Koolan Island Iron Ore Mine and Port Facility

Amendment to Licence – L8148/2006/4

Koolan Iron Ore Pty Ltd

ABN 87 099 455 277
First Floor
2 Kings Park Road
WEST PERTH WA 6005

PO Box 55
WEST PERTH 6872

Prepared by:

SLR Advisory Services Pty Ltd

SLR Project No.: ADV-AU-00869

October, 2025

Revision: 1

Document Control

Client	
Koolan Iron Ore Pty Ltd	
Report Name	**Date**
Koolan Island Iron Ore Mine and Port Facility	October, 2025
Job No.	**Revision Number**
ADV-AU-00869	1
File Name	
Attachment 3B Mt Gibson Licence Amendment Supporting Document.docx	

[redacted]

[redacted]

Basis of Report

This report has been prepared by SLR Advisory Services Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Koolan Iron Ore Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

Table of Contents

Tables

Figures

Appendices

1. Introduction

1.1 Objectives

The objectives of this Licence Amendment application are to obtain approval for:

- changes to Category 64 – Class II or III putrescible landfill site comprising: :
  - increasing the assessed design/production capacity from 4,500 tonnes per Annual Period to 20,000 tonnes per Annual Period
  - expansion of the WD4/WD5 Category 64 scheduled activity area to accommodate the proposed increase in the assessed design/production capacity.
  - the addition of Category 64 scheduled activity areas to for in-situ burial of concrete pads.
- The addition of a Category 73 scheduled activity area for the Aerodrome Jet A-1 Fuel Facility under the license.

1.2 Ownership

Koolan Iron Ore Pty Ltd (KIO) (the Proponent) is a wholly-owned subsidiary of Mount Gibson Iron Ltd (MGX). The Prescribed Premises is located on *Mining Act 1978* (Mining Act) tenements that are listed in **Table 1-1** and shown in **Figure 1-1**. All compliance and regulatory requirements regarding this supporting document should be forwarded to the following address:

- Proponent: Koolan Iron Ore Pty Ltd
- Contact: David Temple-Smith
- Title: Manager – Environment and Approvals
- Phone: 0436 361 478
- Email: david.temple-smith@mgx.com.au

Table 1-1 Mt Gibsons Tenements within Prescribed Premises

Tenement	Owner	Expiry Date
M 04/416-I	KOOLAN IRON ORE PTY LTD	20/04/2027
M 04/417-I	KOOLAN IRON ORE PTY LTD	20/04/2027
L 04/29	KOOLAN IRON ORE PTY LTD	07/07/2046
L 04/68	KOOLAN IRON ORE PTY LTD	14/09/2035
L 04/101	KOOLAN IRON ORE PTY LTD	15/04/2039

1.3 Location, Tenure and Site Layout

Koolan Island is part of the Buccaneer Archipelago within the Yampi Sound Port Area, located at the northern end of the Yampi Peninsula and 130 km north of Derby in the Kimberley Region of Western Australia. Lalang-Gaddam Marine Park is located to the north and east of Koolan Island beyond the Port Authority boundary (**Figure 1-1**). The Project tenements and Prescribed Premises boundary are shown in **Figure 1-2**.

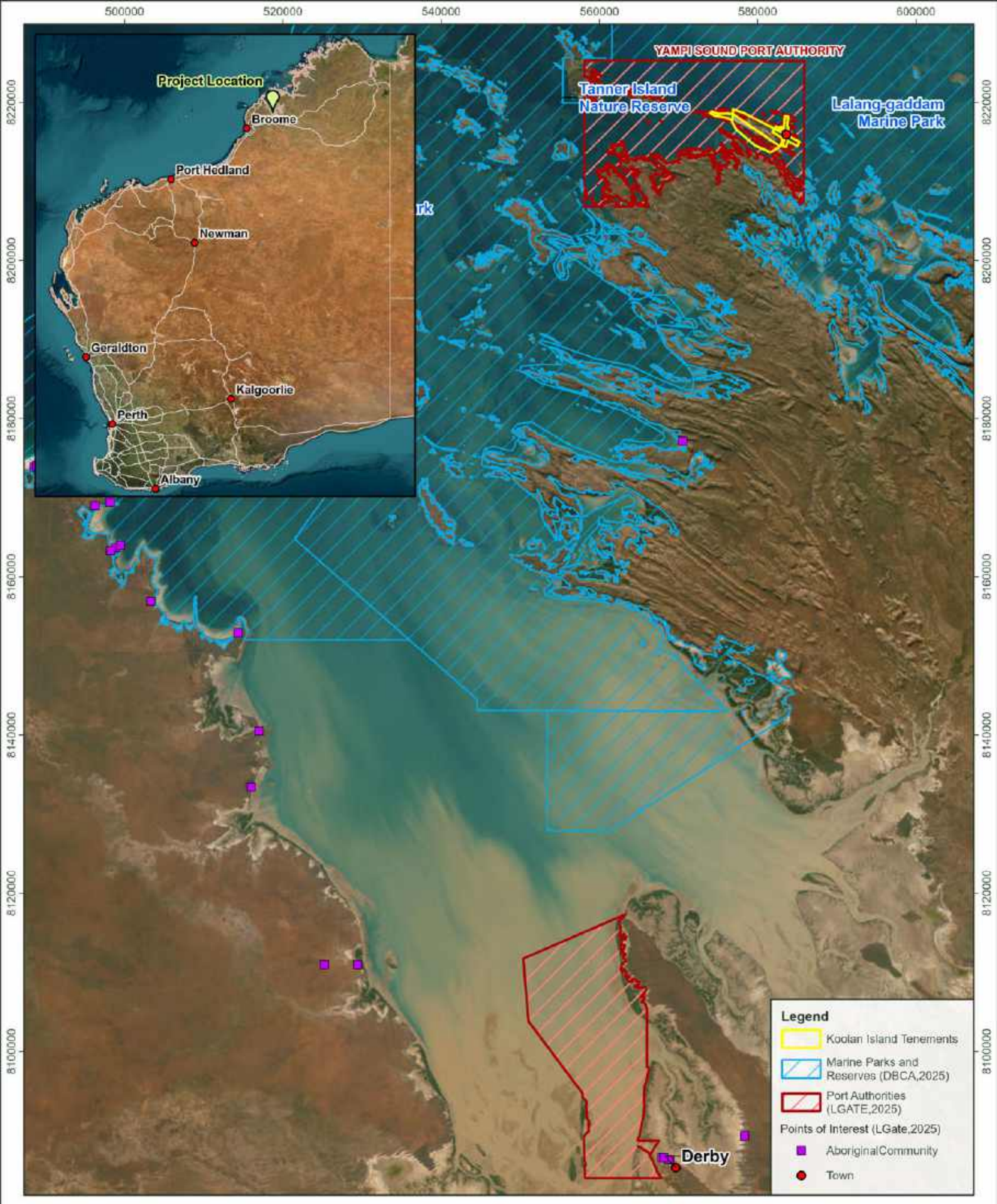
1.4 Prescribed Premises Categories and Existing Approvals

Koolan Island operates under *Environmental Protection Act 1986* (EP act) Licence L8148/2006/4. A summary of the current and proposed prescribed premises categories and capacities is provided in **Table 1-2**.

Table 1-2 Current and Proposed Prescribed Premises Categories

Prescribed Premises Category	Prescribed Premises Category Description (Schedule 1, Environmental Protection Regulations 1987)	Assessed Production/Design Capacity
L8148/2006/4		
5	Processing or beneficiation of metallic or non-metallic ore: premises on which a)Metallic or non-metallic ore is crushed, ground, milled or otherwise processed. b)Tailings from metallic or non-metallic ore are reprocessed; or tailings or residue from metallic or non-metallic ore are discharged into a containment cell or dam	5,000,000 tonnes per annual period
6	Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.	10,000,000 tonnes per annual period
12	Screening etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	2,000,000 tonnes per annual period
54	Sewage facility: premises — a) on which sewage is treated (excluding septic tanks); or b) from which treated sewage is discharged onto land or into waters.	130 m^3 per day
58	Bulk material loading or unloading premises on which clinker, coal, ore, ore concentrate or any other bulk granular material (other than salt) is loaded onto or unloaded from vessels by an open materials loading system.	75,000 tonnes per day
64	Landfill - Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	4,500 tonnes per annual period
73	Bulk storage of chemicals etc.: premises on which acids, alkalis or chemicals that — a) contain at least one carbon to carbon bond; and b) are liquid at STP (standard temperature and pressure), are stored.	1,200 m^3 in aggregate
This Licence Amendment		
64	Landfill - Class II or III putrescible landfill site: premises on which waste (as determined by reference to the waste type set out in the document entitled "Landfill Waste Classification and Waste Definitions 1996" published by the Chief Executive Officer and as amended from time to time) is accepted for burial.	20,000 tonnes per annual period

This application proposes an amendment to Licence L8148/2006/4 to increase the approved production capacity under Category 64 to 20,000 tonnes per annual period, incorporate a new WD5 landfill cell and associated in-situ burial of concrete pads, introduce Category 73 to account for the aerodrome fuel facility, and revise the prescribed premises boundary to reflect these operational changes (**Figure 1-3**).



SLR

Scale: 1:600,000

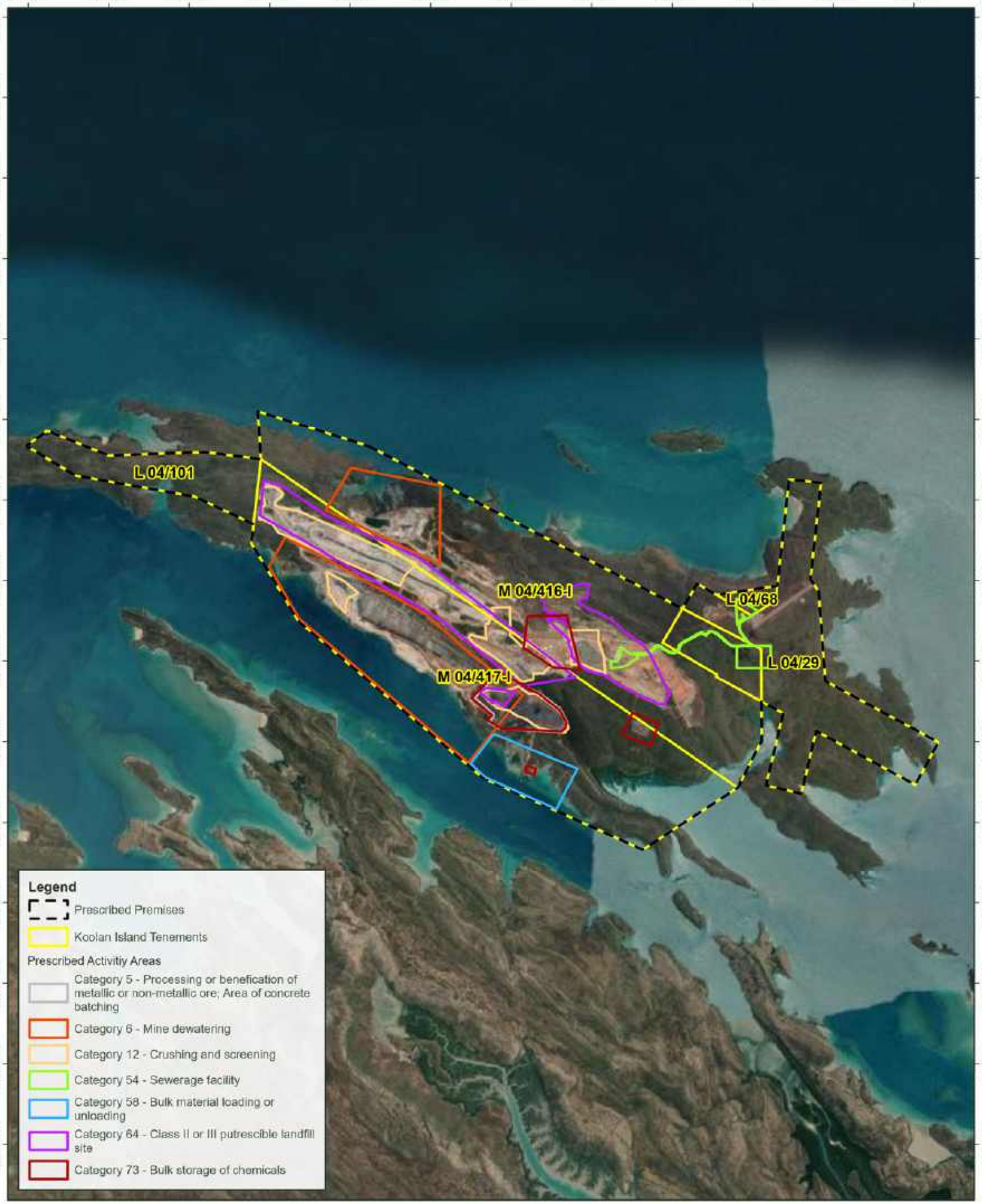
0 5 10 20 km

N

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

PROJECT			CLIENT
NAME: Koolan Island - Licence Amendment			
DRAWING: Project Location			
FIGURE No: 1-1	PROJECT No: ADV-AU-00869	DATE: October 2025	Mount Gibson Iron



SLR

Scale: 1:60,000

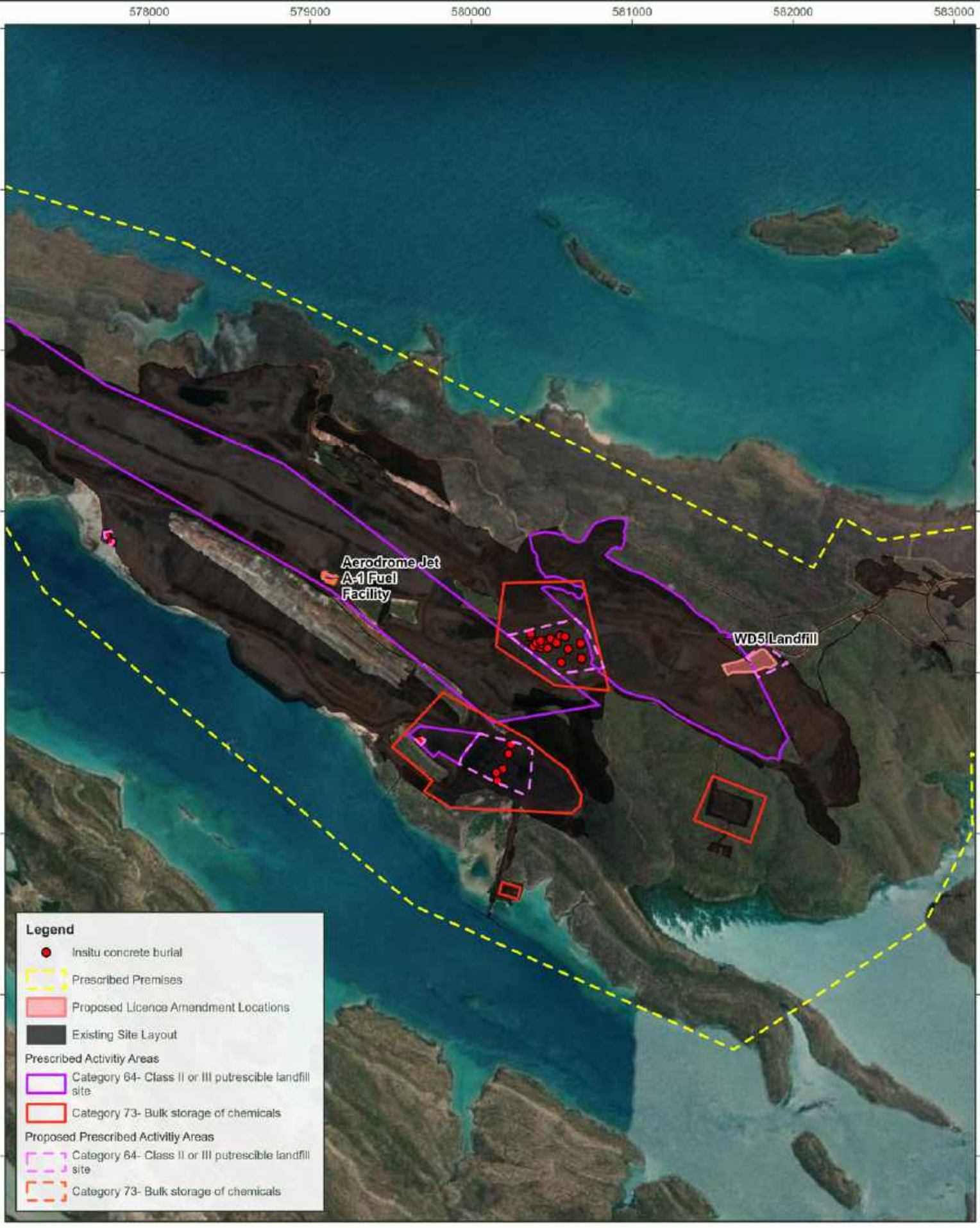
0 500 1,000 2,000 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

N

PROJECT			CLIENT
NAME: Koolan Island - Licence Amendment			
DRAWING: Tenement Plan and Prescribed Premises Boundary			
FIGURE No: 1-2	PROJECT No: ADV-AU-00869	DATE: October 2025	Mount Gibson Iron



SLR

Scale: 1:30,125

0 250 500 1,000 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

N

PROJECT			CLIENT
NAME: Koolan Island - Licence Amendment			
DRAWING: Site Layout			
FIGURE No: 1-3	PROJECT No: ADV-AU-00869	DATE: October 2025	Mount Gibson Iron

2. Environmental Setting

2.1 Regional Setting

The Proposal is located on Koolan Island, approximately 130 km north of Derby at the northern end of the Yampi Peninsula. It lies within the Northern Kimberley (NOK) Region and the Mitchell subregion (NOK1) IBRA region and subregion. The island is approximately 13 km long by 5 km, consisting of a rugged sandstone coast with rock headlands and several small sandy beaches.

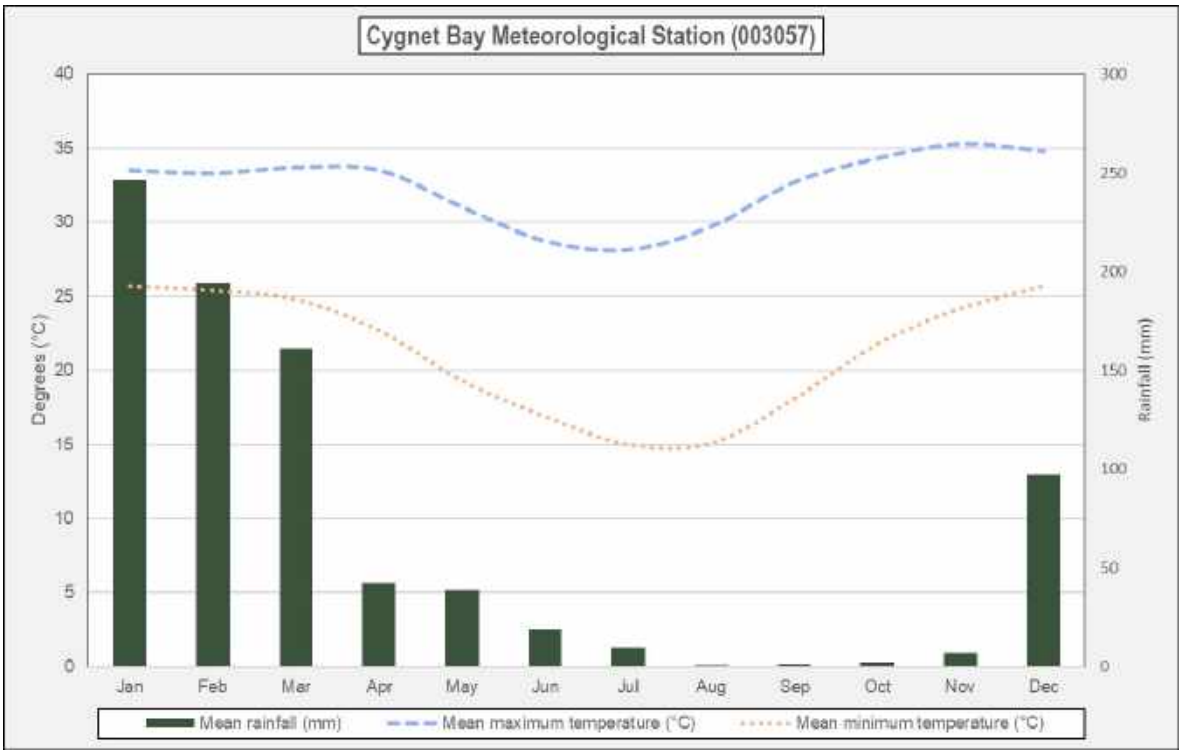
The entire West Kimberley Region is listed as a National Heritage Place. Koolan Island resides within the Yampi Sound Port Area Crown Reserve and contains several designated anchorage points and multiple ship-loading and mining operations. There are no environmentally sensitive areas (ESAs), World Heritage Properties, RAMSAR wetlands or Threatened Ecological Communities (TECs) within the Project tenements. Lalang-Gaddam Marine Park is located to the north and east of Koolan Island beyond the boundary of the Yampi Sound Port Area.

2.2 Climate

The Project is located within the Buccaneer Archipelago within the Kimberley region, which is characterised by a tropical, sub-humid monsoonal climate with two defined wet and dry seasons. The dry season between May and October is characterised by warm to hot days with low humidity, whereas the wet season between November and April is typified by high to very high temperatures with high humidity and, between January and March, large rainfall events. The nearest climate station to the Project is Cygnet Bay Station (site number: 003057), which is approximately 85.8 km southwest of the Project area.

Temperatures have been recorded at the Cygnet Bay site since 1985, and rainfall has been recorded since 1965. The mean maximum temperature is 35.3°C in November, and the mean minimum temperature is 15°C in July. Rainfall is at its highest between December and March, with the highest monthly rainfall recorded in January at 246.5 mm. The dry season from April to November experiences less than 50 mm of rainfall, with August recording the lowest amounts.

Figure 2-1 Cygnet Bay Meteorological Station (003057)



2.3 Soil Characterisation

Soil materials have been broadly classified according to Schoknecht and Pathan (2013). Soil supergroups on Koolan Island are, in order of dominance, rock or stony soils, bare rock, sandy earths, deep loamy duplexes and earths, shallow loam, gravels and tidal soils.

The broad soil classification has been supplemented by sampling and analysis of materials in terms of their physical, chemical, and hydrological (erodibility) properties, initially by Outback Ecology Services (2008) and then by Soil Water Consultants (2014)

An initial baseline material investigation was conducted by Outback Ecology Services in 2008, where soil samples were collected from sites representative of natural vegetated areas, or analogue sites, rehabilitated areas, waste rock dumps and a topsoil stockpile. Further investigations were conducted by Soilwater Consultants in 2013 and summarised below.

- Soil types: Mostly sandy loam or clay loam sand, with clay increasing with depth.
- Rock-derived soils:
  - Siltstone: Silty loam, ~35% silt from weathering.
  - Sandstone: Sandy clay loam, lower silt/clay than siltstone.
- Gravel content:
  - High (75–80%) in laterite ridges/topsoil stockpiles.
  - Lower (<50%) in slopes/creeks.
  - Sandstone waste rock: More coarse material, fewer fine particles than siltstone.
- Structure:
  - Undisturbed: Single-grained, weak aggregates.
  - Rehabilitated: Moderate structure, weak polyhedral aggregates.
  - Siltstone/sandstone: Single-grained; unlikely to form massive, root-restrictive soils.
- Stability:
  - Mostly slaking, non-dispersive (Emerson Class 6); not prone to hard setting.
  - Siltstone may become dispersive after salt leaching.

2.4 Waste Rock Characterisation

The properties of the waste rock at Koolan Island have been extensively studied to support mining proposals and mine closure plans. The most recent study undertaken by MBS Environmental in 2023, reviewed existing waste rock data and involved an additional sampling program for waste rock within the Main Pit.

Key findings for sulphur from the 2023 assay database review by MBS were:

- All waste materials across the four main stratigraphies had a 95th percentile sulphur content of less than 0.3%. Furthermore, the percentage of samples with more than 0.3% total sulphur in each stratigraphy were less than 1%, representing an insignificant portion of waste rock material;
- Results and weathering condition indicate that the main form of sulphur in the waste materials will be as oxidised sulphate (including gypsum and jarosite) with no considered risk of net formation of acid seepage via further oxidation;

Key findings from the review of acid and metalliferous drainage characterisation from the 2023 MBS study were:

- Overall, the waste material was considered extremely benign. All samples for all lithologies were non-acid-forming and considered barren with sulphur content less than 0.05% which was consistent with all assay data from proposed depths of mining;

- Concentrations of environmentally available metals and metalloids (including antimony) were much lower (antimony being mineral-bound and non-available) and below all EIL and ACL guidelines.
- The Naturally Occurring Radioactive Material (NORM) activity concentrations in all lithologies were low and do not classify under any relevant criteria, being well below the levels of activity (exemption limits) which would trigger possible further assessment
- Water leachates for siltstone, sandstone, and footwall schist lithologies were typically slightly acidic to alkaline, whereas quartzite and hematite sandstone samples were circumneutral. The majority of metals and metalloids were not considered soluble under neutral conditions.
- The weathered waste material is typically considered highly sodic with exchangeable sodium percentage (ESP) ranging from 6% (siltstone) to 79% (hematite sandstone). The cation exchange for this material was considered low, with effective cation exchange capacity (ECEC) ranging from 0.53 cmol(+)/kg (hematite sandstone) to 4 cmol(+)/kg (siltstone). Despite this, the low fines content and blocky nature of the waste are considered highly resistant to erosion even on extreme slopes. Minor fines at the surface would infiltrate or wash away, and the remaining material will 'self-armour.

2.5 Hydrogeology

A baseline groundwater survey aimed at developing a groundwater abstraction program was carried out by Aquaterra (2005). Previous work and drilling carried out by BHP on the Island have indicated that there are three broad hydro-geological provinces, corresponding with the three main structural geology features underlying the Island (i.e., the Southern Syncline, the Central Anticline, and the Northern Syncline).

Groundwater is highly localised within fractured-rock aquifers. As seen from previous exploration, these aquifer systems have a high degree of variability, and the success of water supply is dependent on encountering one or more structure-related features. The localised and poorly resolved extent of the fracture systems means that these aquifers can be difficult to locate, manage, and monitor (Hydroconcept, 2013).

Hydroconcept (2013) concluded that:

- Contamination risk is very low owing to the tight and low-permeable nature of the hydrogeology;
- Groundwater resources are associated with a localised, fractured-rock aquifer, preventing the development of a meaningful, regional groundwater monitoring network;

The closest monitoring bore to the proposed landfill site is K3 (M4), which is one of seven wells monitored for water levels in 2023. It had a standing water level ranging from 25.6 to 26.7 mAHD, while the natural level is around 38.7 mAHD. Activities associated with this landfill are only expected to occur to a depth of 150 mAHD, so the landfill will not intersect groundwater.

2.6 Marine and Benthic Habitat

With the exception of parts of the southern coastline, much of the marine environment surrounding Koolan Island remains in its natural state. This is due to the island's isolation and relatively low levels of human impact. The Lalang-Gaddam Marine Park is located to the north and east of Koolan Island, beyond the Port of Yampi Sound, and is jointly managed by DBCA and DAC. The southern shoreline of Koolan Island, near the project infrastructure, has been significantly altered by past mining activities (by BHP until 1993). Waste rock landforms were constructed on the southern coast next to the Main Pit, leading to the degradation of some marine habitats (e.g., Jap Bay, Arbitration Cove and Mangrove Inlet) with ongoing effects that modify baseline water quality.

To allow separation of the project effects from natural changes or previous disturbance, baseline surveys have previously been undertaken to establish the condition of the marine environment prior to the commencement of KIO's mining operations. As part of the approved Marine Management Plan (v22) pursuant to MS 715, marine water quality and benthic habitat condition are monitored annually, and marine sediments triennially.

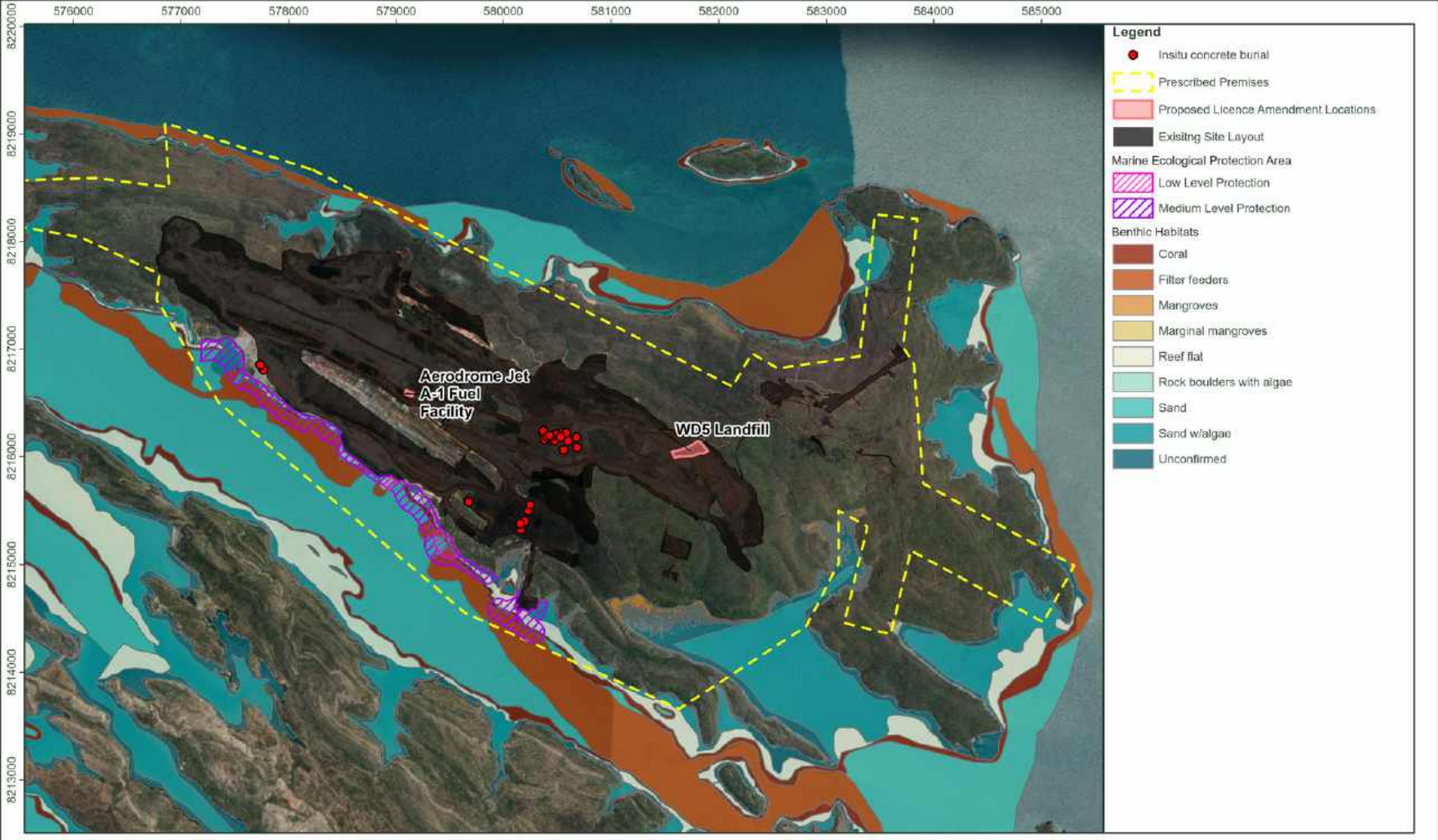
Benthic communities and habitats at Koolan Island have been extensively surveyed for over a decade by MScience and other coral experts. The most recent surveys were conducted in 2019 by MScience, along with the start of coral rehabilitation trials by Hydrobiology.

The marine environment at Koolan Island typically features mud/sand tidal flats with fringing mangrove communities in more protected embayments, coral reefs fringing more exposed and steeper rocky shorelines and sparse benthic filter-feeder communities in deeper areas below 25m. Filter feeders are the most common benthic community, dominating the benthic coastal zones in proximity to the island, particularly in areas of high current flow and increased levels of suspended particles. Corals are the second-most common benthic community.

There are nine benthic habitat types around Koolan Island (**Figure 2-2**). In summary:

- Sand habitats are the most common habitat type, covering almost half of the mapped area.
- Filter feeders are also one of the most common benthic habitats found along the coast, although not as widely distributed as sand habitats.
- Reef flats and coral habitats were often found forming narrow bands in the shallow waters closest to the coast.

The rock boulder benthic habitat type is only found along the southern coastline of the island, as a result of BHP's construction of waste rock dumps to protect the southern extent of Main Pit. These boulders are now covered in algae and fringe Arbitration Cove almost entirely from Jap Bay to the coastline below the mine's sedimentation pond, further east.



SLR

N

Scale: 1:45,000

0 375 750 1,500 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

PROJECT

DATE: October 2025

FIGURE No.: 2-2

PROJECT No.: ADV-AU-00869

NAME: Koolan Island - Licence Amendment

DRAWING: Benthic Communities and Marine Ecological Protection Area

CLIENT

Mount Gibson Iron

2.7 Flora and Vegetation

Surveys of flora and vegetation have been conducted on Koolan Island since 1995. Numerous detailed and targeted surveys have been conducted by Ecologia Environment and AECOM, with the most recent conducted by APM in 2021. The majority of the island is vegetated by open Eucalyptus in which *E*. *miniata* occurs as a taller canopy, with bloodwoods *Corymbia confertiflora and Corymbia cadophora subsp. cadophora* at varying densities below with a mixed herb ground cover. *Callitris* forest is frequently found on slopes and gullies. Small areas of rainforest or vine thickets occur in limited locations within deep gullies that often integrate into *Callitris columellaris* (cypress pine) forest with increasing elevation.

There are no Threatened or Priority Ecological Communities on Koolan Island, nor are there any records of listed Threatened flora under *the Biodiversity Conservation Act 2018 or the EPBC Act*.

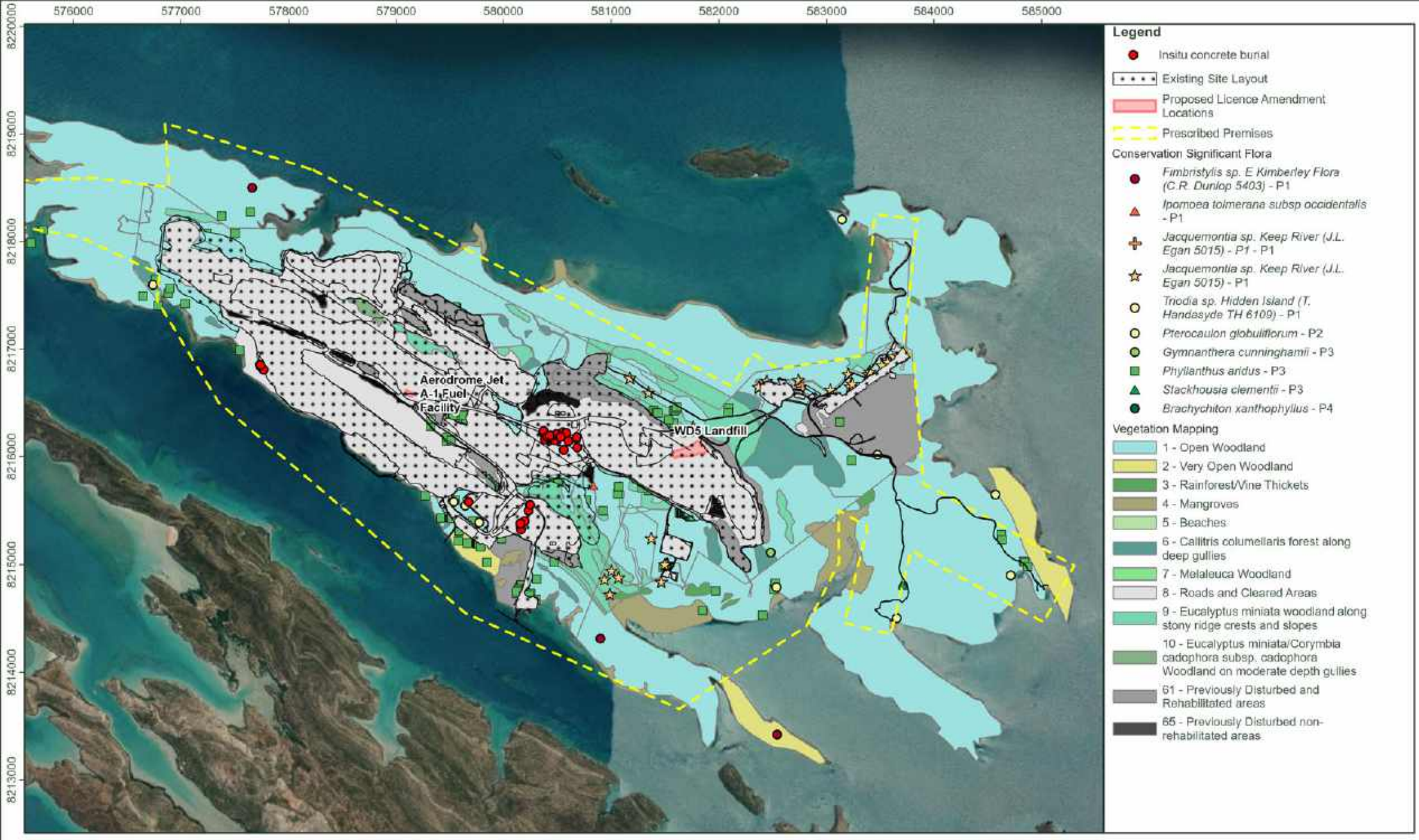
A list of Priority flora species recorded at the Project is provided below and shown in **Figure 2-3**.

- *Jacquemontia* sp. Keep River (P1)
- *Triodia sp.* Hidden Island (P1)
- *Ipomoea tolmerana* subsp. *occidentalis* (P1)
- *Pterocaulon globuliflorum* (P2)
- *Eragrostis spartinoides* (P3)
- *Dendrophthoe odontocalyx* (P3)
- *Gymnanthera cunninghamii* (P3)
- *Hibiscus marenitensis* (P3)
- *Stackhousia clementii* (P3)
- *Solanum leopoldense* (P3)
- *Brachychiton xanthophyllus* (P4)

Surveys have found 95 species of introduced flora at Koolan Island, with four listed as Declared Pests under the *Biodiversity and Agriculture Management Act 2007*, with two species (Bellyache Bush and Rubber vine) listed as Weeds of National Significance (WNOS):

- **Jatropha gossypiifolia* (Bellyache Bush) – P1 all WA and P4 Derby-West Kimberley;
- **Senna alata* (Candle Bush) – P1 and P2 all WA;
- **Cryptostegia madagascariensis* (Rubber Vine); P1 and P2 all WA; and
- **Caliotropis procera* (Rubber Bush).

The majority of these weeds are present in the vicinity of the old BHP settlement near the village and airstrip.



SLR

N

Scale: 1:45,000

0 375 750 1,500 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

PROJECT

DATE: October 2025

FIGURE No.: 2-3

PROJECT No.: ADV-AU-00869

NAME: Koolan Island - Licence Amendment

DRAWING: Conservation Significant Flora and Vegetation

CLIENT

Mount Gibson Iron

2.8 Fauna and Habitat

2.8.1 Terrestrial Fauna and Habitat

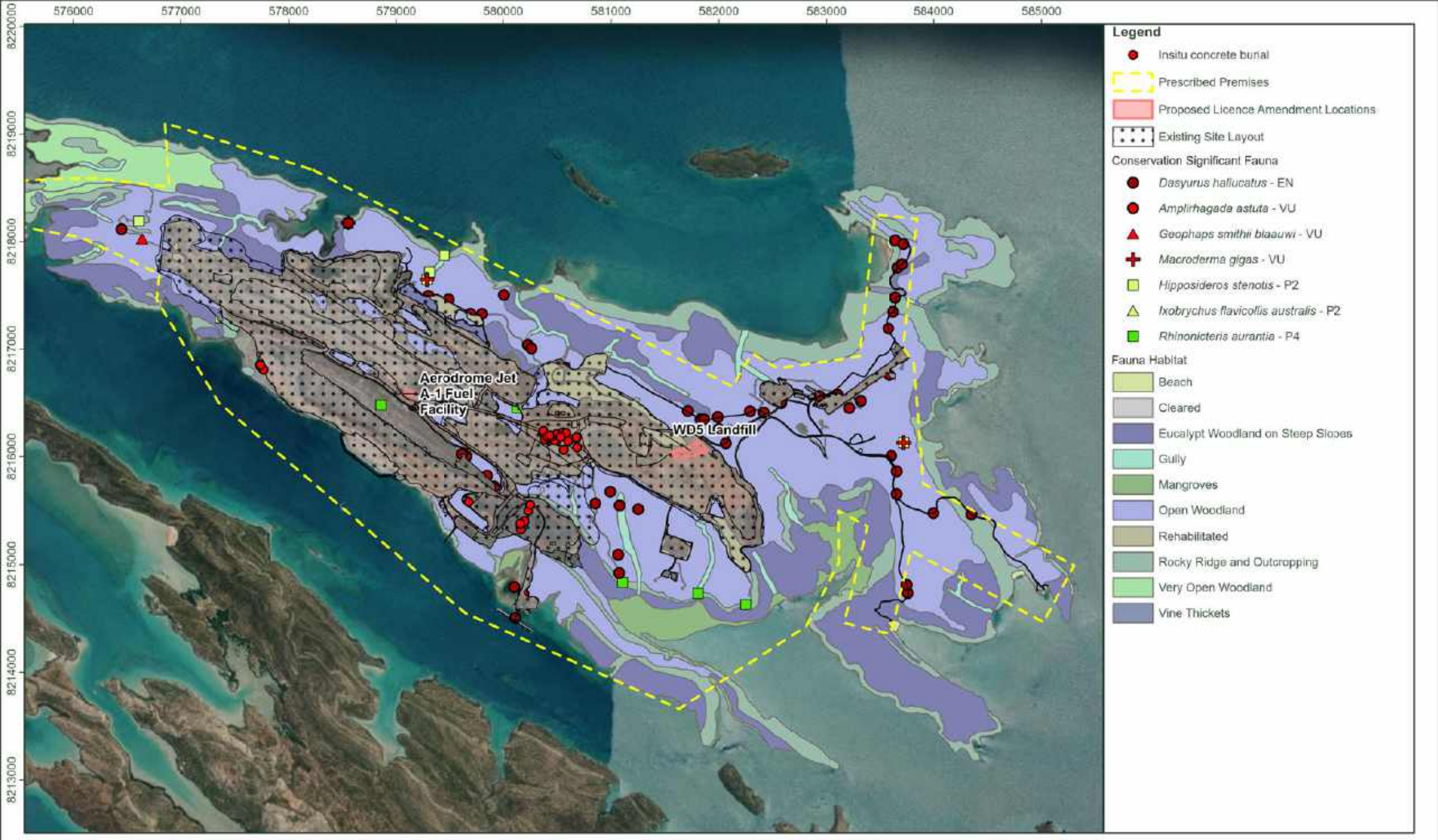
Surveys of fauna and habitat have been conducted on Koolan Island since 1965. Numerous detailed and targeted surveys have been conducted by APM, Ecologia Environmental, Phoenix Environmental Science and Stantec since 2006, with the most recent conducted by Stantec in 2024.

A total of ten broad fauna habitats are within the surveyed areas (**Figure 2-4**):

- Beach;
- Cleared;
- *Eucalypt* Woodland on Steep Slopes;
- Gully;
- Mangroves;
- Open Woodland;
- Rehabilitated;
- Rock Ridge and Outcropping;
- Very Open Woodland; and
- Vine Thickets.

These habitat types support a number of significant fauna species (**Figure 2-4**), all of which are similar to those found within the adjacent mainland. Conservation Significant Fauna Species recorded on Koolan Island include:

- Northern Quoll (*Dasyurus hallucatus*);
- Red Goshawk (*Erythrotriorchis radiatus*)(not recorded since 2004);
- Saltwater crocodile (*Crocodylus porosus*).
- Peregrine Falcon (*Falco peregrinus*);
- Gouldian Finch (*Erythrura gouldiae*)(not recorded since 1978);
- Ghost Bat (Macroderma gigas);
- Northern Leaf-nosed bat (*Hipposideros stenotis*);
- Orange Leaf-nosed bat (*Rhinonicteris aurantius*);
- Yampi Blind Snake (*Anilios yampiensis*); and
- A camaenid land snail *Amplirhagada astute*



SLR

N

Scale: 1:45,000

0 375 750 1,500 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

PROJECT

DATE: October 2025

FIGURE No.: 2-4

PROJECT No.: ADV-AU-00869

NAME: Koolan Island - Licence Amendment

DRAWING: Conservation Significant Fauna and Habitat

CLIENT

Mount Gibson Iron

2.8.2 Short-range endemic Fauna

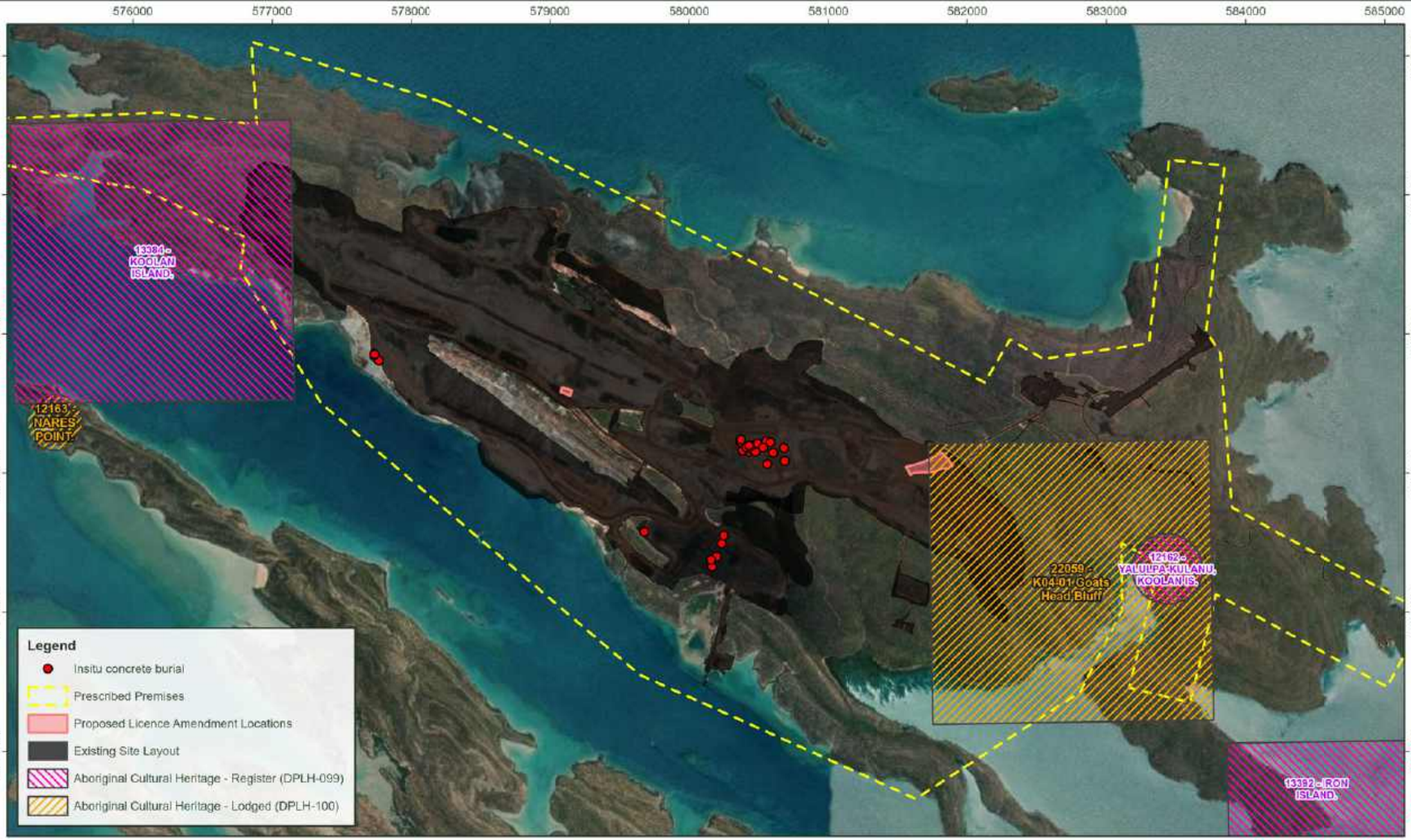
Koolan Island supports one potentially endemic invertebrate fauna species, the Yampi Blind Snake (*Anilios yampiensis*) (Priority 2) in addition to the land snail *Amplirhagada astuta* (Threatened– Vulnerable) that is listed under the *Biodiversity Conservation Act 2018*.

Short-range endemics on Koolan Island are likely to occur in habitats such as caves, vine thickets and rainforest patches. Also, routine snail monitoring which has occurred since the inception of operations in 2007 has identified the presence of SRE species outside proposed disturbance areas. Mining activities are unlikely to impact SREs as activities largely occur in areas developed by BHP before 1993.

2.9 Social Setting and Cultural Heritage

2.9.1 Desktop Heritage Assessment

A search of the Aboriginal Cultural Heritage Inquiry System (ACHIS) and the DPLH's Aboriginal Cultural Heritage Register was conducted for heritage places within the tenements. The results are shown in **Figure 2-5**, which shows the Project intersects two registered sites (ID: 13384 and ID 12162) with one lodged heritage site (ID 22059), which was submitted in 2007.



SLR

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

N

Scale: 1:35,000

0 250 500 1,000 m

PROJECT

DATE: October 2025

FIGURE No.: 2-5

PROJECT No.: ADV-AU-00869

NAME: Koolan Island - Licence Amendment

DRAWING: Cultural Heritage

CLIENT

Mount Gibson Iron

2.9.2 Heritage Surveys

Detailed ethnographical and archaeological surveys were conducted in 2005 by Archae-Aus through the Kimberley Land Council and Derby Aboriginal Council. As part of the co-existence agreement with the Native Title Determination group (Dambimangari People) the Goats Head Bluff site (ID 22059) has been placed within an exclusion zone. A register of all heritage and other heritage places is provided in **Table 2-1.**

Table 2-1 Registered Heritage Sites and Other Heritage Places

ID	Legacy ID	Name	Status	Type	KIO Tenement
Registered Sites					
13384	K01773	Koolan	Registered	Artefacts/Scatter, Midden/Scatter, Mythological, Painting, Skeletal Material/Burial, Arch Deposit	M04/416 M04/417 L04/101 E04/1266
13385	K01773	Koolan Island	Registered	Artefacts/Scatter, Midden/Scatter, Mythological, Painting, Skeletal Material/Burial, Arch Deposit	E04/1266
13386	K01775	Koolan Island	Registered	Artefacts/Scatter, Midden/Scatter, Rockshelter, Arch Deposit	E04/1266
13387	K01776	Koolan Island	Registered	Artefacts/Scatter, Midden/Scatter, Rockshelter, Arch Deposit, BP Dating: 26, 500+/-1050BP, Camp	E04/1266
13392	K01781	Iron Island	Registered	Rockshelter, Skeletal Material/Burial, Other: NE(REJ)	E04/1266
13395	K01784	The Drain Area	Registered	Artefacts/Scatter, Water Source	E04/1266
12162	K00042	Yalupa-Kulanu, Koolan Is	Registered	Artefacts / Scatter, Mythological, Painting, Rockshelter, Arch Deposit, Camp	L04/29 E04/1266
Other Heritage Places					
12163	K00043	Nares Point	Lodged	Camp	E04/1266
12164	K00044	Koolan Island	Lodged	Midden/Scatter, Rockshelter, Arch Deposit, Camp	E04/1266
13393	K01782	Iron Island	Lodged	Artefacts/Scatter, Rockshelter, Camp	E04/1266
22059	N/a	K04-01 Goats Head Bluff	Lodged	Artefacts/Scatter, Rockshelter, Camp	M04/416 M04/417 L04/29 E04/1266

3. Project Description

3.1 Category 64 – Waste Dump 5

The Premises is currently licensed for Category 64: Class II or III putrescible landfill. The proposed activities included within this licence amendment will involve the construction of a new landfill within the existing footprint of Waste Dump 5, as shown in **Figure 3-1**. The landfill area will cover around 2.6 hectares and will have enough capacity to handle the waste requirements of mine closure, which will begin in early 2026. The WD5 landfill will be used to accommodate larger waste types from mine closure activities, including concrete, structural steel, refrigerated panels and fibre cement from camp facilities, vinyl and plastics, poly materials, bitumen from the old airstrip, zincalume and galvanised sheeting, HDPE liners, and other tarpaulin-based materials.

The landfill cell will be approximately 295 m in length, with a maximum width of 135 m and a depth of 9m. Vegetation clearing will not be required as the waste dump is not vegetated in this area. Excavated material from the landfill cell will be used in the reprofiling of the existing waste rock dump or stored in bunds around the landfill, which will prevent any windswept waste from leaving the landfill area. Once the landfill has reached capacity, remaining material will be placed back into the trench to form a water-shedding mound.

The landfill will be managed in accordance with the current licence conditions, as shown in **Table 3-1** with the exception of the quantity limit increasing from 4,500 to 20,000 tonnes per annual period and **Table 3-2** as well as through the Waste Disposal – Landfill procedure (MGX-HSEC-KI-WI-0018).

Table 3-1 Waste Acceptance – Existing License

Waste	Specification	Quantity Limit
Clean Fill	None Specified	Combined total of up to 20,000 tonnes per annual period.
Inert Waste Type 1		
Inert Waste Type 2		
Putrescible Waste		
Special Waste Type 1 (Asbestos)	Must be wrapped in heavy duty plastic prior to acceptance.	
Special Waste Type 2 (Biomedical and Clinical Waste)	The Licence Holder or their representative must note in writing any discrepancies between waste declared and waste received	
Contaminated Solid Waste	Must be supported by documentation that demonstrates compliance with the acceptance criteria for Class II landfills as defined in the document '*Landfill Waste Classification and Waste definitions 1996* (As amended)	

Table 3-2 Waste Processing

Waste Type	Process(es)	Process Limits[1,2]
All	Disposal of waste by landfilling	• Place waste within a defined trench or within an area enclosed by earthen or other bunds; • Cover waste at frequent intervals with at least 150 mm of cover material; • Restrict the tipping area to a maximum linear length of 30 m; • The separation distance between the base of the landfill and the highest groundwater level must not be less than 3 m; and • Maintain a minimum horizontal distance of at least 100 m between the tipping area and any surface water body.
Special Waste Type 1 (Asbestos)	Receipt, handling, storage prior to or disposal by landfilling	• Only to be disposed of into a designated asbestos disposal area within the landfill; • Not to be deposited within 2 m of the final tipping surface of the landfill; and • No works must be carried out on the landfill that could lead to a release of asbestos fibres.
Special Waste Type 2 (Biomedical and Clinical Waste)	Receipt handling and disposal by landfilling	• Only to be disposed of into a designated biomedical waste disposal area within the landfill; • Not to be deposited within 2 m of the final tipping surface of the landfill; and • No works must be carried out on the landfill that could lead to biomedical wastes being excavated or uncovered.
Contaminated Solid Waste	Receipt, handling and disposal by landfilling	None specified.

SLR

N

Scale: 1:3,000

0 25 50 100 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

PROJECT

DATE: October 2025

FIGURE No.: 3-1

PROJECT No.: ADV-AU-00869

NAME: Koolan Island - Licence Amendment

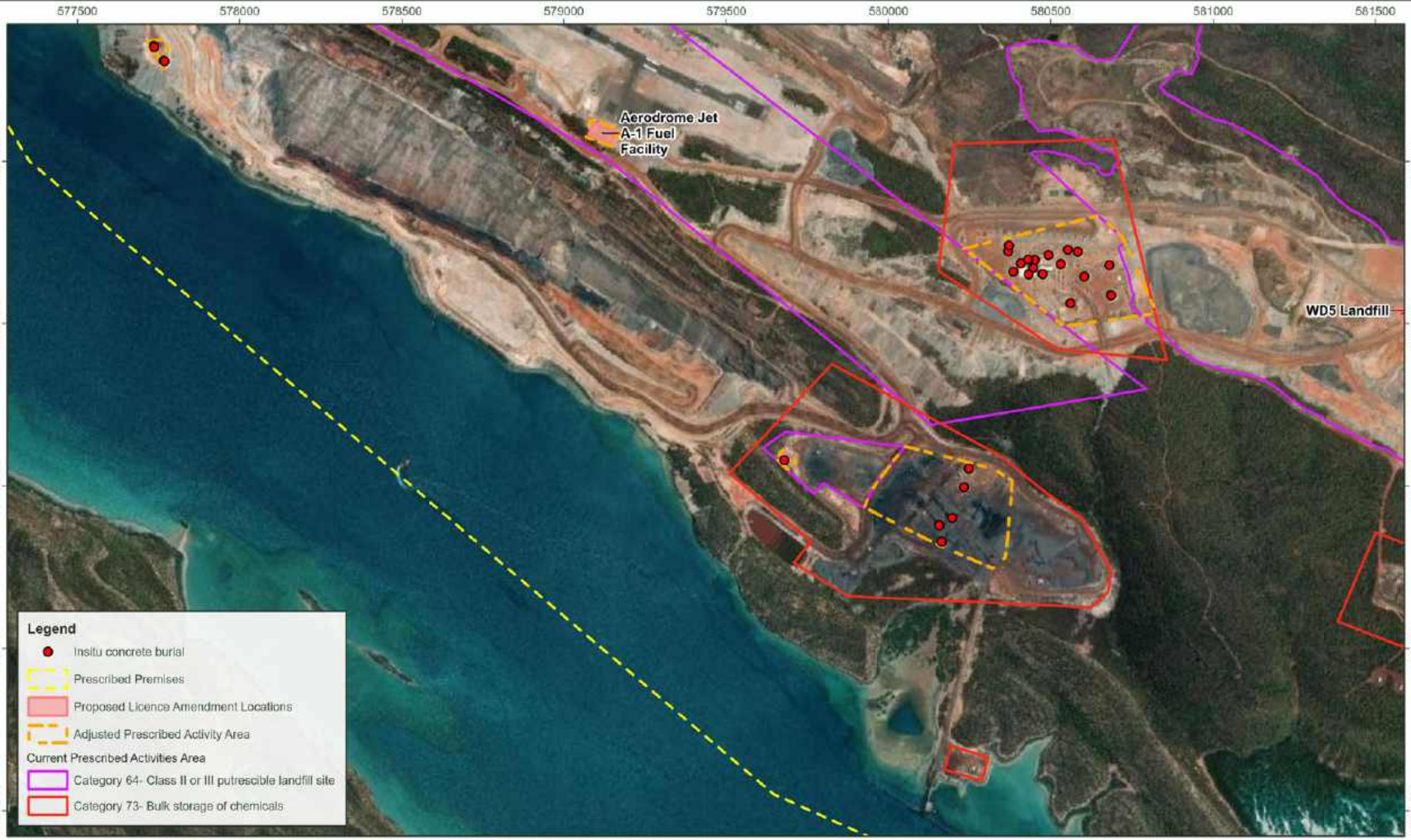
DRAWING: Waste Dump 5 - Landfill Design

CLIENT

Mount Gibson Iron

3.2 *In-situ* Concrete Burial

This amendment also proposes the in-situ burial of concrete pads within the Category 64 scheduled activity areas (**Figure 3-2**). A number of concrete pads remain across the site beneath existing infrastructure, which will be removed as the operation transitions to closure in 2026. These pads will be broken back to the surrounding ground level, with excess material removed and placed in existing approved Category 64 waste facilities. The remaining pad surfaces will be fractured to promote water infiltration and vegetation growth before being covered with a 100 mm layer of topsoil.



SLR

N

Scale: 1:15,000

0 125 250 500 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

PROJECT

DATE: October 2025

FIGURE No.: 3-2

PROJECT No.: ADV-AU-00869

NAME: Koolan Island - Licence Amendment

DRAWING: Insitu Concrete Burial Locations

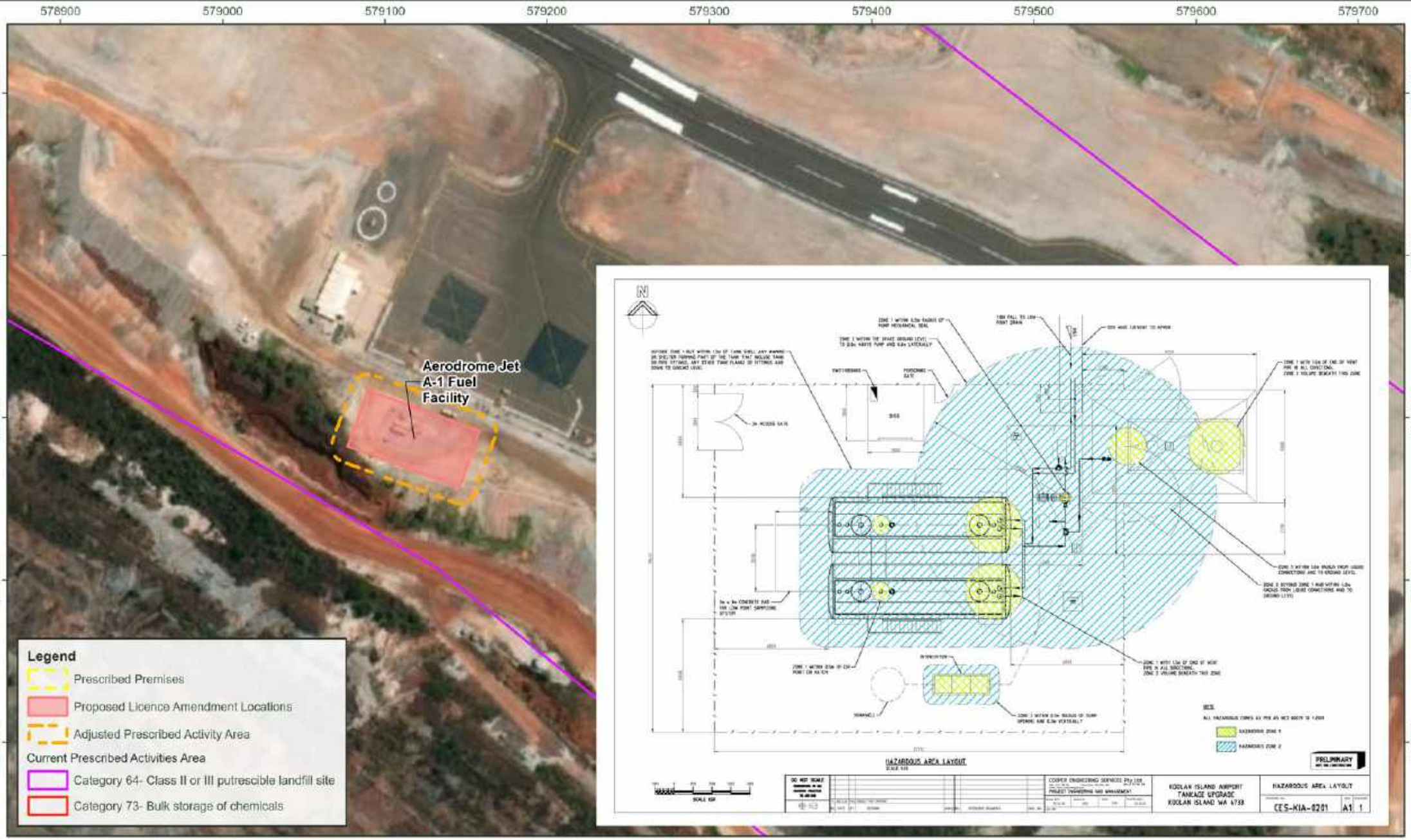
CLIENT

Mount Gibson Iron

3.3 Aerodrome Jet A-1 Fuel Facility

The aerodrome fuel facility has been built and operational at the site since 2021 and contains two 55 kL fuel tanks (110 kl in total). The facility is operated by appropriately trained personnel under the site's operating procedures. The facility has been constructed with a triple interceptor trap to contain any spills, and it is constructed with the low point of the surrounding area within the footprint of the fuel facility to assist in containing potential spills. The existing facility measures approximately 18.5 m by 28.7 m.

This amendment seeks to add the existing facility to the Category 73 Prescribed Premises area. The total proposed area for this Prescribed Activity area will be 0.52 ha (**Figure 3-3**).



SLR

N

Scale: 1:3,000

0 25 50 100 m

Projection: GDA2020 MGA Zone 51

Created/Reviewed By: AW/MR

PROJECT		CLIENT
DATE: October 2025	NAME: Koolan Island - Licence Amendment	Mount Gibson Iron
FIGURE No.: 3-3		
PROJECT No.: ADV-AU-00869	DRAWING: Aerdrome Jet A-1 Fuel Facility	

4. Control of Emissions

4.1 Risk Assessment Overview

The risk assessment has been undertaken in accordance with the DWER Guidance Statement: Risk Assessments (DWER, February 2017) and the DWER Guidance Statement: Environmental Siting (DWER, November 2016).

The risk assessment process identified the:

- Sources of pollution and, where available, quantification of emissions.
- Pathway that pollution follows from the source to the receptor.
- Environmental and health receptors.
- Potential impacts on the receptors from this source of pollution.
- Controls and mitigation measures applied to the Project.
- Likelihood, consequence and overall risk rating associated with this factor.
- Requirement for monitoring.

Likelihood and consequence categories (**Table 4-1 and Table 4-2**) were derived from these DWER guidance statements and used to develop the associated risk matrix, which is presented in **Table 4-3**.

Table 4-1 Likelihood Categories

Likelihood of Occurrence	Probability
Almost Certain	The risk event is expected to occur in most circumstances.
Likely	The risk event will probably occur in most circumstances.
Possible	The risk event could occur at some time.
Unlikely	The risk event will probably not occur in most circumstances.
Rare	The risk event may only occur in exceptional circumstances.

Table 4-2 Consequence Categories

Consequence Category	Environmental Consequence	Public Health and Amenity Consequence
Severe	• Onsite impacts: catastrophic • Offsite impacts local scale: high level or above • Offsite impacts wider scale: mid-level or above • Mid to long-term or permanent impact to an area of high conservation value or special significance • Specific Consequence Criteria (for environment) are significantly exceeded	• Loss of life • Adverse health effects: high level or ongoing medical treatment • Specific Consequence Criteria (for public health) are significantly exceeded • Local scale impacts: permanent loss of amenity
Major	• Onsite impacts: high level • Offsite impacts local scale: mid-level • Offsite impacts wider scale: low-level • Short-term impact to an area of high conservation value or special significance • Specific Consequence Criteria (for environment) are exceeded	• Adverse health effects: mid-level or frequent medical treatment • Specific Consequence Criteria (for public health) are exceeded • Local scale impacts: high-level impact to amenity
Moderate	• Onsite impacts: mid-level • Offsite impacts local scale: low-level • Offsite impacts wider scale: minimal • Specific Consequence Criteria (for environment) are at risk of not being met	• Adverse health effects: low-level or occasional medical treatment • Specific Consequence Criteria (for public health) are at risk of not being met • Local scale impacts: mid-level impact to amenity
Minor	• Onsite impacts: low-level • Offsite impacts local scale: minimal • Offsite impacts wider scale: not detectable • Specific Consequence Criteria (for environment) likely to be met	• Specific Consequence Criteria (for public health) are likely to be met • Local scale impacts: low-level impact to amenity
Slight	• Onsite impact: minimal • Specific Consequence Criteria (for environment) met	• Local scale: minimal to amenity • Specific Consequence Criteria (for public health) met

Table 4-3 Risk Matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost Certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium

4.2 Risk And Impact Assessment

Potential impacts, control measures and residual risk to potentially sensitive receptors are presented in **Table 4-4.**

Table 4-4 Risk and Impact Assessment

Emission Source/Event	Pathway	Receptor	Potential Impacts	Control Measures	Consequence	Likelihood (After Controls)	Risk
Emissions to Air							
Odour from the landfill	Wind dispersion. Diffusion to Air	Koolan Iron Ore Pty Ltd's mining village Terrestrial Fauna	Nuisance of odour	• Waste within the landfill will be covered at regular intervals • Waste is covered to a depth of 150 mm as a minimum.	Slight	Unlikely	Low
Dust and particulates from construction and operation of landfill	Wind dispersion	Koolan Iron Ore Pty Ltd's mining village Terrestrial fauna Flora and Vegetation	Increase in dust levels reduces air quality for people and fauna. Reduce growth of vegetation.	• Water cart used for dust suppression. • Landfill construction will not occur in during periods of strong wind..	Minor	Unlikely	Low

Emission Source/Event	Pathway	Receptor	Potential Impacts	Control Measures	Consequence	Likelihood (After Controls)	Risk
Fire occurring during the operation of the landfill or the jet fuel facility.	Air	Fauna Flora and vegetation	Reduction in vegetation and fauna habitat Impacts on the health of fauna, flora, vegetation and humans.	• Disposal restricted to waste types listed under Table 2 of Licence L8148/2006/4. • Landfill located on an unvegetated waste dump. • Fire suppression system on operational machinery. • Covering of waste to be undertaken at regular intervals. • Bunds and walls surrounding the landfill must be maintained at a height to prevent windblown waste from leaving the facility. • Fire management plan. • Adequate separation distance. • Non-sparking tools. • Located away from emission sources.	Moderate	Unlikely	Medium
Emission to Land and Water							
Windblown waste from landfill	Wind	Fauna Flora and Vegetation People	Contamination of the surrounding environment. Fauna ingestion of waste from the landfill. Reduced Amenity	• Bunds and walls surrounding the landfill must be maintained at a height to prevent windblown waste from leaving the facility. • Covering of waste to be undertaken at regular intervals. • Active/tipping face should not exceed 30m in linear length. • Landfill will be operated in accordance with design capacity.	Slight	Likely	Medium

Emission Source/Event	Pathway	Receptor	Potential Impacts	Control Measures	Consequence	Likelihood (After Controls)	Risk
Leachate from landfill impacting surrounding environment	Water and Soil	Soil Fauna	Contamination of soil and groundwater.	• Drainage is to be maintained so that rainwater is directed away from the active face and does not pond in the landfill. • Covering of waste to be undertaken regular intervals. • Groundwater separation distance is >3m. • Only approved waste as per Licence L8148/2006/4 is to be disposed of within the landfill.	Moderate	Unlikely	Medium
Hydrocarbon spills during operational activities of the Jet A1 fuel farm .	Direct pathway subsurface	Soils Groundwater	Contamination of soils and groundwater.	• Fuel facility to be operated by trained personnel and in accordance with operating procedures. • Spill kits are located at the refuelling site. • Spill response plan and procedure circulated to all trained personnel. • Dangerous Goods requirements to be followed. • Emergency stop used if any spill is observed.	Major	Rare	Medium
Leachates from buried concrete trace metals or residual admixtures into the surrounding soil and groundwater.	Direct pathway subsurface	Soils Groundwater	Contamination of soils and groundwater.	• Buried concrete is inert. • Concrete is buried above groundwater levels.	Moderate	Rare	Low

5. Compliance

5.1 Department of Water and Environment Regulation.

The Licence Amendment seeks to amend the existing Licence issued under Part V of the EP Act. There are no changes to the categories currently outlined in the Licence, as shown in **Table 5-1**. This amendment seeks to increase the production/design capacity of Category 64 to 20,000 tonnes per annual period.

Table 5-1 Prescribed Premises Categories

Prescribed Premises Category Description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed Production/Design Capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore	5,000,000 tonnes per Annual Period
Category 6: Mine dewatering	10,000,000 tonnes per Annual Period
Category 12: Screening	2,000,0000 tonnes per Annual Period
Category 54: Sewage Facility	130 cubic metres per day
Category 58: Bulk material loading or unloading	75,000 tonnes per day
Category 64: Class II or III putrescible landfill site	20,000 tonnes per Annual Period
Category 73: Bulk storage of chemicals	1,200 cubic metres in aggregate

5.2 Department of Mines Petroleum and Exploration

The operation of the site and protection of the surrounding environment are managed under the *Mining Act 1978*. All activities within this Licence Amendment are within areas of approved disturbance under Mining Proposal 500195.

5.3 Environmental Protection Authority (EPA)

The removal of native vegetation and disturbance to the surrounding environment is managed through the Part IV approval process. The Koolan Island mine site received its Ministerial Statement (MS715) in February 2006, which has been amended nine times since approval, most recently in 2024. The activities within the Licence Amendment all occur within areas approved for mining and operations by the WA EPA.

6. References

Aquaterra. (2005). *Koolan Island Feasibility Study - Groundwater*.

Hydroconcept. (2013). *Review of groundwater monitoring on Koolan Island*.

MBS Environmental. (2023). *Koolan Island Iron Ore Project Waste Characterisation*.

Schoknecht, N., & Pathan, S. (2013). *Soil groups of Western Australia: A simple guide to the main soils of Western Australian. Resource Management Technical Report 380, Perth: Department of Agriculture and Food.*

Soilwater Consultants. (2014). *Investigation of WRL Materials and Design at Koolan Island*.

Appendix A Important Information About this Document

Koolan Island Iron Ore Mine and Port Facility

SLR Project No.: ADV-AU-00869

October, 2025

Revision: 1

IMPORTANT INFORMATION ABOUT THIS DOCUMENT

Our Client

This report has been produced by or on behalf of SLR Advisory Services Pty Ltd (SLR) solely for Koolan Iron Ore Pty Ltd (the Client).

1. Client Use

The Client's use and disclosure of this report is subject to the terms and conditions of the engaging Agreement under which SLR prepared the report.

2. Notice to Third Parties

SLR prepared this report for the Client only. If you are <u>not</u> the Client:

- *SLR has prepared this report having regard to the particular needs and interests of the Client, and in accordance with the Client's instructions and in accordance with the terms and conditions of its engagement. It did not draft this report having regard to any other person's particular needs or interests. Your needs and interests may be distinctly different to the Client's needs and interests, and the report may not be sufficient, fit or appropriate for your purposes.*
- *Other than as expressly agreed by SLR in writing, SLR does not authorise, nor does it accept any liability to any party other than the Client who chooses to rely on this Report. Any such reliance is at the user's sole and exclusive risk.*
- *SLR does not make and expressly disclaims from making any representation or warranty to you – express or implied – regarding this report or the conclusions or opinions set out in this report (including without limitation any representation or warranty regarding the standard of care used in preparing this report, or that any forward-looking statements, forecasts, opinions or projections contained in the report will be achieved, will prove to be correct or are based on reasonable assumptions).*
- *SLR expressly disclaims any liability to you and any duty of care to you.*
- *SLR does not authorise you to rely on this report. If you choose to use or rely on all or part of this report, then any loss or damage you may suffer in so doing is at your sole and exclusive risk.*

3. Independence

SLR provides advisory services to the mining and finance sectors. Within its core expertise, it provides independent technical reviews, resource evaluation, mining engineering, environmental assessments and mine valuation services to the resources and financial services industries.

SLR has independently assessed the subject of the report (the Project) by reviewing pertinent data, which may include Resources, Reserves, existing approvals, licences and permits, manpower requirements and the life of mine plans relating to productivity, production, operating costs and capital expenditures. All opinions, findings and conclusions expressed in this report are those of SLR and specialist advisors.

Drafts of this report were provided to the Client, but only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in this report.

SLR has been paid and has agreed to be paid, professional fees for the preparation of this report. The remuneration for this report is not dependent upon the findings of this report. SLR does not have any economic or beneficial interest (present or contingent), in the Project, in securities of the companies associated with the Project or the Client.

4. Inputs, subsequent changes and no duty to update

SLR has created this report using data and information provided by or on behalf of the Client. Unless specifically stated otherwise, SLR has not independently verified that data and information. SLR accepts no liability for the accuracy or completeness of that data and information, even if that data and information have been incorporated into or relied upon in creating this report (or parts of it).

The conclusions and opinions contained in this report apply as at the date of the report. Events (including changes to any of the data and information that SLR used in preparing the report) may have occurred since that date which may impact on those conclusions and opinions and make them unreliable. SLR is under no duty to update the report upon the occurrence of any such event, though it reserves the right to do so.

5. Inherent Mining Risks

Mining is carried out in an environment where not all events are predictable.

Whilst an effective management team can identify the known risks and take measures to manage and mitigate those risks, there is still the possibility for unexpected and unpredictable events to occur. It is not possible therefore to totally remove all risks or state with certainty that an event that may have a material impact on the operation of a mine, will not occur.

The ability of any person to achieve forward-looking production and economic targets is dependent on numerous factors that are beyond SLR's control and that SLR cannot anticipate. These factors include but are not limited to, site-specific mining and geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalize the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, unforeseen changes in legislation and new industry developments. Any of these factors may substantially alter the performance of any mining operation.

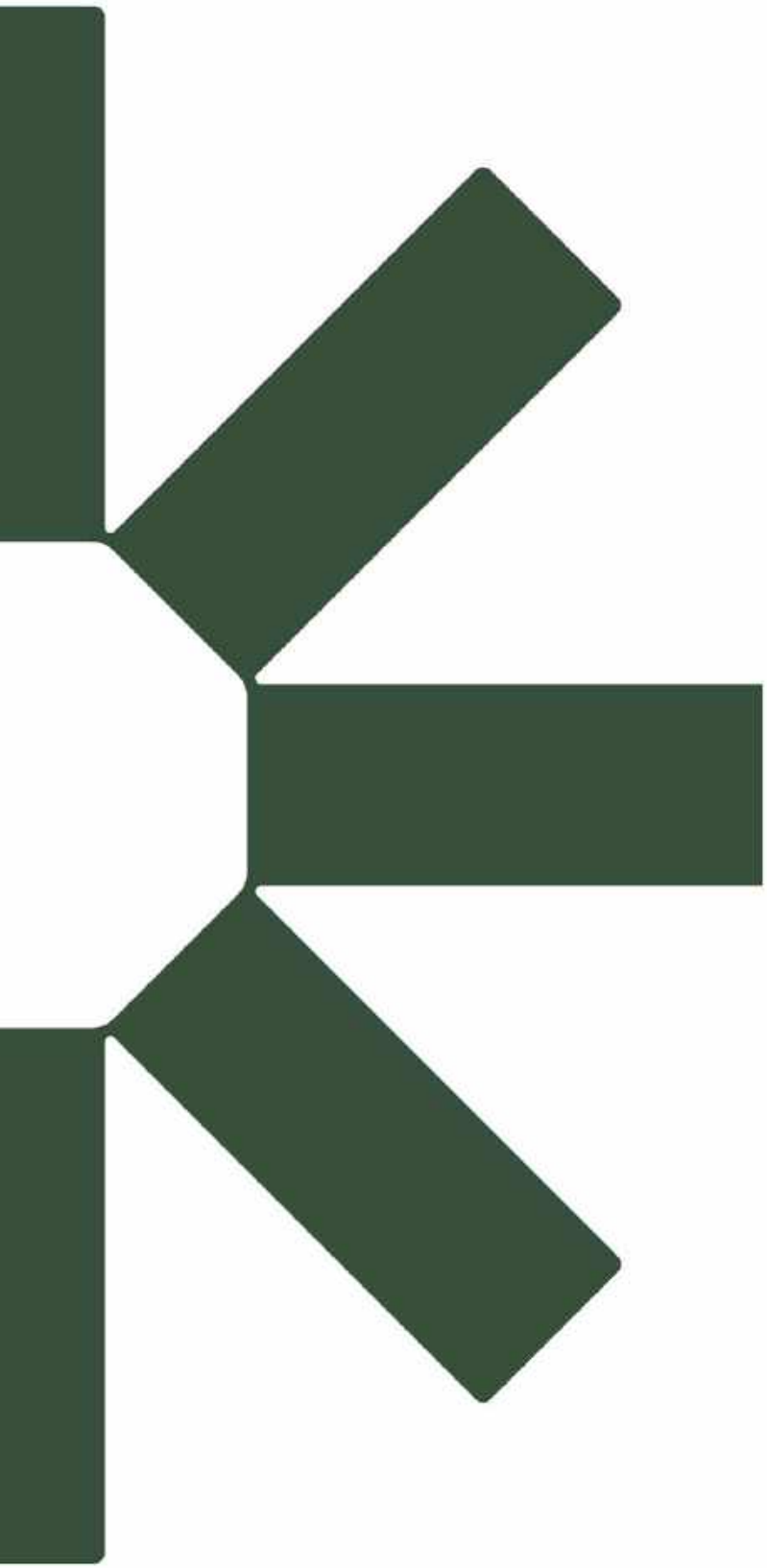
6. Limitations and Exclusions

SLR's report is based on data, information reports, plans and tabulations, as applicable, provided by the Client or on behalf of the Client. The Client has not advised SLR of any material change, or event likely to cause material change, to the operations or forecasts since the date of assets inspections.

The work undertaken for this report is required for a technical review of the information, coupled with such inspections as SLR considered appropriate to prepare this report.

Unless otherwise stated specifically in writing, the report specifically excludes all aspects of legal issues, commercial and financing matters, land titles and agreements, except such aspects as may directly influence technical, operational or cost issues and where applicable to the JORC Code guidelines.

SLR has specifically excluded making any comments on the competitive position of the relevant assets compared with other similar and competing producers around the world. SLR strongly advises that any potential investors make their own comprehensive assessment of the competitive position of the relevant assets in the market.



Making Sustainability Happen