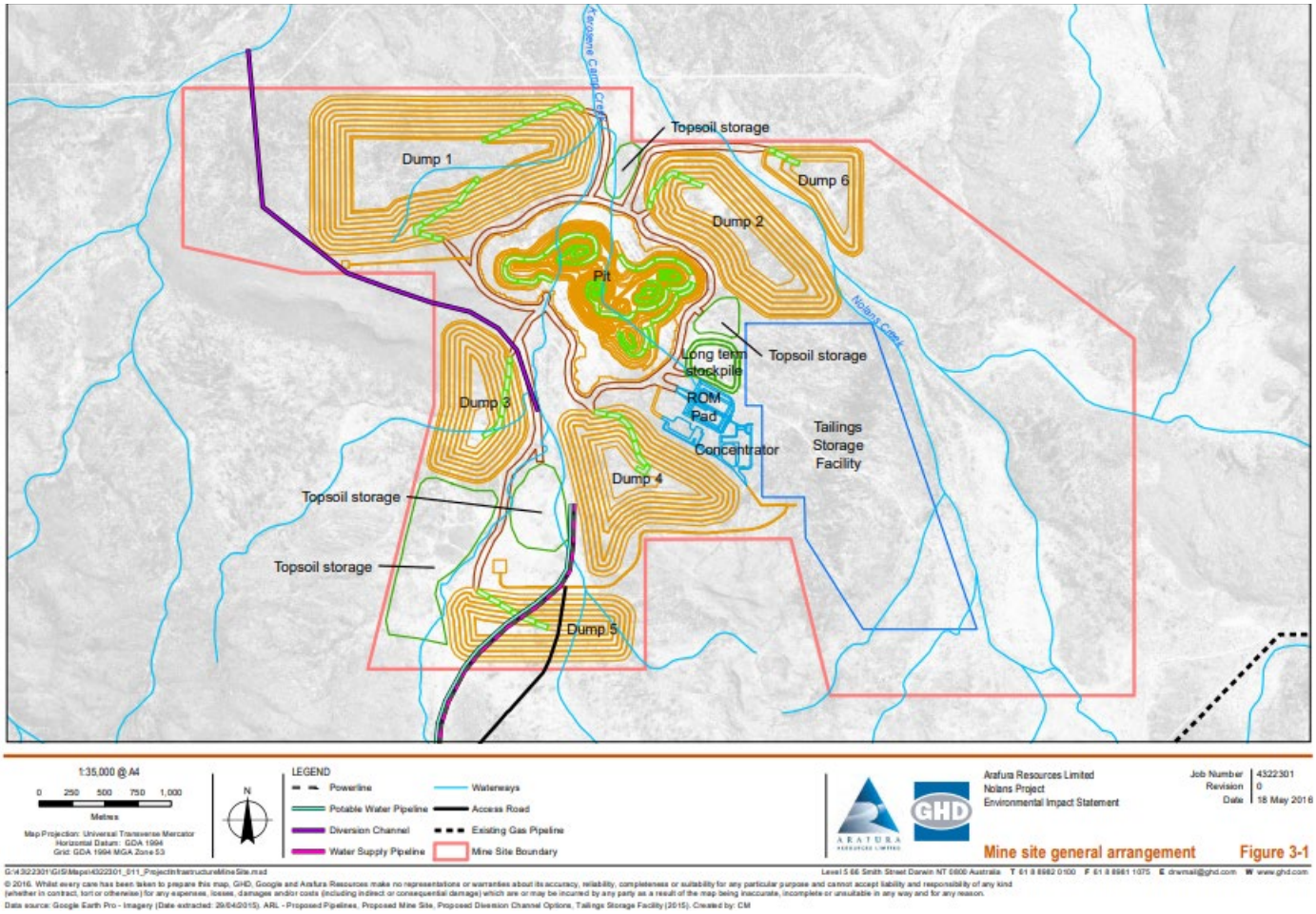
Explosives magazine

3.5.5 Mining methodology

Drill and blast will be required for both ore and waste with design powder factors ranging from around 0.40 kg/BCM for oxide mineralisation and waste to around 0.60 kg/BCM for fresh mineralisation and waste. Blasthole drilling will be carried out by 89mm blasthole drills. All blasting will be undertaken using emulsion explosives selected mainly for its water resistance and resultant reduced drilling cost. The bulk emulsion explosives are delivered by a sub-contractor as a down-the-hole service which is the supply of bulk explosives on the bench.

All final design batters and interim walls will be pre-split drilled and blasted with specialised packaged explosives.

The sub-contractor's explosives plant will be located south of WRD 3 and north of WRD 5 as shown in Figure 3-1. An explosives magazine will be located near the south west corner of WRD 1.



Gravel Borrow Pits

3.4.3 Sources of construction materials

A preliminary geotechnical site investigation was carried out by Knight Piésold Pty Ltd (2014) to evaluate foundation conditions and identify potential material borrow sources for the Nolans site infrastructure. This survey investigated a number of locations with 30 km of the Nolans site to assess construction material. Some of the sites investigated are sites used previously for highway construction or road construction on Aileron Station. Prior to project construction further geotechnical investigation will be undertaken and construction materials investigation completed. Any required regulatory approvals to source these materials for construction purposes (i.e. associated with extractive minerals title processes) will be sought prior to construction. Wherever possible the company intends using material from the pit pre-strip as construction material.

Interpretation of site conditions is based on the sub surface lithology revealed during the investigation program which included visual assessment of the in situ materials, the results of in situ field tests, and the results of laboratory testing carried out on selected representative samples collected during the fieldwork.

The geotechnical site investigation identified borrow material for earthworks construction within 30 km of the mine site, and these are summarised in Table 3-2.

Table 3-2 Summary of borrow materials

Material Type	Description	Location
Zone A	Low permeability material, generally greater than 30% fines and a PI of 8 or more.	Two possible source areas, within the pit area and to the south east of the TSF.
Zone C	Granular material (sandy gravel) with a fines content typically of 15 % to 20 %.	This material will be won from the overburden in the pit or by selective excavation from the WRD.
Zone F	Sand with less than 5% fines.	Two possible source areas, within creeks and imported from a local quarry.
Base Course	Granular material (sandy gravel) with a fines content typically of 15% to 20%	Two possible source areas, Native Gap road quarry and imported from a local quarry.
Road Aggregate	14 mm high strength stone.	One possible source area, imported from a quarry in Alice Springs.
Concrete	Variable properties but generally 40 N/mm^2	Proposed onsite batching plant during construction.

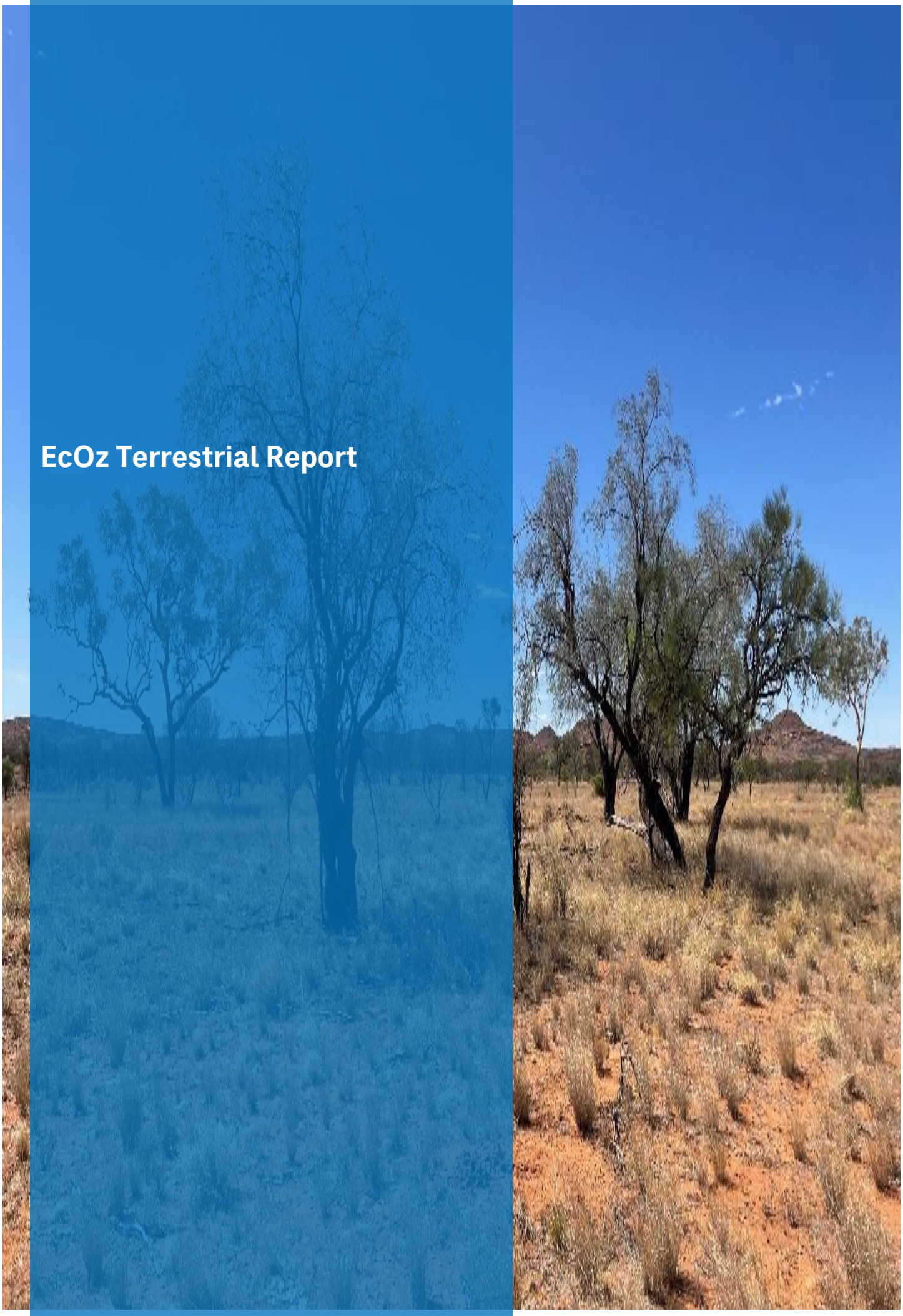
4.3.6 Raw materials supply

The project has a range of raw material requirements for construction and operations. It is intended that the bulk of the raw materials, which includes rock, gravel, sand, topsoil and carbonate material, will be sourced either from within or near the Nolans site.

Rock will be selected during the initial pre-strip of the pit for use in various aspects of construction. Care will be taken to ensure this material is benign in terms of its chemical composition and radionuclide concentrations.

Gravel material will be sourced from an old road construction quarry on the Stuart Highway about 25 kilometres from the processing plant, or from a local source on Aileron Station about 12 kilometres from the plant. Prior to this occurring the necessary regulatory approvals will be sought. Other gravel for cement manufacture will be transported to site from quarries near Alice Springs.

EcOz Terrestrial Report



EPBC Search

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 18-Mar-2024

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	12
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	13
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	3
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Species		[Resource Information]
Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.		
Scientific Name	Threatened Category	Presence Text
BIRD		
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Pezoporus occidentalis Night Parrot [59350]	Endangered	Species or species habitat may occur within area
Polytelis alexandrae Princess Parrot, Alexandra's Parrot [758]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area
MAMMAL		

Scientific Name	Threatened Category	Presence Text
Macroderma gigas		
Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area
Petrogale lateralis centralis		
Warru, Central Australian Rock-wallaby [90831]	Vulnerable	Species or species habitat known to occur within area
Zyzomys pedunculatus		
Central Rock-rat, Antina [68]	Critically Endangered	Species or species habitat may occur within area
REPTILE		
Liopholis kintorei		
Great Desert Skink, Tjakura, Warrarna, Mulyamiji, Tjalapa, Nampu [83160]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Glareola maldivarum		
Oriental Pratincole [840]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis		
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata		
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans		
Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Glareola maldivarum		
Oriental Pratincole [840]		Species or species habitat may occur within area overfly marine area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato)		
Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Nolans Rare Earth Project, NT	2015/7436		Post-Approval
Controlled action			
Development of Rare Earth Oxide and Phosphate Mine at Nolans Mine Site	2008/4371	Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.

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