



Mining Area C- Southern Flank Significant Amendment

Central Pilbara Hub Surplus Water Proposal
Stage 1

Proposal Content Document

17 February 2024
Version 1

Document amendment record

Version	Section/page	Version description	Key changes	Date
0	All	Draft provided for Traditional Owner Review	N/A	27/09/2024
1	All	Final	Greenhouse gas emissions updates	17/02/2025

1 Introduction

BHP has prepared the Proposal Content Document (PCD) for the Amended Proposal, consistent with the EPA's *Instructions: How to identify the content of a Proposal* (EPA 2024).

As required by the Instructions, amendments to the existing general proposal description of the Approved Proposal (Ministerial Statement (MS) 1072) are summarised below and the consolidated, updated general proposal description for the Amended Proposal is presented in Table 1. The proposal elements and amendments which have the potential to have a significant effect on the environment are quantified in Table 2.

Summary of proposal content amendments

Proponent name

- Amended from *BHP Billiton Iron Ore Pty Ltd* to ***BHP Iron Ore Pty Ltd***

Maximum extent of clearing

- Amended from *21,824 hectares* to ***22,900 hectares***.

Development envelope

- Amended from *38,909 hectares* to ***40,059 hectares***

Maximum groundwater abstraction

- Amended from *37.3 GL/a* to ***65.7 GL/a***.

Maximum surplus water discharge

- Amended from *34.84 GL/a* to ***56.21 GL/a***.

2 Combined Proposal contents

Table 1: General proposal content description

Proposal title	Mining Area C-Southern Flank Mining Operations
Proponent name	BHP Iron Ore Pty Ltd
Short description	<p>The Combined Proposal is for mining operations at the Mining Area C Hub, located approximately 120 km north-west of the town of Newman (Figure 1).</p> <p>The proposal includes, but is not limited to the following activities and elements:</p> <ul style="list-style-type: none"> • mine pit excavation above and below the water table • groundwater abstraction to dewater mine deposits and operational water supply • dewatering and surplus water infrastructure, including bores, infiltration ponds and pipelines • provision of environmental water requirements to Yandicoogina Gorge groundwater dependent ecosystem • surplus water management, including controlled discharge to creeks, infiltration ponds and injection to aquifers • surface water management infrastructure including culverts and creek diversions • installation of communication towers to support mine operation • ore stockpiles and topsoil stockpiles and associated stacking, reclaiming and loading activities • mineral waste management, including overburden storage areas • haul and access roads • borrow pits and laydown areas • ore processing and blending infrastructure, including crusher and beneficiation plant • ore transportation infrastructure, including overland conveyor and rail • ancillary infrastructure, including workshops, offices, hydrocarbon storage areas, accommodation villages, water treatment plant, wastewater treatment plant. <p>The proposal is located within 40,059 ha Development Envelope and will require the clearing of up to 22,900 ha of native vegetation.</p>

Table 2: Proposal content elements

Element	Location / description	Existing proposal maximum extent, capacity or range (Approved Proposal)	Proposed amendment extent, capacity or range (Proposal – Significant Amendment)	Combined maximum extent, capacity or range (Combined Proposal)
Physical elements				
Mine and associated infrastructure <ul style="list-style-type: none"> • Open pits • Haul Roads • Overburden Storage Areas • Ore Processing and Blending 	Figure 2	Part IV assessed and approved <ul style="list-style-type: none"> • Clearing of no more than 21,824 ha of native vegetation within the development envelope of 38,909 ha 	Additional clearing of 1076 ha of native vegetation Additional development envelope area of 1150 ha	Clearing of no more than 22,900 ha of native vegetation, within the 40,059 ha development envelope
Operational elements				
Groundwater abstraction – mine pit dewatering and water supply		Part IV assessed and approved <ul style="list-style-type: none"> • Total abstraction up to 37.3 GL/for dewatering 	Additional groundwater abstraction for mine pit dewatering of up to 28.4 GL/a	Groundwater abstraction of up to 65.7 GL/a

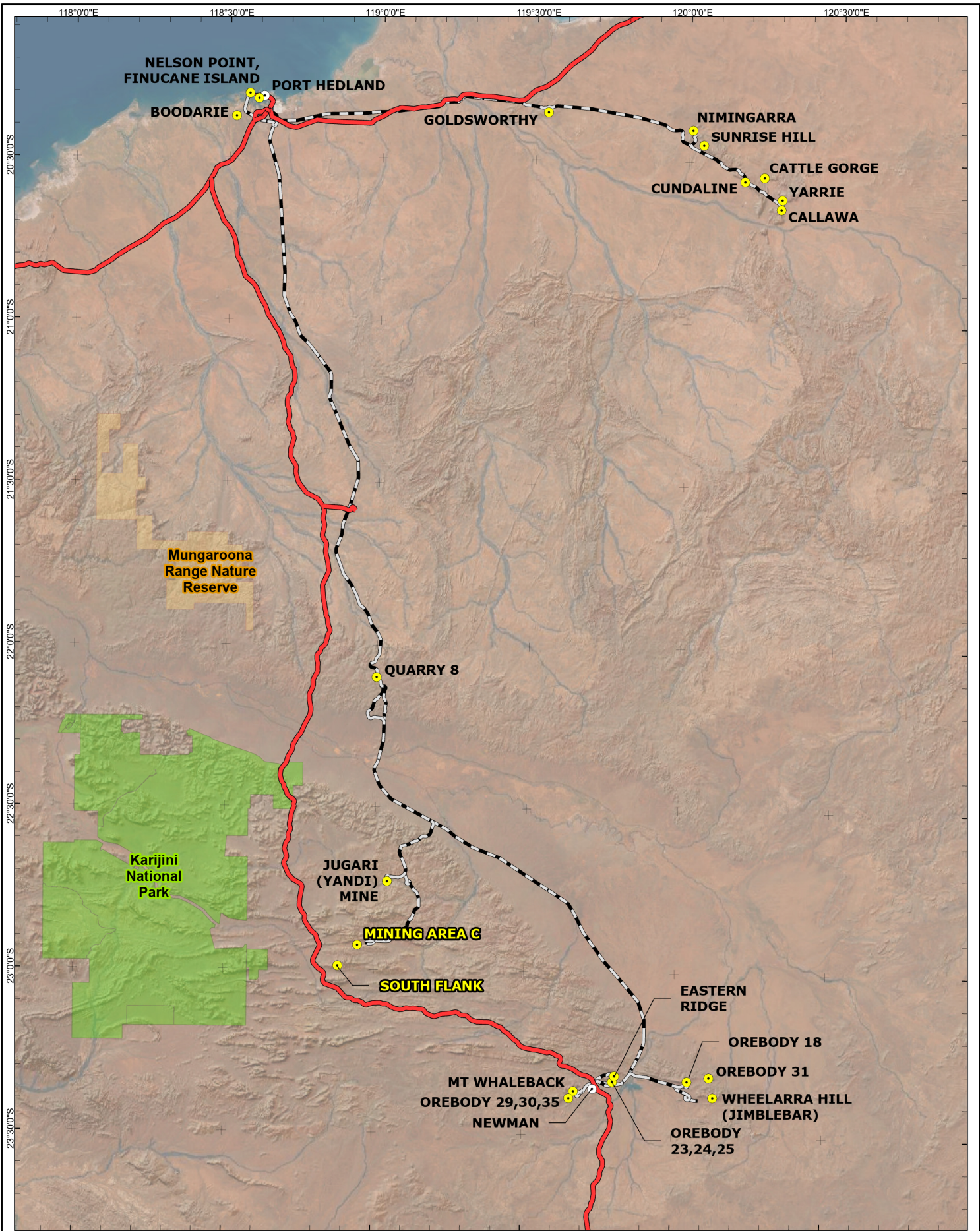
Element	Location / description	Existing proposal maximum extent, capacity or range (Approved Proposal)	Proposed amendment extent, capacity or range (Proposal – Significant Amendment)	Combined maximum extent, capacity or range (Combined Proposal)
Surplus water management		<p>Part IV assessed and approved</p> <ul style="list-style-type: none"> Up to 34.84 GL per annum via managed aquifer recharge, infiltration ponds, discharge from sedimentation basin and discharge to a drainage line that leads to Pebble Mouse Creek 	<p>Additional surplus water discharge volume of up to 21.37 GL/a</p>	<p>Surplus water management up to 56.21 GL/a</p>
Surplus water management – surface water discharge to watercourses		<p>Part IV assessed and approved</p> <p>Surface water discharge – Pebble Mouse Creek</p> <ul style="list-style-type: none"> Controlled discharge along drainage line and Pebble Mouse Creek to extend no further than 14 km from the discharge point or extend beyond the boundary of the Mining Area C development. Shall be intermittent under natural no flow conditions for maximum of 120 days in any 12-month period. <i>(up to 34.84 GL/a assessed under Part IV)</i> <p>Part V approved</p> <p>MAC Environmental Licence L7851/2002/6</p> <ul style="list-style-type: none"> 12.76 tonnes per annum (tpa) surface water discharge to Pebble Mouse Creek 	<p>Additional surface discharge to watercourses of up to 60 ML/day</p>	<p>Upper Marillana Creek</p> <p>Controlled discharge of up to 30 ML/day of surplus water must not extend further than 27 km along Marillana Creek tributary from the discharge point.</p> <p>A dry period of 90-days proposed in any 12-month period.</p> <p>Maximum operational duration of 5 years.</p> <p>Lower Marillana Creek</p> <p>Controlled discharge of up to 30 ML/day surplus water from existing licenced discharge point in BHP Yandi Mine Site.</p> <p>A dry period of 90-days proposed in any 12-month period.</p> <p>Maximum operational duration of 5 years.</p> <p>Pebble Mouse Creek</p> <p>Controlled discharge along drainage line and Pebble Mouse Creek to extend no further than 14 km from the discharge</p>

Element	Location / description	Existing proposal maximum extent, capacity or range (Approved Proposal)	Proposed amendment extent, capacity or range (Proposal – Significant Amendment)	Combined maximum extent, capacity or range (Combined Proposal)
				<p>point or extend beyond the boundary of the Mining Area C development.</p> <p>Shall be intermittent under natural no flow conditions for maximum of 120 days in any 12-month period.</p>
<p>Surplus water management – aquifer injection</p>		<p>Part IV assessed and approved</p> <p>Aquifer injection – South Flank MAR</p> <ul style="list-style-type: none"> Managed aquifer recharge in the South Flank area to limit groundwater level rise to 30 m from ground level within an area of 400 m around SF0095R bore. up to 35 ML/d (12.78 GL/a) <p>Infiltration – Runaway Valley</p> <ul style="list-style-type: none"> up to 30 ML/day (10.95 GL/a) <p>Aquifer injection – Juno Downs MAR</p> <ul style="list-style-type: none"> up to 30 ML/day (10.95 GL/a) <p>Central Sedimentation Basin</p> <ul style="list-style-type: none"> up to 23.5 ML/day (8.58 GL/a) <p>Western Sedimentation Basin</p> <ul style="list-style-type: none"> up to 12 ML/day (4.38 GL/a) <p>Part V approved</p> <p>MAC Environmental Licence L7851/2002/6</p> <ul style="list-style-type: none"> 12,760,000 tpa (12.76 GL/a) South Flank MAR 16,425,000 tpa (16.43 GL/a) Runaway Valley Infiltration Ponds (listed as Packsaddle Infiltration Ponds in the licence) 	<p>Additional surplus discharge via managed aquifer recharge</p>	<p>Northern RAV MAR</p> <p>Groundwater injection and infiltration of up to 20 ML/day (7.3 GL/annum) via managed aquifer recharge.</p> <p>Yandicoogina GDE Groundwater Supplementation</p> <p>Groundwater injection of up to 10 ML/day (3.65 GL/annum) via managed aquifer recharge as an environmental water requirement for the Yandicoogina GDE</p> <p>South Flank MAR</p> <p>Managed aquifer recharge in the South Flank area to limit groundwater level rise to 30 m from ground level within an area of 400 m around SF0095R bore.</p> <p>Groundwater injection of up to 35 ML/d (12.78 GL/a)</p> <p>Runaway Valley</p> <p>Infiltration of up to 30 ML/day (10.95 GL/a)</p> <p>Juno Downs MAR</p>

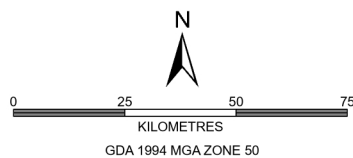
Element	Location / description	Existing proposal maximum extent, capacity or range (Approved Proposal)	Proposed amendment extent, capacity or range (Proposal – Significant Amendment)	Combined maximum extent, capacity or range (Combined Proposal)
		<ul style="list-style-type: none"> 12,775,000 tpa (12.78 GL/a) Juna Downs MAR 8,760,000 tpa (8.76 GL/a) Central Sedimentation Basin 10,950,000 tpa (10.95 GL/a) Western Sediment Basin 12,760,000 tpa (12.76 GL/a) surface water discharge to Pebble Mouse Creek. 		<p>Groundwater injection of up to 30 ML/day (10.95 GL/a)</p> <p>Central Sedimentation Basin Infiltration of up to 23.5 ML/day (8.58 GL/a)</p> <p>Western Sedimentation Basin Infiltration of up to 12 ML/day (4.38 GL/a)</p>
Grand Central Overburden Storage Area (GCOSA) Surface Water Diversion Structure	Figure 2		Inclusion of surface water diversion structures to mine infrastructure	Surface water diversion structure to protect flood inundation of the Overburden storage area.
Tailings storage – in-pit tailings storage facilities		None	N/A	N/A
Ore processing		<p>Part IV assessed 151,000,000 tonnes of ore per annual period</p> <p>Part V approved <i>MAC Environmental Licence Part V L7851/2002/6:</i></p> <ul style="list-style-type: none"> Production capacity of 151,000,000 tonnes per annum 	No change	Processing of up to 151 Mtpa
Mine pit voids and pit lakes		<p>Part IV assessed In Mining Area C and Highway deposit (South Flank) all below water table pits to be backfilled to prevent the formation of pit lakes.</p>	No change	In Mining Area C and Highway deposit (South Flank) all below water table pits to be backfilled to prevent the formation of pit lakes.

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		Backfill in other deposits at South Flank to be assessed as part of the closure planning process.		Backfill in other deposits at South Flank to be assessed as part of the closure planning process.
Greenhouse Gas Emissions				
Peak annual				
Scope 1	Mine Emissions covered by Safeguard Mechanism	Part IV assessed <i>Mining Area C MS1072:</i> Scope 1,2 and 3 emissions were not individually specified Maximum annual cumulative 1,975 kt tCO ₂ -e per annum	242,126 tCO ₂ -e per annum (2045)	Up to 1,032,246 tCO ₂ -e per annum (2035)
Scope 2	Electricity supply- (Grid-connected electricity demand)(Part IV assessed <i>Mining Area C MS1072:</i> Scope 1,2 and 3 emissions were not individually specified Maximum annual cumulative 1,975 kt tCO ₂ -e per annum	62,137 tCO ₂ -e per annum (2041)	Up to 171,979 tCO ₂ -e per annum (2050)
Scope 3	Downstream emissions (including rail transport, port, iron ore shipping and steel making)	Part IV assessed <i>Mining Area C MS1072:</i> Scope 1,2 and 3 emissions were not individually specified Maximum annual cumulative 1,975 kt tCO ₂ -e per annum	59,782,907 tCO ₂ -e per annum (2041)	Up to 207,440,658 tCO ₂ -e per annum (2029)
Annual average life of mine				
Scope 1	Mine Emissions covered by Safeguard Mechanism	Part IV assessed <i>Mining Area C MS1072:</i> Scope 1,2 and 3 emissions were not individually specified	Up to 34,563 tCO ₂ -e per annum	Up to 431,311 tCO ₂ -e per annum.

Element	Location / description	Existing proposal maximum extent, capacity or range (Approved Proposal)	Proposed amendment extent, capacity or range (Proposal – Significant Amendment)	Combined maximum extent, capacity or range (Combined Proposal)
		Average annual over mine life 1,200 kt tCO ₂ -e per annum		
Scope 2	Electricity supply-(Grid-connected electricity demand)	Part IV assessed <i>Mining Area C MS1072:</i> Scope 1,2 and 3 emissions were not individually specified Average annual over mine life 1,200 kt tCO ₂ -e per annum	Up to 10,317 tCO ₂ -e per annum	Up to 120,408 tCO ₂ -e per annum
Scope 3	Downstream emissions (including rail transport, port, iron ore shipping and steel making)	Part IV assessed <i>Mining Area C MS1072:</i> Scope 1,2 and 3 emissions were not individually specified Average annual over mine life 1,200 kt tCO ₂ -e per annum	Up to 5,888,132 tCO ₂ -e per annum	Up to 120,822,587 tCO ₂ -e per annum
Other elements which affect extent of effects on the environment				
Maximum project life:	Part IV assessed and approved Until 2073	No change	Expected life of asset :2073	
Commissioning				
Commissioning of the additional dewatering infrastructure and tailings storage facilities will be undertaken subject to the operational elements above				
Rehabilitation and closure				
Progressive rehabilitation will be undertaken, where practicable, when disturbed areas are no longer required for operations.				



- BHP WAIO operation
- Town
- National highway
- Rail
- National park
- Nature reserve



BHP

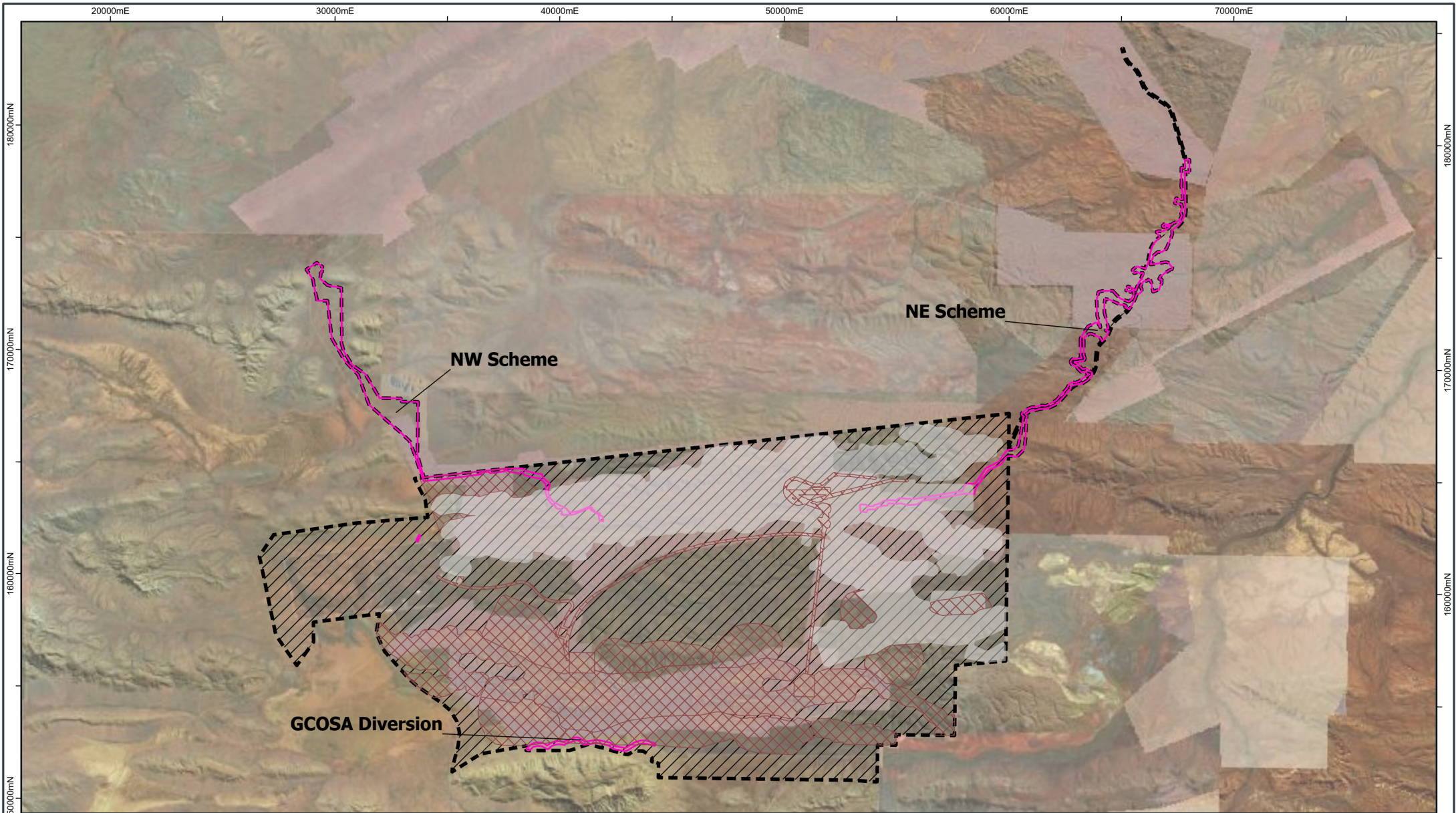
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


**MINING AREA C-SOUTH FLANK
SIGNIFICANT AMENDMENT
REGIONAL LOCATION AND
CONTEXT**

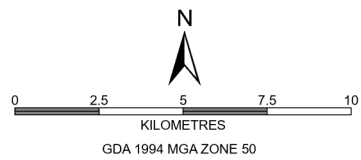
WAIO PLANNING, TECHNICAL AND ENVIRONMENT

SCALE @A4: 1:1,700,000 PREPARED: GEOMATICS FIGURE: 1
DATE: 28/08/2024 REQUESTOR: ENV APPROVALS NO:

A1285-048-RevB



-  Proposed Development Envelope
-  Indicative Footprint
-  Approved Development Envelope
-  EMP Rev6 Area
-  Additional Impact Assessment Area



DRAFT

BHP

PUBLIC

MINING AREA C-SOUTH FLANK
SIGNIFICANT AMENDMENT
APPROVED DEVELOPMENT ENVELOPE,
PROPOSED DEVELOPMENT ENVELOPE
AND INDICATIVE FOOTPRINT
WAIO PLANNING, TECHNICAL AND ENVIRONMENT

SCALE @ A3: 1:225,000	REQUESTOR: ENVIRONMENT	FIGURE: 2	
DATE: 4/09/2024	PREPARED: GEOMATICS	NO: A1285-049 RevB	
	REVIEWED:		

3 References

Environmental Protection Authority (EPA) 2024. *How to identify the content of a Proposal: Instruction and template*. EPA, Western Australia