

FY25 MINING MANAGEMENT PLAN AMENDMENT

**Groote Eylandt Mining Company
Limited (GEMCO) | ABN 26 004 618 491**

Authorisation Number: 126-01 (GEMCO Mine)
Planning Period: FY2025

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APPROVAL

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DOCUMENT CONTROL

Version	Date	Comments
1.	25 March 2024	First submission to DITT
2.	17 July 2024	Second submission in response to DITT's request for additional information

DISCLAIMER

Information in this document that relates to the Ore Reserve and/or Mineral Resource estimate for GEMCO was declared as part of South32's annual Resource and Reserve declaration in the FY23 Annual Report (www.south32.net) issued on 8 September 2023 and prepared by Competent Persons in accordance with the requirements of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012) (the JORC Code). South32 confirms that it is not aware of any new information or data that materially affects the information included in the original announcements. All material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. South32 confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Information in this document that refers to Production Target and forecast financial information is based on Proved (64%) and Probable (36%) Ore Reserves. The updated Mineral Resources and Ore Reserves underpinning the Production Target have been prepared by Joshua Harvey and Mark Bryant, Competent Persons in accordance with the requirements of the JORC Code. The Mineral Resource and Ore Reserve estimates are published in South32's FY23 Annual Report (www.south32.net). The stated Production Target is based on South32's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that this target will be met.

This document may contain forward-looking statements, including statements about plans, strategies and objectives of management; and anticipated productive lives of projects, mines and facilities. These forward-looking statements reflect reasonable expectations at the date of this document, however they are not guarantees or predictions of future performance.

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1 INTRODUCTION

1.1 Background

1.1.1 Overview of Operation

Groote Eylandt Mining Company Pty Ltd (GEMCO) operates a manganese mine located on Groote Eylandt in the Northern Territory (NT) (Figure 1-1). GEMCO has been operating since 1964 and is currently owned by South32 Ltd (60 percent [%]) and Anglo American Plc (40%).

GEMCO undertakes mining and exploration activities across a number of mineral tenements on Groote Eylandt. These are listed in Table 1-1 and shown in Figure 1-2. For ease of reference, these tenements are grouped into areas referred to as the Western Leases, Eastern Leases and Southern Lease. The Western and Eastern Leases are approved mineral leases and form part of the same mining authorisation (0126-01). The Southern Lease is a mineral exploration licence that is subject to separate mining authorisation (0887-01) and is shown for context purposes only.

Table 1-1: GEMCO Tenements (Groote Eylandt)

Description	Title Number	Title Holder	Activity	Grant Date	Expiry Date
Western Leases	MLN951	GEMCO	Mining and associated activities	21/05/1965	20/07/2031
	MLN952	GEMCO	Mining and associated activities	21/05/1965	20/07/2031
	MLN953	GEMCO	Mining and associated activities	21/05/1965	20/07/2031
	MLN956	GEMCO	Mining and associated activities	08/04/1974	29/09/2031
	MLN957	GEMCO	Mining and associated activities	08/04/1974	29/09/2031
	MLN958	GEMCO	Mining and associated activities	08/04/1974	29/09/2031
	MLN959	GEMCO	Mining and associated activities	08/04/1974	29/09/2031
	MLN960	GEMCO	Mining and associated activities	08/04/1974	29/09/2031
	MLN961	GEMCO	Mining and associated activities	08/04/1974	29/09/2031
	MLN2	GEMCO	Power line lease	30/09/1985	29/09/2031
	MLN3	GEMCO	Bridge lease	20/12/1984	20/07/2031
	SPL382	GEMCO	Cargo handling and wharf ancillary purposes	15/05/1974	29/05/2065
	SPL383	GEMCO	Industrial area including stockpiling of ore	15/05/1974	29/05/2065
	SPL392	GEMCO	Township lease	15/05/1974	29/05/2065
	SPL393	GEMCO	Greenbelt around township	15/05/1974	29/05/2065
	AA32517	GEMCO	Haul road corridor for MLN961	12/10/2020	29/09/2031
Eastern Leases	ML31219	GEMCO	Mining and associated activities	04/08/2016	03/08/2041
	ML31220	GEMCO	Mining and associated activities	04/08/2016	03/08/2041
	AA31711	GEMCO	Haul road corridor for Eastern Leases	12/10/2017	03/08/2041
Southern Lease	EL2455	GEMCO	Exploration activities	12/10/2016	11/10/2024

MLN = Mineral Lease Northern

EL = Exploration Licence

SPL = Special Purpose Lease

ML = Mineral Lease



LEGEND

- Eastern Leases (Mineral Leases / Access Authority)
- Western Leases (Mineral Leases / Special Purpose Leases / Access Authority)
- Southern Lease (Exploration Licence)
- Public Road
- Unsealed Public Road

Source: GEMCO (2024); Department of Environment, Parks and Water Security (2024)

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GEMCO MANGANESE

Location Plan

Figure 1-1



Figure 1-2

Key GEMCO contacts for the purpose of this FY25 Mining Management Plan (MMP) Amendment are provided in Table 1-2.

Table 1-2: Key GEMCO Contacts

	Steven Hedges	Michael Smith
Title	Vice President Operations	Manager Technical Services
Postal Address	Rowell Highway Alyangula NT 0885	Rowell Highway Alyangula NT 0885
Phone	+61 8 8987 4388	+61 8 8987 4311
Email	steve.hedges@south32.net	michael.smith@south32.net

1.1.2 Key Approvals

Operations within GEMCO's Western Leases are undertaken in accordance with the following approvals:

- Land owner approval granted in the form of a Mining Agreement and Haul Road Agreement between GEMCO and the Anindilyakwa Land Council (ALC) pursuant to the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth) (ALRA);
- Regulatory approval granted in the form of Mineral Leases and an Access Authority under the *Mineral Titles Act 2010* (NT) (MT Act) and Special Purposes Leases under the *Special Purposes Leases Act 1953* (NT); and
- Regulatory approval granted in the form of a Mining Authorisation (0126-01) under the *Mining Management Act 2001* (NT) (MM Act).

Operations within GEMCO's Eastern Leases are undertaken in accordance with the following approvals:

- Land owner approval granted in the form of a Mining Agreement and Haul Road Agreement between GEMCO and the ALC pursuant to ALRA;
- Regulatory approval granted in the form of Mineral Leases and an Access Authority under the MT Act;
- Regulatory approval granted under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) (EPBC 2014/7228);
- Regulatory approval granted under the *Environment Assessment Act 1982* (NT) (EA Act)¹; and
- Regulatory approval granted in the form of a Mining Authorisation (0126-01) under the MM Act.

1.1.3 Current Mine Status

GEMCO has undertaken mining activities in the Western Leases for over 60 years. Exploration activities in the Eastern Leases commenced in 2001 and mining activities are scheduled to occur from FY25. The Eastern Leases consists of two mineral tenements termed the Northern Eastern Lease and Southern Eastern Lease (Table 1-1; Figure 1-2). The Northern Eastern Lease is in feasibility and the Southern Eastern Lease is currently under construction. The proposed development activities for FY25 are only planned to occur in the Southern Eastern Lease.

GEMCO's current production capacity is approximately six million tonnes of manganese ore per annum (Mtpa). Mining activities in the Southern Eastern Lease are expected to extend the life of GEMCO operations but will not increase the current annual production capacity.

¹ Now superseded by the *Environmental Protection Act 2019* (NT) (EP Act).

1.2 Purpose of Document

GEMCO's current MMP for its Western Leases describes activities to be undertaken during the FY21-FY24 planning period (termed FY21-FY24 MMP). This MMP was submitted to the NT Department of Tourism, Industry and Trade (DITT)² on 25 November 2020 and was approved on 18 June 2021. GEMCO subsequently submitted an amendment to the FY21-FY24 MMP on 7 September 2021 for activities to be undertaken in the Eastern Leases for the same planning period (termed Eastern Leases Mining Management Plan Amendment [MMPA]). DITT approved the Eastern Leases MMPA on 25 February 2022.

GEMCO has recently undertaken a review of its proposed activities for FY25 against the FY21-FY24 MMP and Eastern Leases MMPA. For the Western Leases, no significant changes are forecast, and the proposed disturbance for FY25 is accounted for in the disturbance area approved under the FY21-FY24 MMP but yet to be undertaken (refer Appendix A). Accordingly, the Western Leases are not considered further in the main text of this document.

For the Eastern Leases, the Southern Eastern Lease will transition from construction activities in FY24 to mining activities in FY25 (note, there are currently no development activities proposed in the Northern Eastern Lease). Whilst the Eastern Leases MMPA describes operational activities and associated environmental management measures, it does not include the proposed disturbance for FY25 development activities in the Southern Eastern Lease.

GEMCO is in the process of preparing an updated MMP for the FY25 to closure planning period (termed FY25-Closure MMP) which is scheduled for submission in mid-2024. The purpose of this current document (termed FY25 MMPA) is to provide authorisation for FY25 activities in the Southern Eastern Lease pending approval of the FY25-Closure MMP. Accordingly, the document:

- Describes the planned development areas within the Southern Eastern Lease for FY25; and
- Provides a revised security estimate associated with the additional development areas.

This FY25 MMPA is an amendment to the FY21-FY24 MMP and should be read concurrently with the FY21-FY24 MMP and associated amendments.

Table 1-3 provides a summary of the MMP amendments described above.

Table 1-3: Summary of MMP Amendments

Document Name	Variation #	Submission Date	Authorisation Date
FY21-FY24 MMP	Variation 7	25/11/2020	18/06/2021
FY21-FY24 Eastern Leases MMPA	Variation 8	07/09/2021	25/02/2022
FY25 MMPA (this document)	-	21/03/2024	-
FY25-Closure MMP (future document)	-	TBC	-

1.3 Stakeholder Consultation

GEMCO has engaged with the following stakeholders as part of this FY25 MMPA submission:

- **DITT:** GEMCO met with DITT on 22 November 2023 and 24 January 2024 to seek feedback on its proposed approach for upcoming MMP amendments. The feedback received from DITT has been incorporated into this document.
- **ALC:** GEMCO's engagement strategy with the ALC includes consideration of specific requirements under the Mining Agreement in place between both parties. Article 11 of the Mining Agreement outlines the requirement for GEMCO to submit any MMP amendments to the ALC for review and approval prior to submission to the NT Government. The ALC provided their endorsement of this FY25 MMPA on 12 March 2024 (refer Appendix B) and ongoing communication throughout the term of the MMPA will be maintained utilising existing engagement methods.

² Previously the NT Department of Primary Industry and Resources (DPIR).

2 PROJECT DESCRIPTION

GEMCO's operations involve mining manganese ore by open cut mining methods, sizing and washing the ore in a concentrator and transporting the final product to the Milner Bay port facility for shipping. Ongoing exploration activities and sustaining capital project works are also undertaken to support the progression of mining activities. Refer to the FY21-FY24 MMP for further details about each of these activities.

The following sections describe the mining, exploration and project activities planned to be undertaken in the Southern Eastern Lease for FY25. These operational activities will be undertaken using GEMCO's existing workforce and will involve the sharing of fixed and mobile plant within the Western Leases to supplement production.

2.1 Mining Activities

Mining activities are undertaken over a number of quarry areas simultaneously (Figure 2-1). The quarries are typically mined in strips approximately 40 metres (m) wide, and generally between 400 m to 1,500 m long depending on the extent of mineralisation. Typical quarry depth varies between 5 m and 20 m.

Consistent with mining operations occurring in the Western Leases, open cut strip mining in the Southern Eastern Lease will involve the following sequence of activities:

- Clearing vegetation using bulldozers.
- Stripping and recovering topsoil. Topsoil is stripped, loaded into haul trucks and either placed directly on areas that are ready for rehabilitation or temporarily stockpiled for later use.
- Pre-stripping overburden. Overburden is excavated to gain access to the ore. This material is either temporarily stockpiled or placed directly within previously mined quarries.
- Drilling and blasting the manganese ore. The ore is drilled and blasted to break up the material so it can be easily handled.
- Mining ore. A fleet of haul trucks and excavators is used to extract the ore and transport it via a network of dedicated haul roads to the concentrator (within the Western Leases).
- Backfilling quarries following ore removal. Dozers and haul trucks are used to backfill quarries with overburden up to the Post Mining Surface (PMS) to create a stable and free draining landform. The objective of the PMS is to broadly replicate the pre-mining topography.
- Topsoil replacement. Topsoil is spread over backfilled areas to a minimum depth of 300 millimetres (mm).
- Revegetation of topsoil.

Refer to section 4.1 of the FY21-FY24 MMP and Eastern Leases MMPA for further information about GEMCO's mining activities.

Water management structures including sediment basins and drains will be constructed to prevent or minimise erosion caused by runoff on disturbed surfaces, separate different water types and, trap and retain sediment from cleared areas. Refer to section 5.6.3 of the Eastern Leases MMPA for details.

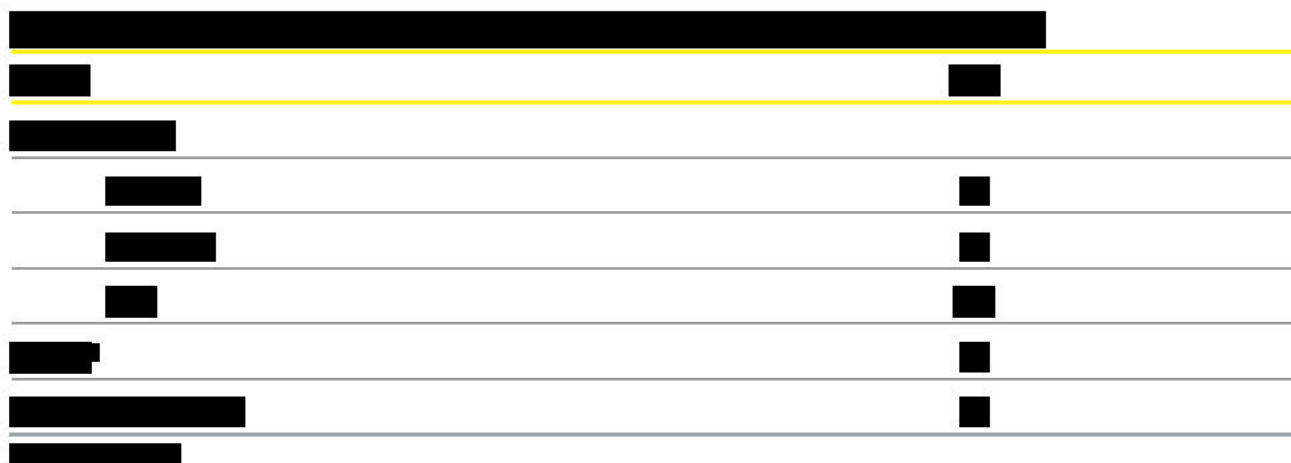
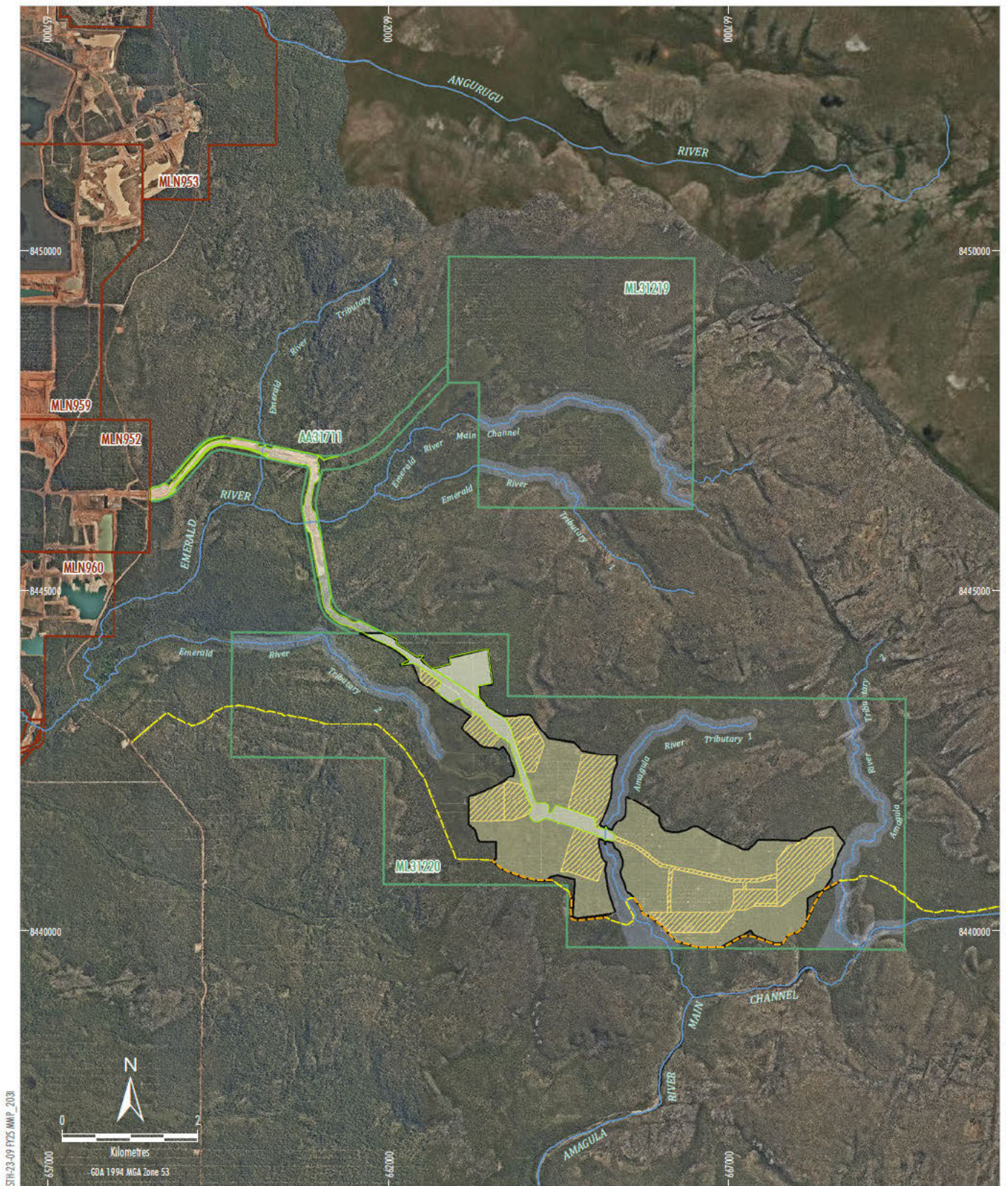


Figure 2-1 shows the proposed clearing extent associated with mining activities in the Southern Eastern Lease for FY25.

These activities will require the realignment of an existing public access track that provides access to an area in the south-east of the island known as Dalumba Bay (Figure 2-1). Whilst proposed alignments have been provided in both the Environmental Impact Statement (EIS) and Mining Agreement for the project, the final alignment will be agreed in consultation with the ALC. The realigned track will be similar to the existing track, comprising a single lane, unsealed road which will be cleared and graded to follow the natural ground elevation. Works to develop the track realignment will be undertaken during the 2024 dry season prior to closure of the existing track. Any portion of the existing access track that will no longer be used, but not subsequently mined, will be closed and rehabilitated.

Disturbance associated with the realignment of this public access track has not been included in the security estimate as it involves permanent disturbance of an area that is not under GEMCO ownership or management.



LEGEND

- Eastern Leases
- Western Leases
- Approved Mine Disturbance Area
- Disturbance as at June 2024
- Proposed Realigned Public Access Track
- Existing Public Access Track
- Proposed Mine Plan (FY25)
- Watercourse
- Watercourse Buffer

Source: GEMCO (2024); Department of Environment,
Parks and Water Security (2024)
Orthophoto: GEMCO (2024); Esri, Maxar, Earthstar
Geographics, and the GIS User Community (2024)

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GEMCO MANGANESE

**Proposed Mine Plan (FY25)
- Southern Eastern Lease**

Figure 2-1

2.2 Ore Transportation and Processing Activities

Manganese ore from the Southern Eastern Lease will be transported to the Western Leases via a network of dedicated haul roads. The ore will then be stockpiled prior to being fed into the concentrator and processed to a final product. This process involves:

- Crushing the ore;
- Washing the ore to remove clay components; and
- Screening the ore into size fractions (ore and tailings).

Tailings produced from the concentrator will be pumped to purpose-built tailings storage facilities (TSFs) within the Western Leases, with the exception of some sands tailings which will be pumped to the Sand Beneficiation Plant for reprocessing (to produce PC02 product). Refer to section 4.2 of the FY21-FY24 MMP for further information about GEMCO's processing activities and TSFs.

The proposed FY25 activities in the Southern Eastern Lease will not increase GEMCO's processing rates, and no ore processing activities will occur within the Southern Eastern Lease. Some ore may be temporarily stockpiled within the Southern Eastern Lease before being transported to the Western Leases.

2.3 Exploration Activities

GEMCO undertakes ongoing exploration drilling to improve the understanding of manganese mineralisation across its lease areas. Three phases of drilling are conducted including exploration drilling, resource definition drilling and grade control infill drilling. Grade control infill drilling is undertaken ahead of mining operations within the mine path. Refer to section 4.3 of the FY21-FY24 MMP for further information about GEMCO's exploration activities.

[REDACTED]	
[REDACTED]	
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

2.4 Projects

Refer to section 4.4 of the FY21-FY24 MMP for a description of current projects.

Whilst there are no additional major projects proposed under this FY25 MMPA, ancillary infrastructure and activities may be developed or undertaken within the approved MMPA footprint. This may include relocation of existing infrastructure, construction of temporary infrastructure, stockpiles, water management and other minor infrastructure and activities.

3 ENVIRONMENTAL MANAGEMENT

3.1 Environmental Management Measures

Refer to the FY21-FY24 MMP and Eastern Leases MMPA for a detailed description of the environmental management measures associated with operational activities.

3.2 Environmental Commitments

GEMCO's environmental commitments for the Eastern Leases are outlined within section 5.3 of the Eastern Leases MMPA.

Table 3-1 provides an update on the key environment commitments deemed to be precursors to mining activities commencing. These commitments are largely based on commitments agreed to through the EIS approvals process, the Eastern Leases Mining Agreement between GEMCO and the ALC and other commitments identified by GEMCO as being required to manage the environmental risks associated with the Eastern Leases project. The FY25-Closure MMP will provide an update on the full extent of commitments arising from environmental assessment and approval under the EA Act (Assessment Report 77) and EPBC Act (2014/7228).

Table 3-1: Key Environmental Commitments

Commitment	Performance against Commitment	Status
GEMCO Stakeholder Engagement Plan (SEP) Update	GEMCO engages with community stakeholders using a range of measures described in its SEP. The SEP was updated in 2021 to include the consultation requirements for the Eastern Leases.	Completed
Eastern Leases Mining Agreement Plans	The Biosecurity Management Plan was implemented during construction activities in FY23 and FY24. This included weed management, quarantine inspections, and induction training. An Upper Catchment Area Management and Management Plan (UCAMMP) has been prepared. Should GEMCO wish to undertake mining or exploration activities within the 'Upper Catchment Area' (as defined in the Mining Agreement), ALC approval of the UCAMMP will be sought.	Ongoing
Rock Art Heritage Site Condition Re-Assessment	GEMCO engaged a suitably qualified consultant to conduct a rock art condition re-assessment in July 2023. The Handbook for the Assessment of Rock Art Condition within the Eastern Leases was finalised following the assessment.	Complete
Rock Art Heritage Site Visual Inspections	Visual monitoring of specific rock art sites is required within five days of blast events that occur within 700 m of the site. No monitoring has been undertaken to date as mining activities have not commenced. Once mining commences, monitoring will be undertaken in accordance with the Blast Management Plan.	To commence with mining
Manuport Heritage Site	The Manuport was relocated in 2021 following endorsement from the ALC. The site was surveyed at the time of removal so that the Manuport can be returned to its original location at the completion of mining.	Completed
Rock Art Heritage Site Blast Monitoring	Vibration monitoring of sensitive rock art sites is required to assess any impacts from blasting. No monitoring has been undertaken to date as mining activities have not commenced. Once mining commences, monitoring will be undertaken in accordance with the Blast Management Plan.	To commence with mining
GDE Monitoring Program	GEMCO engaged a suitably qualified consultant to conduct a Groundwater Dependent Ecosystem (GDE) survey to determine baseline conditions prior to mining commencing. The survey consisted of an early dry season and a late dry season survey in 2023. The GDE Monitoring Program (GDEMP) is being updated following the GDE survey. Monitoring of GDE will continue in accordance with the updated GDEMP.	Baseline assessment completed Ongoing monitoring to commence

Commitment	Performance against Commitment	Status
Weed Management	A number of weed surveys were conducted in FY23 and FY24 to monitor the presence, extent and location of weed infestations. Any identified weeds were subsequently treated. Weed management will continue in accordance with GEMCO's Weed Management Plan and the Biosecurity Management Plan prepared for the Eastern Leases.	Ongoing
Rehabilitation Performance Trials	GEMCO established controlled burning and salvage timber trials in rehabilitation plots in the Western Leases in 2023. The outcomes of the trials are being monitored and assessed.	In progress
Air Quality Monitoring Network	An additional High Volume Air Sampler (HVAS) PM ₁₀ air quality monitoring site has been installed at Yedikba Outstation. Monitoring commenced in June 2022 and will continue during mining.	Ongoing
PAF Material Monitoring	Monitoring of potentially acid forming (PAF) material is required when mining clay overburden at depths below 15 m that are within 500 m of boreholes EL-S-MB05 and EL-S-MB06. Whilst mining activities have not commenced, GEMCO undertook PAF sampling as part of the 2023 drilling campaign in the Eastern Leases. One drill hole indicated trace pyrite however the record was several meters below the ore horizon and therefore will not be disturbed. No further PAF materials have been detected. Once mining commences, monitoring will be undertaken in accordance with the Eastern Leases Procedure for Management of Potentially Acid Forming Overburden Material.	Ongoing
Water Accounting Framework Reporting	The existing GEMCO site water balance was expanded to include Eastern Leases following commencement of the project, to fulfil internal reporting obligations and DITT's water reporting requirements. Water accounting is undertaken in accordance with the Minerals Council of Australia User Guide, Water Accounting Framework for the Minerals Industry (2022).	Ongoing
Water Monitoring Network	GEMCO resumed the Eastern Leases water monitoring program in August 2022. The program includes monitoring of surface water quality, groundwater quality and water levels at the locations and frequencies described in section 6.4 of the Eastern Leases MMPA.	Ongoing

4 SECURITY

4.1 Disturbance Summary

Table 4-1 provides a summary of disturbance in the Southern Eastern Lease, [REDACTED]

Following the submission of the FY25 MMP Amendment to DITT on 26 March 2024, a review of the current and planned disturbance area spatial data for the Southern Eastern Lease was completed as part of the preparation of the FY25-Closure MMP. GEMCO has also reviewed the planned life-of-mine Disturbance Footprint for the Southern Eastern Lease. Table 4-1 and Figure 2-1 have been revised to illustrate the updated disturbance footprint and spatial data.

Table 4-1: Disturbance Summary (updated) - Southern Eastern Lease (ha)

Disturbance type	Current (June 2024)	Forecast (FY25)	Total ⁴
Site Infrastructure	25	-	25
Quarries / Active Mining	41	283	324
Tailings Storage Facilities and Dams	14	-	14
Stockpiles	26	5	31
Haul Roads and Access Tracks ¹	80	2	83
Total Active Disturbance²	187	287	474
Rehabilitation ³	0	11	11
Total Disturbance⁴	187	287	474

(1) As stated in section 2.1, forecast disturbance associated with realigning the public access track to Dalumba Bay has not been included in the below Security Calculation as it involves permanent disturbance of an area that is not under GEMCO ownership or management.

(2) Forecast public access track clearing is excluded from Total Active Disturbance.

(3) Proposed Rehabilitation areas are within current Active Disturbance areas, and thereby excluded from Forecast Total Disturbance area

(4) Total values may not equal the sum of values in each row or column due to rounding.

Closure costing has been developed in line with the NT DITT Security Calculation Procedure (2016). Where applicable, costs per unit (i.e. \$/ha, \$/m³) and individual items costs have been developed using GEMCO rates or a third-party estimate. The total number of units and material quantities requiring rehabilitation is based on the disturbance data above.

[REDACTED]

ABBREVIATIONS AND UNITS

5 ABBREVIATIONS AND UNITS

Table 5-1: Abbreviations

Abbreviation	Description
AA	Access Authority
ALC	Anindilyakwa Land Council
ALRA	<i>Aboriginal Land Rights (Northern Territory) Act 1976 (Cth)</i>
DITT	Northern Territory Department of Tourism, Industry and Trade
DDH	Diamond Drill Hole
DPIR	Former Northern Territory Department of Primary Industry and Resources
EIS	Environmental Impact Statement
EL	Exploration Licence
EP Act	<i>Environment Protection Act 2019 (NT)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
FY	Financial Year
GDE	Groundwater Dependent Ecosystem
GDEMP	Groundwater Dependent Ecosystem Monitoring Program
GEMCO	Groote Eylandt Mining Company Pty Ltd
HVAS	High Volume Air Sampler
ML	Mineral Lease
MLN	Mineral Lease Northern
MM Act	<i>Mining Management Act 2001</i>
MMP	Mining Management Plan
MMPA	Mining Management Plan Amendment
MT Act	<i>Mineral Titles Act 2010</i>
NT	Northern Territory
PAF	Potentially Acid Forming
PMS	Post Mining Surface
RC	Reverse Circulation
ROM	Run of Mine
SEP	Stakeholder Engagement Plan
SPL	Special Purpose Lease
TSF	Tailings Storage Facility
UCAMMP	Upper Catchment Area Management and Management Plan

ABBREVIATIONS AND UNITS

Table 5-2: Units

Unit	Description
%	Percent
ha	Hectare
m	Metres
m ³	Cubic metres
mm	Millimetres
Mt	Million tonnes
Mtpa	Million tonnes per annum
PM ₁₀	Particulate matter 10 micrometres or less in diameter

APPENDIX A – WESTERN LEASES DISTURBANCE SUMMARY

This appendix summarises the disturbance associated with mining activities in the Western Leases. Mining and processing operations within the Western Leases for FY25 will continue to be undertaken as described in Sections 4.1. and 4.2. of the FY21-FY24 MMP.

Table A-1 provides a reconciliation of the disturbance area assessed and approved under the FY21-FY24 MMP, actual disturbance undertaken to the end of FY24 and forecast FY25 disturbance.

Table A-1: Disturbance Summary - Western Leases (ha)

Disturbance type	Proposed ¹ (FY21-24 MMP)	Actual ¹ (June 2024)	Forecast (FY25)	Revised Total (FY21-FY25)	Forecast Variance
Site Infrastructure ²	333	424	-	424	-91
Airport	111	110	-	110	1
Quarries / Active Mining	2,103	1,597	169	1,767	336
Tailings Storage Facilities and Dams	1,055	1,003	-	1,003	52
Stockpiles ²	162	141	-	141	21
Access and Haul Roads	559	507	-	507	52
Total Active Disturbance²	4,323	3,783	169	3,952	371
Rehabilitation	2,045 ³	1,688	156 ⁴	1,844	201
Total Disturbance⁵	5,696³	5,471	169	5,641⁴	55

(1) Proposed & Actual disturbance hectares include GEMCO's Mineral Lease Tenements, Access Authority areas, and Special Purpose Lease areas.

(2) Variance due to ongoing refining of GEMCO's disturbance tracking spatial data.

(3) Proposed FY21-FY24 MMP Rehabilitation included 672 ha within existing disturbance areas as at 30 June 2020; area excluded from Total Disturbance.

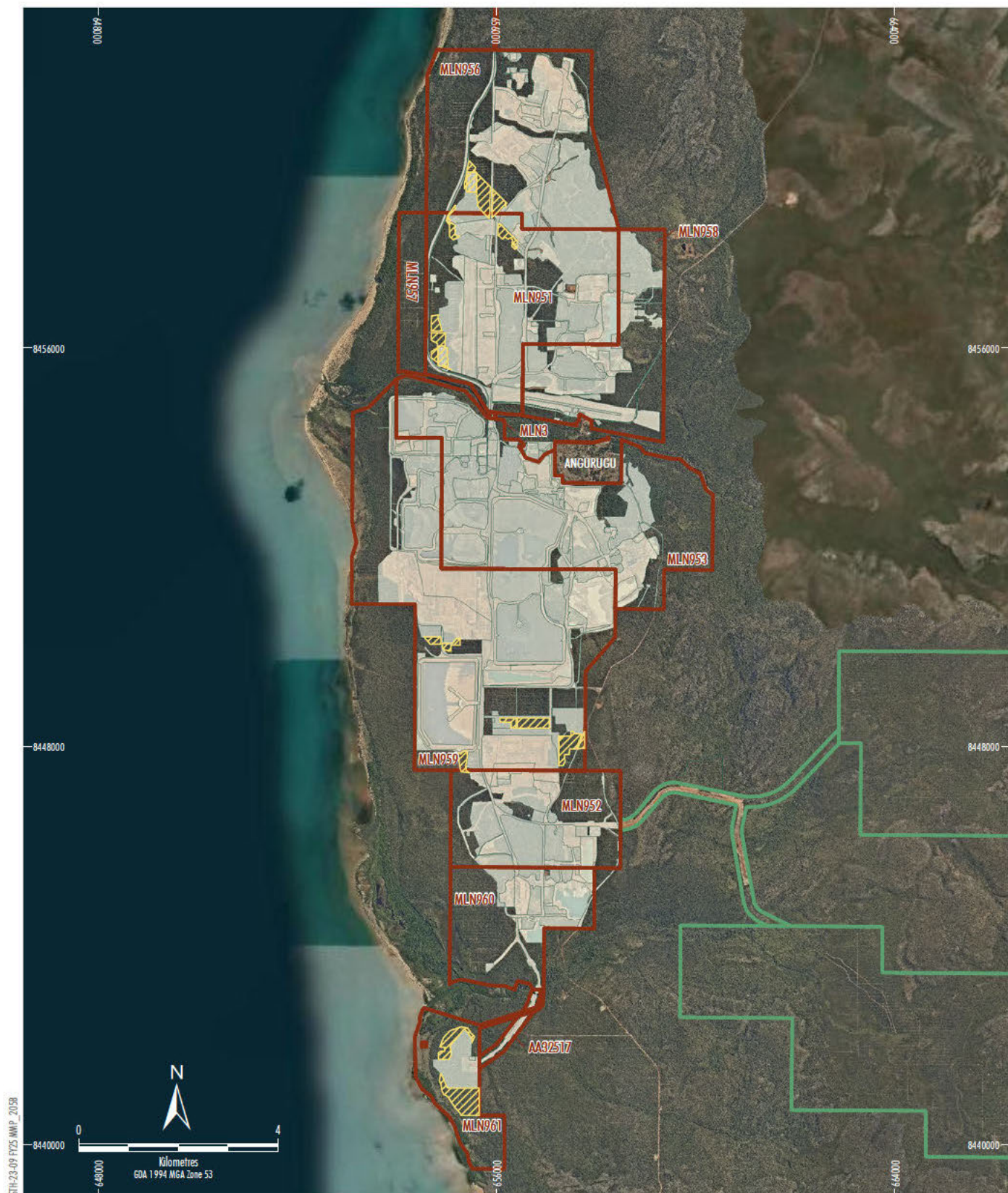
(4) Proposed FY25 Rehabilitation area is within existing disturbance areas, and thereby excluded from Revised Total Disturbance for FY21-FY25.

(5) Total and variance columns/rows may not equate with respective values due to rounding.

Total forecast disturbance on GEMCO's Western Leases to the end of FY25 is 5,641 ha (including 5,471 ha actual and 169 ha forecast) compared to 5,696 ha of disturbance which was assessed and approved under the FY21-FY24 MMP

Sufficient security is currently held for the Western Leases to accommodate forecast FY25 mine disturbance activities.

The extent of development in the Western Leases to date, as well as the proposed development for FY25, is shown by Figure A-1.



LEGEND

- Western Leases
- Eastern Leases
- Proposed Mine Plan (FY25)
- Disturbance as at December 2023

Source: GEMCO (2024); Department of Environment,
Parks and Water Security (2024)
Orthophoto: GEMCO (2024); Esri, Maxar, Earthstar
Geographics, and the GIS User Community (2024)

SOUTH32
GEMCO MANGANESE
Western Leases
Disturbance Summary

Figure A-1

APPENDIX B – ALC LETTER OF ENDORSEMENT



12 March 2024

Mr Steve Hedges
VP GEMCO Operations South32
ALYANGULA NT 0885
Via Email: Steve.Hedges@south32.net

Re: ALC Endorsement of the GEMCO Eastern Leases FY25 Mining Management Plan Amendment

Dear Steve,

Thank you for the opportunity to consider the GEMCO Eastern Leases FY25 Mining Management Plan Amendment, (FY25 MMPA).

The Anindilyakwa Land Council, (ALC), have considered the plan provided, met with GEMCO personnel to discuss the amendment and appreciates GEMCO's consideration of ALC's comments in the final plan. The ALC is satisfied with the plan and can provide in principle support for this document.

It is acknowledged by the ALC that the mining management plan for the FY25 to closure, (FY25-Closure MMP), is currently being prepared and that this FY25 MMPA addresses planned activities in the Southern Eastern Lease for FY2025 pending approval of the FY25-Closure MMP.

If you require further clarification around this letter, please contact Michael Trainor, our Mining and Sustainability Manager, michael.trainor@alcnt.com.au.

Yours Sincerely,

Mark Hewitt
Chief Executive Officer
Anindilyakwa Land Council

