



**ENDURANCE
MINING**

Supporting Report
Application to Amend Native Vegetation Clearing Permit
CPS 10170/1
28 November 2025
Abra Base Metals Project

Prepared	Description
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28 November 2025

Department of Mines, Industry Regulation and Safety
Resource and Environmental Compliance Division
Mineral House
100 Plain Street
East Perth WA 6004

RE: Application to Amend Native Vegetation Clearing Permit CPS 10170/1 – Abra Base Metals Project

Abra Mining Pty Limited (permit holder for CPS 10170/1) and Endurance Mining Pty Ltd (Endurance), the current owner and operator of the Abra Base Metals Project, seek approval to amend Native Vegetation Clearing Permit CPS 10170/1 to:

- increase the total authorised clearing area within the existing permit boundary on G52/292, M52/776, L52/194, L52/198, L52/210 and L52/240 to 150 hectares for mineral production and associated activities; and
- extend the permit duration to five (5) years from the date of issue of the amended permit.

The additional clearing is confined to the existing Abra mine footprint (TSF Cell B2, ROM and stockpile expansions, laydowns, landfill and associated services corridors). An updated Supporting Report is attached, including an assessment against the ten clearing principles under Schedule 5 of the *Environmental Protection Act 1986*. The proposed amendment is not expected to be at variance with any of the clearing principles and will continue to be managed under Endurance's Environmental Management System and existing permit conditions.

The following documents are submitted in support of this application:

- Completed Form C4 – Application to amend a clearing permit
- ESRI GIS data package “CPS10170_Amendment_Shapefiles_20251128.zip”, containing the spatial datasets listed in Appendix F – GIS data supplied (GDA2020 / MGA Zone 50)
- Evidence of authority to operate on the relevant Mining Act 1978 tenements
- Letter of authority from Abra Mining Pty Limited Authorising Endurance Mining Pty Ltd / Gavin Lee to act on the permit holder's behalf (Appendix G)
- Internal clearing registers for CPS 8234/1 and CPS 10170/1
- Updated environmental Supporting Report and relevant survey information

If you require any further information, please contact me on 0419 353 593 or at lr Ridley@endurancemining.com.au.

Yours sincerely

Lance Ridley

Environmental Officer – Abra Base Metals Project
Endurance Mining Pty Ltd

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1. Introduction

1.1 Project

This Supporting Report has been prepared on behalf of Endurance Mining Pty Ltd (ACN 686 341 471), the current owner and operator of the Abra Base Metals Project (Abra). At the time Clearing Permit CPS 10170/1 was granted, the permit holder was Abra Mining Pty Limited. Following a change in project ownership and corporate structure, Endurance Mining Pty Ltd now operates the project and is the applicant for this amendment. For consistency with existing regulatory instruments, this report refers to both Abra Mining Pty Limited (as the original permit holder) and Endurance Mining Pty Ltd (as the current operator).

The Abra Base Metals Project is an underground lead–silver mine supported by on-site processing and associated infrastructure. Ore is mined from underground workings, processed through a conventional flotation plant to produce a lead–silver concentrate, and exported via established transport routes. The project is located approximately 178 km south of Newman, within the Shire of Meekatharra, on the Mugul pastoral lease in the Gascoyne IBRA bioregion (**Figure 1**).

Key project tenements relevant to this Supporting Report are:

- G52/292 – General Purpose Lease
- M52/776 – Mining Lease
- L52/194, L52/198, L52/210, L52/240 – Miscellaneous Licences supporting infrastructure such as roads, airstrip, pipelines and power.

The mine is surrounded by extensive tracts of native vegetation, with Collier Range National Park located approximately 3.8 km east of the project area. The project area lies within the Collier, Jamindie, and Three Rivers land systems and supports mulga shrublands and associated arid-zone vegetation.

1.2 Legislative and Approval Context

The clearing of native vegetation for the Abra Base Metals Project is regulated under Part V Division 2 of the *Environmental Protection Act 1986* (EP Act) and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. Clearing Permit CPS 10170/1 was originally granted as a Purpose Permit under section 51E of the EP Act. The original assessment considered the Schedule 5 clearing principles, local environmental values, flora and fauna habitat, landforms, and surface water characteristics. The assessment also relied on key guidance documents, including *A Guide to the Assessment of Applications to Clear Native Vegetation* (DER 2014), DWER's *Native Vegetation Clearing Permit Procedures* (2021), and EPA technical guidance for flora, vegetation and terrestrial fauna surveys.

The Abra project has been progressively developed under a suite of existing approvals, including CPS 8234/1, CPS 8558/1 and CPS 10170/1, as well as the approved Mining Proposal and Mine Closure Plan, Part V works approvals and licences, groundwater licences under the *Rights in Water and Irrigation Act 1914*, and various miscellaneous licence approvals supporting access, pipelines, airstrip and power infrastructure. These approvals collectively authorise the current mining footprint, which includes the underground mine, process plant, TSF Cell A and B, WRD, solar farm, power station, accommodation village, airstrip, haul roads, laydowns and associated operational services.

CPS 10170/1 currently authorises the clearing of 70 ha of native vegetation on tenements G52/292, M52/776, L52/194, L52/198, L52/210 and L52/240 (**Figure 2**). The permit requires the permit holder to avoid and minimise clearing where practicable; undertake directional clearing to allow fauna to disperse; apply stringent weed hygiene; protect riparian vegetation and surface flows; salvage and manage topsoil; and maintain detailed clearing records and annual reporting. Clearing undertaken to date has been fully consistent with these conditions and integrated within Endurance Mining's environmental management system.

Figure 1
Regional Location of the Abra Base Metals Project

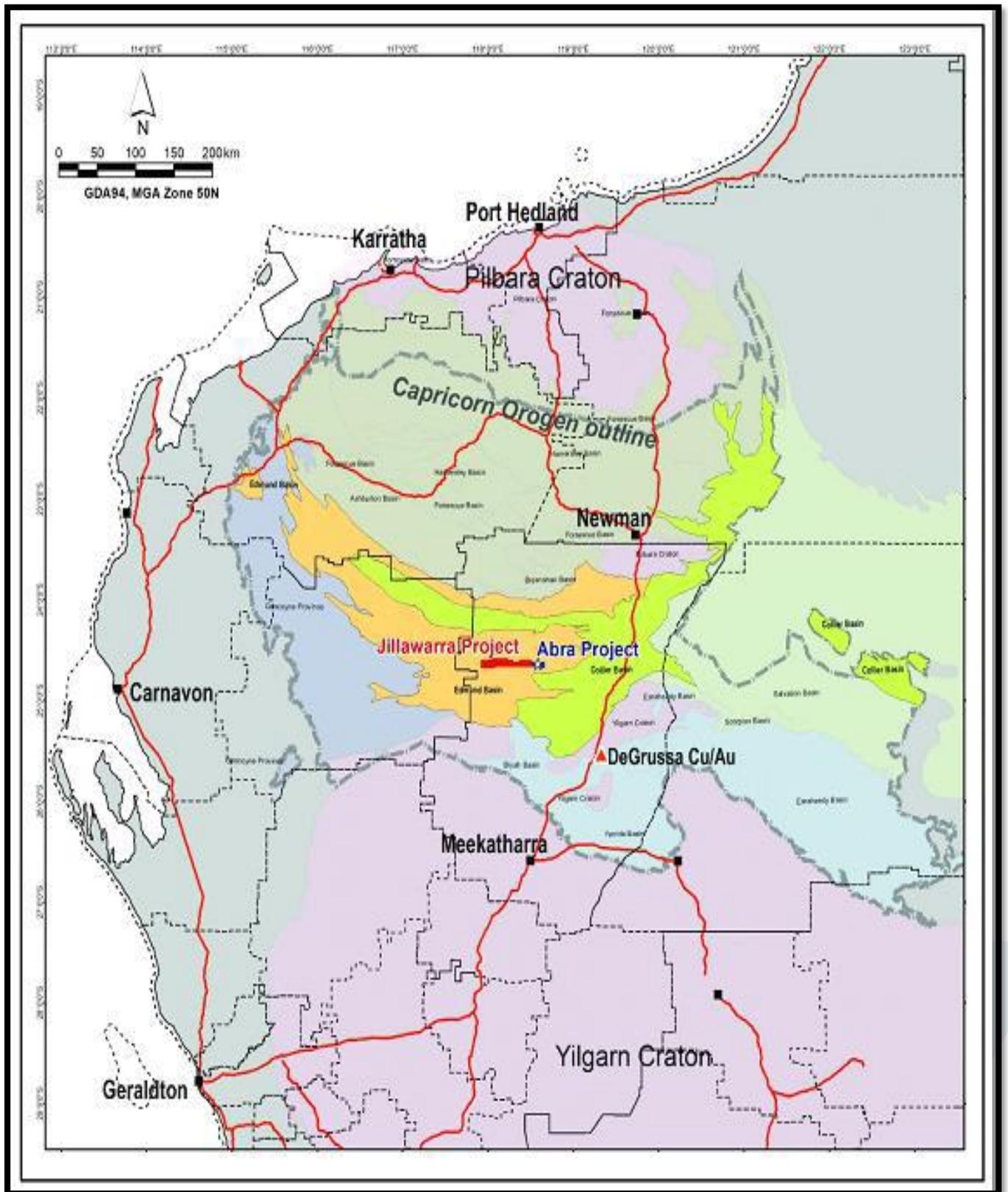
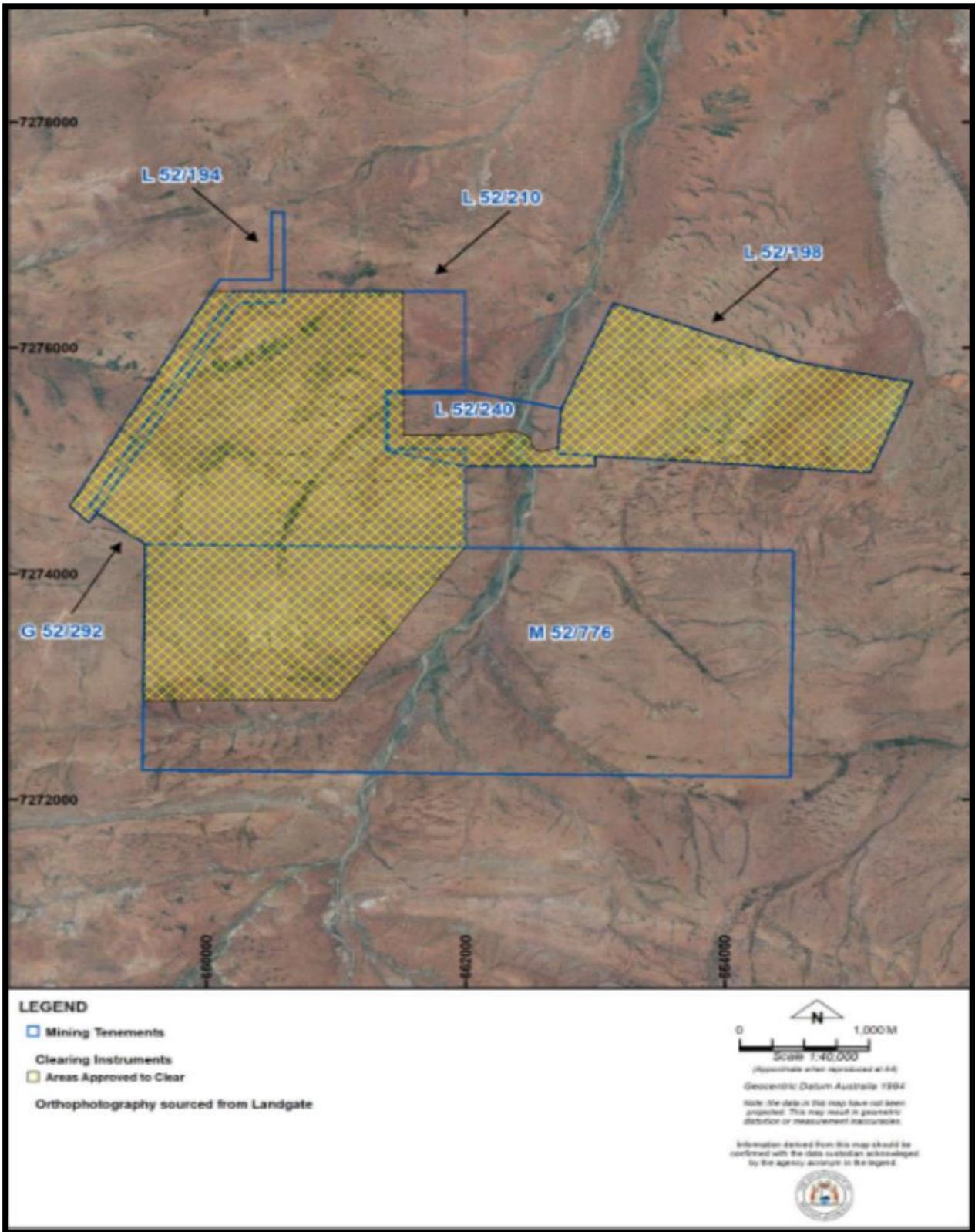


Figure 2
Tenement Layout and CPS 10170/1 Clearing Permit Boundary



1.3 Proposed Increase to Clearing Authorisation and Permit Term

Endurance Mining is seeking to amend Clearing Permit CPS 10170/1 to increase the total authorised clearing from 70 ha to 150 ha, and to extend the permit duration to five (5) years from the date of approval of the amended permit. No changes are proposed to the spatial extent of the permit boundary, the tenements covered, or the permitted purpose of clearing (mineral production and associated activities).

The increased clearing allowance is required to provide sufficient capacity for essential life-of-mine infrastructure, including the development of TSF Cell B2, expansions to the ROM pad and ore stockpile areas, additional laydown and hardstand areas, an expanded engineered landfill, minor access roads and services corridors, associated drainage and borrow areas, as well as supporting facilities such as extensions to the solar farm and designated topsoil stockpile areas.

All clearing associated with the amendment will occur within the existing CPS 10170/1 boundary and predominantly within, or immediately adjacent to, areas that have already been disturbed. Higher-value vegetation and undisturbed habitats have been avoided wherever practicable.

This Report provides the necessary information to support the amendment request by:

- summarising the history of clearing and existing disturbance across the Abra project
- describing the location, purpose and justification for increasing the authorised clearing to 150 ha
- addressing the environmental values present within the permit area, including vegetation, flora, fauna, soils, hydrology and heritage considerations
- demonstrating that current management measures remain adequate to mitigate potential environmental impacts
- confirming ongoing compliance with clearing permit conditions and Part V reporting requirements.

The increased clearing allowance and extended permit duration will enable Endurance Mining to progress essential operational infrastructure within an already established mining footprint, while continuing to comply with the EP Act, the Schedule 5 clearing principles, and the site's environmental management framework.

2. Background and Existing Clearing

Development of the Abra Base Metals Project has occurred progressively since 2019 under a series of native vegetation clearing permits and mining approvals. The project footprint has been developed in stages to support:

1. underground mine access (portal, boxcut and associated infrastructure)
2. processing plant and ancillary infrastructure
3. tailings storage facilities (TSFs) and associated drainage/borrow pits
4. waste rock dumps and low-grade stockpile areas
5. camp, airstrip and services corridors (power, water, pipelines, roads)
6. laydown areas, workshops and landfills.

The main clearing authorisations relevant to the current mine footprint are:

- CPS 8234/1 – mine infrastructure (western side of project)
- CPS 8558/1 – airstrip and associated infrastructure (eastern side of project)
- CPS 10170/1 – current permit, subject to this amendment.

An internal clearing register has been maintained since the commencement of development. The register tracks, for each clearing event: Permit number and tenement(s), Date of clearing, Purpose (e.g. boxcut, TSF cell, ROM pad, road, camp, landfill, laydown), Area requested vs reconciled survey area (ha) and Running balance of remaining authorised area under each permit. A full copy of the current clearing register is provided in Appendix A1.

2.1 Clearing under CPS 8234/1 (Expired January 2024)

Purpose Permit CPS 8234/1 authorised clearing for “mineral production and associated activities” over the western portion of the mine development area, principally on G52/292 and M52/776. The approved permit area was 128.373 ha. According to the internal clearing register, clearing commenced in September 2019 and has been carried out for:

- Access roads and water pipeline corridors
- Accommodation village and village landfill
- Boxcut, ROM pad and waste rock dump (WRD)
- TSF construction (Cell A and associated borrow pits and drains)
- Process plant, power station and solar farm
- Mine roads, turkey nests, event ponds and stockpiles
- Paste plant, pipelines and laydowns
- Heritage fence lines and associated access.

By the end of the 2023 reporting period—and prior to the expiry of CPS 8234/1—the reconciled survey area cleared under this permit totalled approximately 126.84 ha, leaving only a small remaining balance against the original 128.373 ha authorisation. A detailed, entry-by-entry record of all clearing undertaken under CPS 8234/1 (including dates, individual clearing events, reconciled survey areas and cumulative running balance) is included in Appendix A1 – CPS 8234/1 Internal Clearing Register. This register documents more than 60 discrete clearing events and forms the historical basis for the establishment of the primary mine infrastructure footprint.

Clearing authorised under CPS 8234/1 facilitated construction of the core operational areas now in use, including TSF Cell A, the process plant, waste rock dump (WRD), accommodation village, solar farm, and associated services corridors, roads and laydowns. With CPS 8234/1 now expired, subsequent clearing activities are controlled exclusively under CPS 10170/1, and the present amendment request builds upon the existing, previously assessed disturbance footprint established under CPS 8234/1.

2.2 Clearing under CPS 8558/1 (Expired September 2024)

Clearing Permit CPS 8558/1 authorised clearing to construct the airstrip and associated infrastructure to the east of the mine. As documented in the CPS 10170/1 decision report, by the end of the 2021/2022 reporting period: approximately 52.0853 ha of native vegetation had been cleared under CPS 8558/1 for the airstrip and associated works, and the airstrip is now operational, with associated access roads and service corridors in place. Airstrip disturbance areas are also captured in the Mine Rehabilitation Fund (MRF) spatial dataset, including Airstrip – 446,485.2 m² (~44.65 ha) on L52/198 and associated tracks and road corridors on L52/198, L52/121 and L52/194. The airstrip is outside the CPS 10170/1 core mine disturbance area but forms part of the broader Abra project footprint.

2.3 Clearing under CPS 10170/1 – current permit (Expires August 2028)

Clearing Permit CPS 10170/1 authorises up to 70 ha of native vegetation clearing within the defined permit boundary covering tenements G52/292, M52/776, L52/194, L52/198, L52/210 and L52/240. Endurance Mining maintains a formal internal clearing register for CPS 10170/1, which documents the location, date,

method, reconciled survey area and cumulative running balance for all clearing events undertaken. The full clearing register for CPS 10170/1 is provided in Appendix A.

Key clearing activities recorded under CPS 10170/1 to date include:

- TSF pipeline corridor (G52/292) – 2.10 ha
- ROM pad extension (G52/292) – 3.75 ha (surveyed)
- Bore drill pad and access track – 0.64 ha
- Laydown and hardstand areas (G52/292) – 4.89 ha
- Waste dump / overburden stockpile area – 1.18 ha
- Campsite carpark – 4.00 ha
- Borrow pit (G52/292) – 2.47 ha
- TSF Cell B – initial clearing – 14.79 ha, plus an associated 1.53 ha borrow area
- HV cable corridor (G52/292 & M52/776) – 0.17 ha (surveyed)
- New engineered mine landfill – 2.62 ha
- Qube truck laydown – 2.71 ha

Based on the most recent internal reconciliation, the cumulative clearing allocation under CPS 10170/1 is approximately 40.8 ha, leaving a remaining balance of 29.178 ha within the current 70 ha authorisation. This running balance includes a small number of areas that have been “allocated” for clearing but not yet physically cleared, which are conservatively retained within the register until verified by survey.

The detailed clearing register entries, including all spatial references, dates and reconciled areas, are presented in Appendix A1 – CPS 10170/1 Clearing Register (Internal).

As of October 2025, the remaining allocation under CPS 10170/1 is 29.178 ha, as recorded in the internal clearing register.

All clearing under CPS 10170/1 has been undertaken within the existing permit boundary and in accordance with permit conditions, including:

- use of directional clearing and fauna displacement measures
- weed hygiene for machinery, vehicles and imported materials
- avoidance of riparian vegetation where practicable and maintenance of surface flow when drainage lines are intersected
- detailed record keeping and annual reporting to the CEO.

3. Description of Proposed Amendment

Endurance Mining Pty Ltd seeks approval to amend Native Vegetation Clearing Permit CPS 10170/1 to increase the total authorised clearing from 70 ha to 150 ha, and to extend the permit duration to five (5) years from the date of approval. The existing permit purpose (“mineral production and associated activities”), tenement coverage and spatial clearing envelope remain unchanged, and no expansion beyond the approved CPS 10170/1 boundary is proposed.

To date, approximately 40.8 ha of the 70-ha authorised under CPS 10170/1 has been allocated or cleared for approved mining activities. Development of TSF Cell B2 requires an estimated ~12 ha, with an additional ~12 ha required for the three associated 4 ha borrow pits, which provide essential construction materials for the TSF embankments and drainage structures. Once these commitments are applied, only ~5 ha of clearing capacity remains under the current permit. This remaining area is insufficient to support the operational footprint required for the continuation of mining activities at Abra.

Accordingly, the increase to 150 ha is required to ensure adequate clearing allowance for the next phase of mine development, including:

- expansions to the ROM pad and ore/tailings stockpile areas
- new and expanded laydown and hardstand facilities, including the Qube truck laydown
- expansion of the engineered mine landfill
- additional services corridors, HV cable routes, water pipelines and internal access tracks

- topsoil stockpile areas, borrow areas and operational construction pads
- drainage upgrades, stormwater diversion works and minor realignments
- expansion of the solar farm footprint and related electrical infrastructure.

All proposed clearing will occur within tenements G52/292, M52/776 and L52/194, entirely within or immediately adjacent to previously disturbed areas. No new disturbance is proposed outside the existing CPS 10170/1 envelope, and no greenfield vegetation clearing will occur beyond areas already assessed under CPS 8234/1, CPS 8558/1 or CPS 10170/1.

The 28 proposed clearing components that comprise the amendment request are summarised in Appendix B, including indicative areas, purpose and tenement locations. The spatial relationship between existing disturbance and the proposed clearing areas is illustrated in **Figure 3**, which is derived from Endurance Mining’s 2025 QGIS disturbance dataset. These areas will be spatially confirmed in the ESRI shapefile submitted with this amendment application.

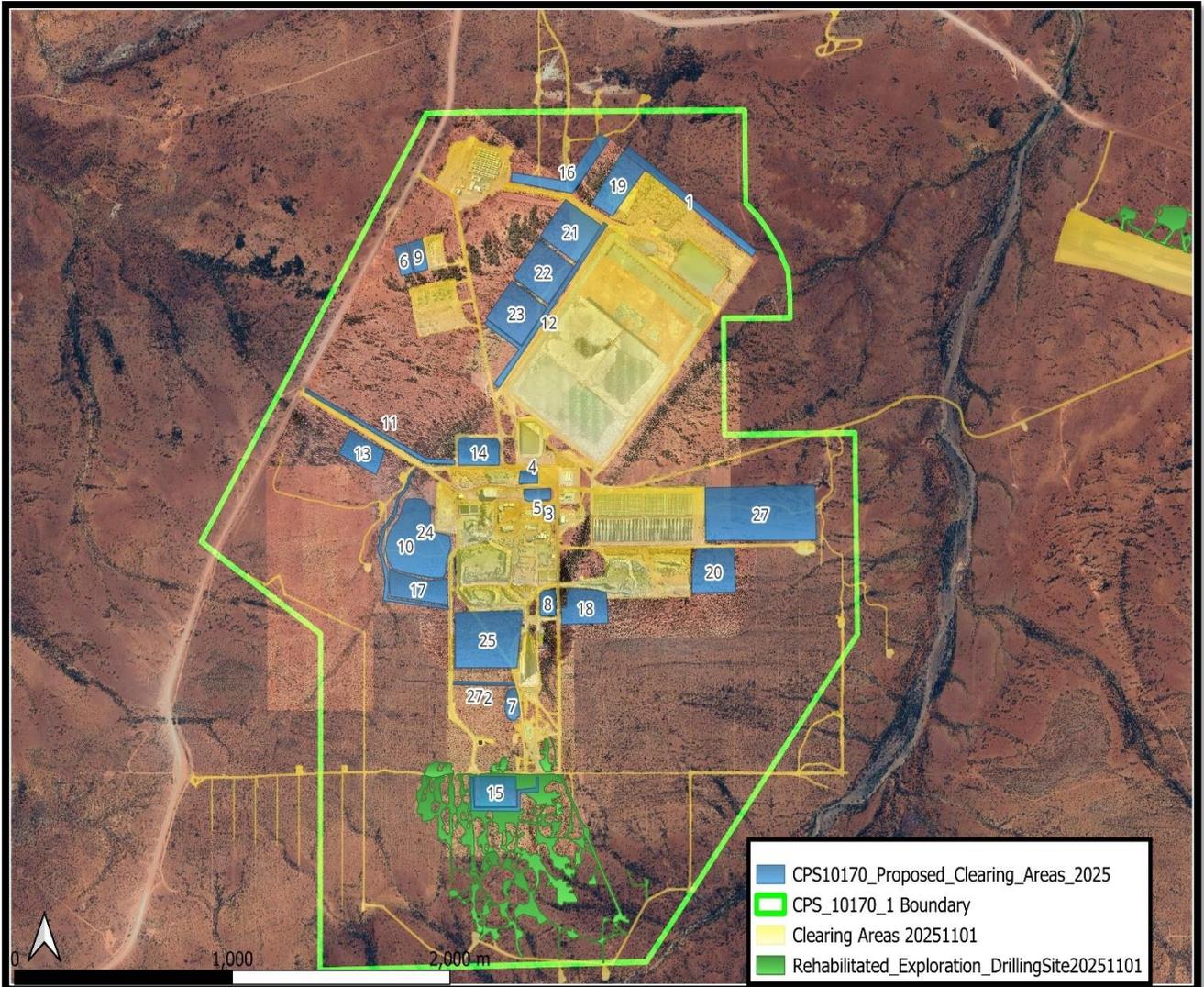
The amendment ensures that Endurance Mining can continue to implement essential life-of-mine infrastructure within the established operational hub while maintaining compliance with the *Environmental Protection Act 1986*, the Schedule 5 clearing principles, and the management conditions already established under CPS 10170/1.

Table 1 provides a summary of the current CPS 10170/1 clearing authorisation, the area already utilised, and the additional clearing required to support the next phase of life-of-mine development. The table demonstrates that while 70 ha is currently authorised, approximately 40.8 ha has already been used, and a further ~81 ha is required for TSF Cell B2, borrow pits and associated operational infrastructure. In total, the project requires approximately 121.8 ha of clearing capacity, and the requested increase to 150 ha provides an appropriate buffer to accommodate final design refinement, operational flexibility and survey reconciliation.

Table 1 - CPS 10170/1 Summary of Clearing Authorisation, Usage and Proposed Amendment

Item	Area (ha)	Notes
Current CPS 10170/1 authorised clearing	70 ha	Existing permit limit
Clearing undertaken/allocated to date	40.8 ha	As per internal clearing register
TSF Cell B2 footprint	12 ha	Required for embankment & basin development
Borrow Pits (3 × ~4 ha)	12 ha	Total borrow area for TSF construction
Other proposed additional clearing components	57 ha	Laydowns, ROM expansion, landfill, corridors, solar extension, etc.
Total proposed additional clearing requirement	~81 ha	Calculated total of all new components
Total clearing required for operations (used + proposed)	~121.8 ha	40.8 ha + 81 ha
Proposed amended clearing authorisation	150 ha	Requested new limit
Operational flexibility & survey reconciliation buffer	~28.2 ha	Provides contingency for final design development

Figure 3
Spatial layout of existing and proposed clearing within CPS 10170/1 – Abra Base Metals Project



Aerial imagery of the Abra Base Metals Project showing the CPS 10170/1 permit boundary (green), existing cleared areas as of 1 November 2025 (yellow) and proposed additional clearing areas subject to this amendment (blue), including TSF Cell B2, ROM and stockpile expansions, laydowns, landfill and associated infrastructure within the established mine footprint.

4. Environmental Setting

4.1 Climate

The Abra Project is in the Gascoyne region of Western Australia, approximately 178 km southwest of Newman. The regional climate is characterised by hot, dry conditions, high inter-annual variability, and low but episodic rainfall driven largely by northern tropical systems and summer cyclonic activity.

Long-term climate data were sourced from Bureau of Meteorology (BoM) stations representative of the Project area. Mean annual rainfall records from the Neds Creek station (007103), located approximately 139 km southeast of the site, indicate an average annual rainfall of 239 mm, with most of the precipitation occurring between January and March. Rainfall outside this period is typically low and sporadic, often associated with isolated storm events.

Temperature data from Newman Aerodrome (007176) and Meekatharra Airport (007045), located 178 km northeast and 219 km south of the Project respectively, show typical arid-zone thermal ranges. Newman records an annual average maximum temperature of 32.1°C and an average minimum of 16.4°C, while Meekatharra records an annual average maximum of 29.0°C and an average minimum of 15.9°C.

Table 2 - Summary of Regional Climate – Abra Project Area (Best-Available Data)

Sources: BoM Stations 007176 (Newman Aero) & 007103 (Neds Creek); DPIRD Pan-Evaporation Database (Gascoyne Region).

Month	Mean Max Temp (°C)	Mean Min Temp (°C)	Mean Monthly Rainfall (mm)	Mean Monthly Pan Evaporation (mm)
Jan	38.4	25.4	65	390
Feb	37.5	24.7	70	340
Mar	36.1	22.5	40	310
Apr	32.5	18.1	20	250
May	27.5	13.8	15	180
Jun	22.8	10.2	10	150
Jul	22.1	9.2	8	160
Aug	25.0	10.5	6	210
Sep	29.3	14.2	5	260
Oct	33.6	18.6	6	300
Nov	36.3	22.1	8	340
Dec	38.0	24.6	15	380
Annual	32.7	17.9	≈239 mm/yr	≈3,270 mm/yr

Table 2 summarises the best-available climate data for the Abra region using long-term Bureau of Meteorology temperature and rainfall records from the nearest representative stations (Newman Aero and Neds Creek), combined with regional Gascoyne pan-evaporation climatology compiled by DPIRD. These data illustrate the highly arid climate, with extremely high summer temperatures, very high annual evaporation (>3,000 mm/yr), and low but episodic cyclonic-influenced rainfall (annual average ~239 mm).

The regional climate has important implications for land and vegetation management, including:

- highly variable rainfall influencing surface water flows, erosion risk and rehabilitation outcomes
- extended dry periods that limit natural regeneration potential
- dependence on summer cyclonic rainfall events to drive episodic groundwater recharge.

Climate conditions across the Project area therefore align with regional arid-zone patterns, with low, highly variable rainfall and high summer temperatures influencing environmental behaviour and mine-site landform processes.

4.2 Landscape, Geology and Soils

The Abra Project is situated within the southeastern margin of the Bangemall Basin, a Mesoproterozoic sedimentary basin overlying the Capricorn Orogen, a major Paleoproterozoic tectonic zone formed through the amalgamation of the Yilgarn and Pilbara Cratons. This geological setting forms part of the Bangemall Geomorphic Province, a rugged 18,590 km² landscape that defines the watershed between the Ashburton and Gascoyne River systems. The province is characterised by resistant Proterozoic sedimentary units forming northwest-trending ridges, mesas and dissected uplands, interspersed with stony plains, drainage floors and hardpan surfaces.

Within the Abra project area, the dominant landforms consist of:

- Rugged hills and ridges formed from resistant sandstone, siltstone and dolerite intrusions
- Stony hardpan plains with a dense surface mantle of ironstone and quartz fragments
- Shallow valley floors and restricted alluvial plains associated with minor drainage features
- Low rounded rises produced by the weathering of dolerite dykes and sills
- Broad interfluvial supporting mulga shrublands on shallow red loams

These terrain features influence vegetation patterns, hydrology, erosion potential and the distribution of soil types across the site.

4.2.1 Geology

The geology of the Project area is dominated by Bangemall Supergroup sedimentary rocks, including sandstones, shales, siltstones and minor carbonate units. Dolerite intrusions are common and now form prominent rounded ridges due to their resistance to weathering. Bedding orientation generally follows a northwest structural trend, reflected in regional topography.

The Capricorn Orogen basement, while not exposed at surface within the permit area, exerts regional control on stratigraphy and hydrology, creating gentle north-trending groundwater gradients and structurally guided drainage features such as Five Mile Creek.

4.2.2 Soils

Soils across the project area align with the regional arid-zone profile and include:

- Red shallow loams over hardpan (typical of mulga plains)
- Red loamy earths on broad stony plains and upland slopes
- Stony skeletal soils on ridges and breakaways
- Red deep sands and shallow sands occurring in minor dune-like deposits or sandy drainage banks

These soils have generally low fertility, moderate to high erodibility when vegetation is removed, and limited moisture retention, factors important for rehabilitation planning.

4.2.3 Land Systems

Based on the Gascoyne Land System mapping by Payne et al. (1988), the clearing permit area intersects three regional land systems, summarised in **Table 3**. The Three Rivers and Jamindie systems dominate the landscape, with a minor portion within the Collier system.

Table 3 - Land Systems within the CPS 10170/1 Area

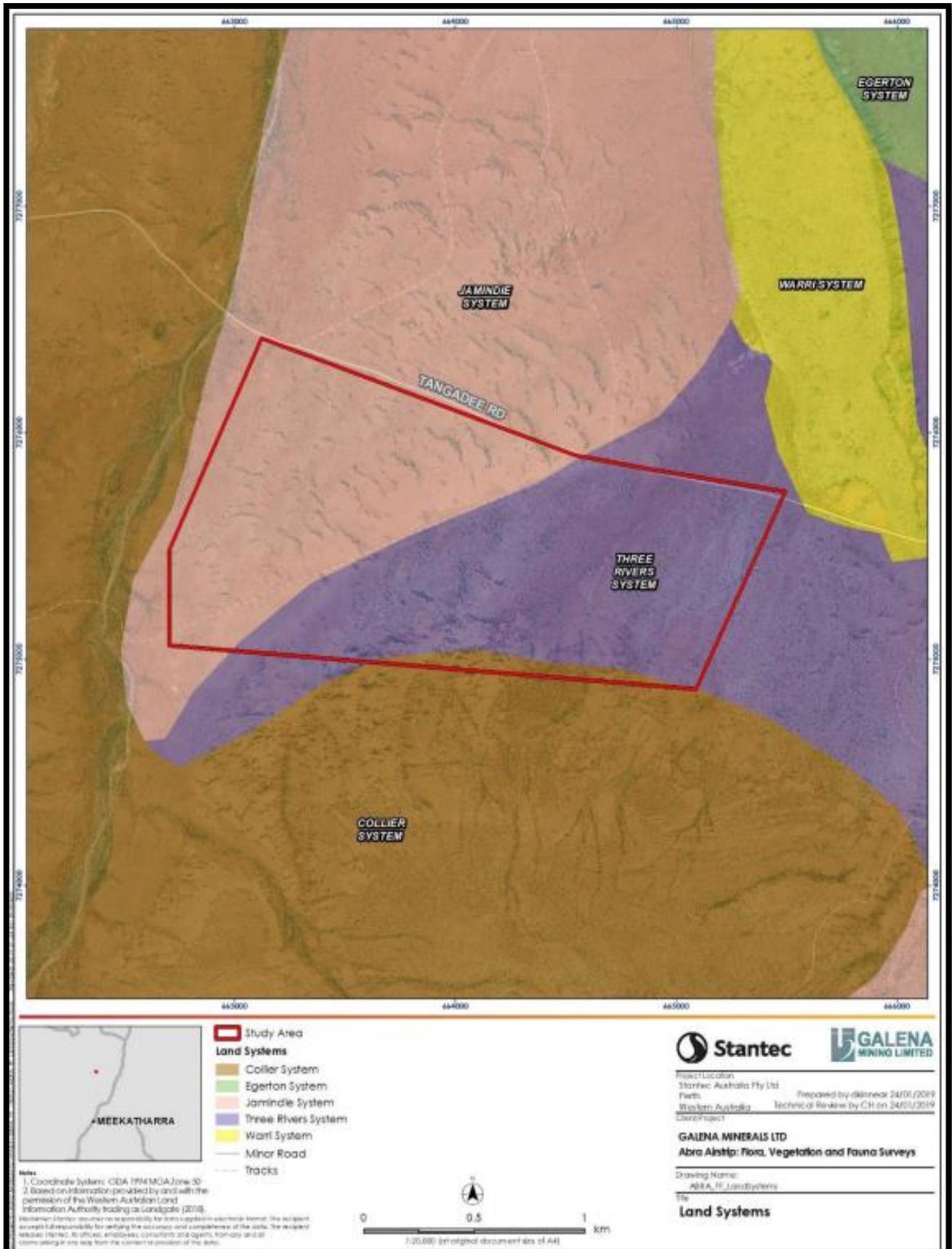
Land System	Description	Extent (ha)	% of Area
Jamindie	Stony hardpan plains and rises; groved mulga shrublands; occasional spinifex	123.73	44.5%
Three Rivers	Hardpan plains and minor sandy banks; sparse mulga shrublands	146.22	52.6%
Collier	Undulating stony uplands, low hills, ridges and stony plains; mulga and some spinifex	8.22	3%
Total	–	278.17	100%

Figure 4 (Land Systems within and surrounding the Abra Project Area) provides the spatial context for interpreting soil–vegetation relationships, surface hydrology and potential constraints relevant to clearing, rehabilitation planning and infrastructure development.

These land systems are widely distributed across the central Gascoyne and are not regionally restricted or threatened, with mulga-dominated shrublands remaining largely intact at state and bioregional scales. The landforms represented within the CPS 10170/1 boundary are typical of the region and do not include any unique geomorphic features, breakaways of conservation significance, or landforms considered environmentally sensitive under the EP Act.



Figure 4 - Land Systems within and surrounding the Abra Project Area



4.3 Vegetation and flora

Baseline flora, vegetation and terrestrial fauna information used to support this amendment is derived from surveys undertaken for Galena Mining Ltd over the Abra project area. The survey report and spatial datasets have been lodged with the Index of Biodiversity Surveys for Assessments (IBSA) as data package **IBSA-2018-0056**, titled “*Detailed flora and vegetation survey, Level 1 fauna survey conducted for Galena Mining Ltd, for the Mining Lease M52/766 Exploration Lease E52/1455.*” This IBSA package provides the primary biological survey record referenced in this Supporting Report (**Appendix E**).

4.3.1 Pre-European Vegetation

Pre-European vegetation across Western Australia was originally mapped at 1:1,000,000 and 1:250,000 scales by Beard (1975a), forming the foundation of the State’s vegetation classification framework. These vegetation associations were subsequently refined by Shepherd et al. (2002) to incorporate post-European clearing patterns and to subdivide broad units into finer, more ecologically meaningful classes. The updated vegetation system associations used by contemporary assessments remain consistent with Beard’s original structural descriptions but apply revised polygon boundaries and remnant extent analyses across multiple spatial scales.

Within the Abra Project Area, pre-European vegetation mapping identifies the landscape as dominated by Mulga (*Acacia aneura*) woodland and shrubland communities, characteristic of the Augustus subregion of the Gascoyne bioregion (Beard 1975a; Shepherd et al. 2002). Two vegetation system associations intersect the Study Area—Augustus 18 and Augustus 39—both belonging to the broader Gascoyne Ranges system (**Table 4**).

- Augustus 18 is described as *low woodland dominated by mulga (Acacia aneura)*.
- Augustus 39 comprises *mulga shrublands (Acacia aneura) occurring on plains, rises and stony surfaces*, often associated with hardpan soils.

The mapped extents of these associations within the Study Area are provided in **Figure 5**, based on regional vegetation spatial datasets.

Table 4 - Pre-European Vegetation System Associations within the Study Area

System	Code	Extent (ha)	Description
Augustus	18	1,068.62 ha	Low woodland; mulga (<i>Acacia aneura</i>)
Augustus	39	288.02 ha	Shrublands; mulga scrub

Across all spatial scales—State, bioregion, subregion and Local Government Area (LGA)—both vegetation system associations retain >99% of their pre-European extent, indicating extremely low historical clearing pressure. This confirms that the vegetation types present at Abra remain well-represented and intact across the wider landscape, and that clearing within the project area will not significantly diminish regional vegetation representation (**Table 5**).

Table 5 - Remaining Pre-European Vegetation Extent Across Assessment Scales
(Values aligned with Shepherd et al. 2002 dataset revisions)

System	Scale	Pre-European Extent (ha)	Current Extent (ha)	% Remaining	Current Extent in IUCN I–IV Reserves (ha)	% Protected
Augustus 18	State-wide	31,723.47	31,698.27	99.92%	–	–
	Bioregion	2,831.02	2,831.02	100%	–	–
	Subregion	2,736.93	2,736.93	100%	–	–
	LGA	3,737.92	3,737.92	100%	–	–
Augustus 39	State-wide	6,613,569.14	6,602,580.10	99.83%	479,205.99	7.25%
	Bioregion	2,338,128.28	2,337,580.69	99.98%	55,523.47	2.37%
	Subregion	1,404,073.25	1,403,525.66	99.96%	55,523.47	3.95%
	LGA	157,356.02	157,356.02	100%	–	–

These metrics demonstrate extremely high persistence of pre-European vegetation across the wider Gascoyne region and confirm that vegetation types associated with the Abra Project are neither restricted nor under clearing pressure at regional or State scales.



Figure 5 - Pre-European Vegetation Associations within the Abra Project Area

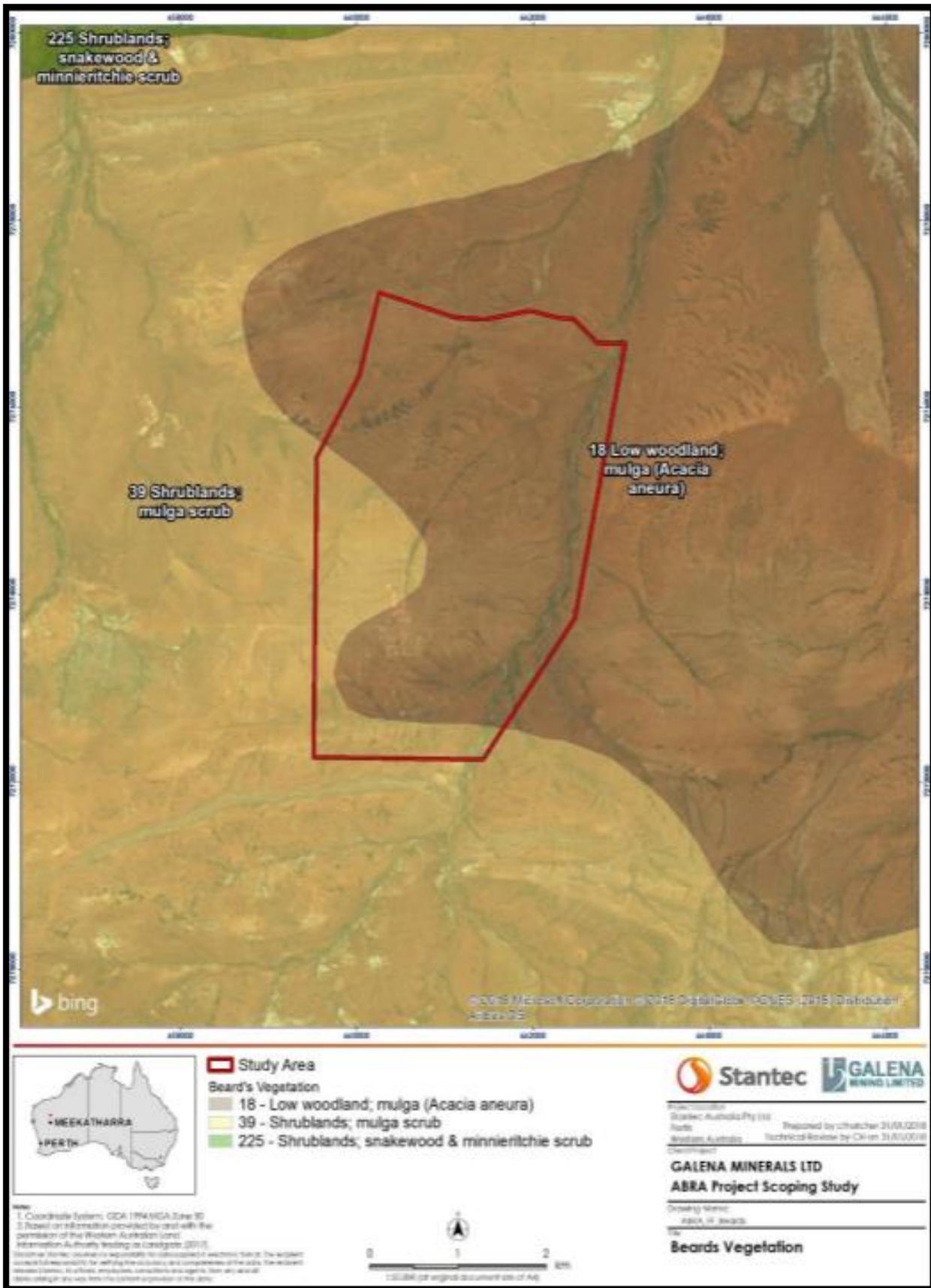


Figure 5 illustrates the spatial distribution of pre-European vegetation within and adjacent to the Project Area, confirming that the Abra mine footprint occurs within extensive, continuous Mulga-dominated communities typical of the Gascoyne Ranges.

4.3.2 Conservation Significant Vegetation

Desktop database searches were undertaken for the Abra project area, including:

- the Commonwealth EPBC Act Protected Matters Search Tool (PMST, report dated 26 November 2025), and
- the DBCA Threatened and Priority Ecological Communities lists (Version 35).

The PMST identified no EPBC-listed Threatened Ecological Communities or nationally important wetlands within the search area, although several listed threatened and migratory species may occur regionally. Consistent with this, DBCA TEC/PEC spatial datasets do not show any mapped TEC or PEC polygons intersecting the CPS 10170/1 permit boundary or its immediate surrounds. Accordingly, vegetation proposed to be cleared under this amendment does not form part of any State- or Commonwealth-listed Threatened or Priority Ecological Community.

In line with the EPA *Flora and Vegetation Environmental Factor Guideline* (EPA 2016a), assessment of conservation significance has therefore focused on local-scale values rather than formal TEC/PEC listings.

Within the broader Abra project area, the following features are considered locally important:

- dense banded mulga groves and hardpan mulga that provide higher structural complexity, litter accumulation and microhabitat than surrounding open shrubland
- minor drainage-line and run-on zones that support slightly increased shrub and ground-layer productivity following episodic rainfall
- scattered mature mulga and other Acacia trees that provide shade, perching and potential nesting resources for birds.

These locally significant features are not formally listed as TECs or PECs but are recognised in mine planning and the internal Ground Disturbance Permit (GDP) process. The additional clearing sought under this amendment is largely confined to existing or partially disturbed domains (TSF, ROM/stockpiles, laydowns, landfill and services corridors), thereby avoiding intact mulga groves and drainage-line vegetation wherever practicable.

Where clearing of better-condition mulga or run-on areas cannot be entirely avoided, impacts will be minimised by:

- limiting disturbance to the smallest practicable operational footprint
- salvaging and re-spreading topsoil and woody debris to support regeneration during future rehabilitation
- incorporating these areas into progressive rehabilitation, including direct-seeding trials using locally sourced *Acacia ramulosa* (bowgada) and associated species.

On this basis, while the CPS 10170/1 amendment will result in additional clearing within widespread mulga vegetation types that remain very well represented at regional and State scales, it is not expected to significantly affect any conservation-significant vegetation community, nor materially reduce the availability of locally important vegetation features across the broader Abra landscape.

4.4 Fauna

4.4.1 Fauna Habitat

Terrestrial fauna habitat at the Abra Mine has been described from previous Level 1 and Level 2 surveys undertaken across the project area (Stantec 2018, 2019) are summarised in **Table 6**. Five broad habitat types are recognised within and around the CPS 10170/1 permit area:

- **Banded mulga on plain** – mulga (*Acacia aneura* complex) and associated Acacia shrubland on gently undulating plains, typically with a relatively dense shrub layer and patchy woody debris and

leaf litter. This habitat provides nesting and roosting opportunities for small birds and shelter for reptiles and small mammals in bark, shrub bases and surface debris.

- **Open shrubland on stony plain** – the dominant habitat across the mining hub, comprising open Grevillea / Acacia shrubland with Eremophila spp. and tussock grasses over stony or gravelly substrates. Structural complexity and litter are generally low, and the habitat is of limited significance for fauna at a regional scale, although scattered trees and small mulga groves provide local shelter and nesting sites.
- **Riparian habitat** – narrow linear habitat associated with major drainage lines, characterised by taller Eucalyptus and Acacia over mixed shrubs and tussock grasses, with higher densities of woody debris, leaf litter, root crevices and occasional small alcoves or hollows. This habitat supports elevated fauna diversity relative to the surrounding plains and provides important shelter, foraging habitat and ephemeral water resources following rainfall events.
- **Drainage lines** – minor to intermediate drainage features that are likely to be seasonally inundated. These areas support mixed Acacia / shrub overstorey, tussock grasses and localised accumulations of woody debris and leaf litter. When inundated, they may be used by amphibians and transient wetland birds; when dry, they provide shelter for reptiles and small mammals.
- **Gully and breakaway habitats** – localised eroded gullies and breakaway margins with rocky or gravelly soils and low shrub cover. Breakaway faces and associated rock provide micro-caves, alcoves and crevices that can be used by reptiles and small mammals, although overall habitat extent within the CPS 10170/1 area is limited.

At a regional scale, all these habitats are widespread within the Augustus subregion and wider Gascoyne landscape. The open shrubland on stony plain habitat is dominant across the existing Abra mining hub and accounts for most of the land within the CPS 10170/1 permit envelope. Riparian and gully habitats are more restricted in extent but occur as narrow linear features in the broader landscape rather than as large, isolated remnants.

Within the current CPS 10170/1 boundary, the proposed additional clearing is largely confined to:

- existing disturbed or partially disturbed areas (TSF, ROM, WRD, laydowns, roads, landfill); and
- adjacent stony plain shrubland immediately contiguous with that disturbance.

Riparian habitat and major drainage features are largely avoided by design, with only minor encroachment on secondary drainage lines where required for access or services. This pattern of disturbance minimises the removal of more structurally complex and higher-value fauna habitat while consolidating clearing within the existing operational footprint.



Table 6 - Summary of Terrestrial Fauna Habitats within CPS 10170/1 Permit Area

Habitat type	Occurrence within CPS 10170/1 permit area	Key structural features	Relative fauna value (local / regional)	Interaction with proposed additional clearing
Banded mulga on plain	Localised patches	Dense <i>Acacia aneura</i> complex and other <i>Acacia</i> shrubland on gently undulating plains; patchy woody debris and leaf litter; mostly bare soil substrates.	Moderate local value; provides nesting/roosting for small birds and shelter for reptiles and small mammals in shrubs, bark and surface debris.	Minor additional loss where new infrastructure abuts existing disturbance; habitat is widespread regionally and well represented outside mining hub.
Open shrubland on stony plain	Dominant habitat in mining hub	Open <i>Grevillea</i> / <i>Acacia</i> shrubland with <i>Eremophila</i> spp. and tussock grasses over stony or gravelly substrates; low litter and woody debris; locally disturbed by tracks and existing infrastructure.	Generally low to moderate value; supports common arid-zone birds, reptiles and small mammals, but lacks high structural complexity or specialised microhabitats.	Primary habitat affected by proposed clearing; disturbance largely consolidates within already cleared or partially cleared areas contiguous with ROM, TSF, WRD, laydowns and roads.
Riparian habitat	Narrow, linear and limited extent	Taller <i>Eucalyptus</i> and <i>Acacia</i> over mixed shrubs and tussock grasses; higher woody debris, leaf litter, exposed roots, occasional hollows and alcoves; ephemeral surface water after rain.	High local value; supports elevated fauna diversity, including amphibians and transient wetland birds after rainfall; potential foraging/roosting habitat for raptors.	Largely avoided by design; only minor encroachment on secondary drainage features where essential for access or services; no clearing proposed in major riparian corridors.
Drainage lines (minor to medium)	Scattered throughout permit area	Seasonally inundated channels with mixed <i>Acacia</i> / shrub overstorey, tussock grasses, leaf litter and woody debris; localised clay-bound crevices.	Moderate local value; provides ephemeral water and shelter for reptiles, small mammals and amphibians; used intermittently by transient birds.	Limited, targeted crossings or parallel alignments for roads, pipelines and services; disturbance minimised through design and surface water management controls.
Gully and breakaway habitats	Very limited extent	Eroded gullies, breakaway faces and adjacent rocky soils; low shrub cover; abundant rock crevices, alcoves and small caves; some grazing disturbance.	Moderate local value: rock features provide potential shelter for reptiles and small mammals, although usage recorded to date is low.	No direct clearing proposed where practicable; any unavoidable disturbance to be restricted to small, localised areas and managed through progressive rehabilitation.

4.4.2 Fauna Assemblages

Previous fauna surveys at Abra (Stantec 2018, 2019) recorded a typical arid-zone vertebrate assemblage for the Gascoyne mulga landscape (Table 7), comprising:

- 8 mammals (primarily common macropods and small mammals, plus domestic/feral species).
- 19 bird species, including common mulga-woodland passerines and raptors.
- 2 reptiles; and
- 2 amphibians associated with ephemeral surface water following rainfall.

Table 7 - Summary of Vertebrate Fauna Assemblages Recorded at Abra Mine

Fauna group	No. of species recorded in Abra survey area	Representative species (local records)	Introduced species recorded	Conservation-significant species recorded	Notes on assemblage and relevance to proposed clearing
Mammals	8	Red Kangaroo (<i>Osphranter rufus</i>), small dasyurids and rodents (unidentified to species in some cases)	Feral Cat (<i>Felis catus</i>), Domestic Dog (<i>Canis familiaris</i>), European Cattle (<i>Bos taurus</i>)	None	Assemblage dominated by widespread arid-zone species; no threatened or Priority mammals detected. Proposed clearing is largely within existing disturbance where habitat values are already reduced.
Birds	19	Inland Thornbill (<i>Acanthiza apicalis</i>), Western Gerygone (<i>Gerygone fusca</i>), Crested Pigeon (<i>Ocyphaps lophotes</i>), Australian Magpie (<i>Cracticus tibicen</i>), Australian Ringneck (<i>Platycercus zonarius</i>), Mulga Parrot (<i>Platycercus varius</i>), Grey Shrike-thrush (<i>Colluricincla harmonica</i>), Spotted Nightjar (<i>Eurostopodus argus</i>), Zebra Finch (<i>Taeniopygia guttata</i>), Singing Honeyeater (<i>Gavicalis virescens</i>)	None detected (feral / domestic species confined to mammals)	None	Bird assemblage typical of mulga and stony-plain habitats. Riparian and drainage habitats support higher structural complexity but are limited in extent within CPS 10170/1 and are largely avoided by proposed clearing.

Reptiles	2	Variegated Dtella (<i>Gehyra variegata</i>), Ring-tailed Dragon (<i>Ctenophorus caudicinctus mensarum</i>)	None	None	Low number of species recorded reflects short survey window and arid conditions, but habitats are typical and well represented regionally. Additional clearing occurs mainly in previously disturbed areas, limiting incremental impact on reptile habitat.
Amphibians	2	Little Red Tree Frog (<i>Litoria rubella</i>), Sheep Frog (<i>Cyclorana maini</i>)	None	None	Amphibians utilise ephemeral surface water in drainage and riparian habitats after significant rainfall. These habitats occupy a small proportion of the permit area and are largely retained under the proposed amendment.
Overall	31	—	3 introduced species	0	No conservation-significant fauna has been recorded in the Abra mining hub, and desktop review indicates low likelihood of occurrence for listed species. With clearing constrained to the existing mining footprint and additional controls (directional clearing, speed limits, waste management), the amendment is not expected to materially change the local fauna assemblage or overall fauna values at Abra.

No fauna species of conservation significance under the EPBC Act or BC Act were recorded during field surveys in the Abra project area, and the assemblage was assessed as representative of widespread habitats across the Augustus subregion.

Given that:

- the proposed amendment area is almost entirely within or immediately adjacent to the existing mining hub; and
- the dominant habitat affected is open shrubland on stony plains that is extensive at a regional scale, the additional clearing required to increase authorisation from 70 ha to 150 ha is not expected to substantially alter the local vertebrate assemblage or materially change the fauna values previously described for Abra.

4.4.3 Fauna of Conservation Significance

Desktop assessments for the original CPS 10170/1 application, together with the recent EPBC Act Protected Matters Search Tool (PMST) report for the permit area (**Appendix D**), identify several conservation-significant species with broad regional distributions in arid Western Australia. These include several listed birds (e.g. Southern Whiteface *Aphelocephala leucopsis* – Vulnerable, Grey Falcon *Falco hypoleucos* – Vulnerable, Curlew Sandpiper *Calidris ferruginea* – Critically Endangered, Sharp-tailed Sandpiper *Calidris acuminata* – Vulnerable) and Pilbara Leaf-nosed Bat *Rhinonicteris aurantia* (Pilbara form) – Vulnerable, as well as the Vulnerable plant Mt Augustus Foxglove *Pityrodia augustensis*. The PMST also notes a suite of migratory waders (e.g. Common, Pectoral and Curlew Sandpipers and Oriental Plover) and listed marine/migratory land birds (e.g. Grey and Yellow Wagtails, Rainbow Bee-eater) as “may occur” or “species habitat may occur within area”.

However, when these desktop predictions are considered against site-specific information:

- No Threatened or Priority fauna have been recorded within the Abra mine footprint during Stantec’s baseline surveys (2018, 2019).
- Key habitats for many of the EPBC-listed species (coastal or large inland wetlands for migratory waders, extensive spinifex dunes, granite outcrops, deep gorges and humid caves for Pilbara Leaf-nosed Bat, or the Mt Augustus ranges for *Pityrodia augustensis*) are absent from the CPS 10170/1 permit area.
- Habitats present within the permit boundary—mulga plains, stony shrublands and minor ephemeral drainage lines—are widespread and well-represented in the surrounding landscape and are already substantially modified within the existing Abra operations hub.

Potential, opportunistic use of the broader region by wide-ranging species (e.g. raptors, migratory waders moving through after major rainfall events) cannot be completely excluded, but regular use of the highly disturbed mine footprint is considered unlikely. The proposed additional clearing:

- is largely confined to existing or partially disturbed infrastructure domains.
- avoids higher-value riparian and gully habitats where practicable; and
- does not intersect any known locations or core habitat of Threatened or Priority species.

On this basis, increasing the CPS 10170/1 clearing authorisation from 70 ha to 150 ha is not expected to be at variance with the fauna-related clearing principles, nor to materially increase risk to conservation-significant species beyond that already assessed for the existing permit. Residual fauna risk will continue to be managed through slow, directional clearing towards adjacent vegetation, fauna-awareness and speed controls, restriction of disturbance to surveyed and approved envelopes, and avoidance of riparian zones and major drainage features wherever practicable.

4.4.4 Vegetation Condition (Keighery Scale)

Vegetation condition within the CPS 10170/1 permit area was assessed using the Keighery (1994) condition scale, based on previous flora and vegetation surveys (Stantec 2018, 2019) and subsequent site inspections by Endurance Mining (2023–2025). The Keighery scale describes condition on a six-point continuum from *Pristine* to *Completely Degraded* (**Table 8**).

Table 8 - Vegetation condition categories (Keighery 1994)

Condition category	Description
Pristine	Vegetation structure and floristics undisturbed; no obvious signs of disturbance, weed invasion or grazing.
Excellent	Vegetation structure intact; virtually no signs of disturbance. Very low weed cover (if any); native species composition and structure essentially intact.
Very Good	Vegetation structure largely intact with minor signs of disturbance (e.g. low levels of grazing, limited track disturbance, or very minor weed presence). Native species still dominate.
Good	Vegetation structure altered, with some disturbance evident (e.g. moderate grazing, tracks, fire history, or localised weed invasion), but native species remain dominant and vegetation retains its overall character.
Degraded	Vegetation structure clearly altered and substantially disturbed (e.g. heavy grazing, frequent fire, soil disturbance, or significant weed invasion). Native species cover reduced and opportunistic species more prominent.
Completely Degraded	Vegetation no longer intact; structure almost totally lost and the site is effectively non-vegetated or dominated by weeds or highly disturbed surfaces (e.g. infrastructure footprints, hardstand and compacted laydowns).

Within the CPS 10170/1 boundary, vegetation condition ranges from Excellent to Completely Degraded, with the following broad pattern:

- Excellent condition
 - Two narrow tracts of Excellent-condition vegetation occurs along minor drainage lines on the eastern side of the mining hub.
 - This drainage-line vegetation has been purposely excluded from the proposed additional clearing areas through mine planning and the Ground Disturbance Permit (GDP) process and will remain outside the amended clearing envelope.
- Very Good – Good condition
 - Occurs across most of the mulga-dominated shrublands and low woodlands on hardpan plains and low rises away from the immediate mining hub.
 - These areas show limited weed presence and only minor grazing or historical track disturbance.
- Good – Degraded condition
 - Occurs adjacent to existing infrastructure such as haul roads, laydowns, stockpiles and historical exploration tracks.
 - Disturbance is characterised by soil compaction and localised surface disturbance.
- Completely Degraded condition
 - Confined to areas of existing mine infrastructure including the ROM pad, process plant, TSF embankments, main access roads, village, airstrip and associated laydowns and landfills.
 - Native vegetation has been largely removed and surfaces are dominated by engineered landforms or hardstand.

The proposed additional clearing areas associated with this amendment largely intersect Good to Degraded condition vegetation within and immediately surrounding the existing operational hub (ROM/WRD, TSF footprint, landfill, laydowns and internal roads), with only limited encroachment into Very Good condition mulga shrubland on the margins of new TSF, stockpile and borrow-pit areas.

No *Pristine* vegetation is present within the CPS 10170/1 boundary, and the only Excellent-condition tract—the drainage-line vegetation described above—has been deliberately avoided in the design of the proposed clearing.

4.5 Surface Water, Soils and Land Degradation

The CPS 10170/1 Decision Report identified that soils within the Jamindie land system are generally resistant to erosion, whereas soils mapped within the Collier and Three Rivers systems may be more susceptible to erosion if vegetation is removed and drainage is poorly managed. Ephemeral drainage lines associated with Five Mile Creek, which traverses the broader permit area before joining the Ethel River approximately 2.3 km to the east, were also noted as features requiring careful management to avoid localised erosion or alteration to surface-water regimes.

Under the proposed amendment, Endurance Mining seeks to increase the total authorised clearing from 70 ha to 150 ha, of which approximately 81 ha represents additional clearing allowance (Table 1). This additional clearing is predominantly located within the existing Central and Southern catchments shown on Figure 6 and is associated with:

- development of TSF Cell B2 and associated collection drains and embankments;
- ROM pad and stockpile expansions;
- new and expanded laydown and hardstand areas;
- an expanded engineered landfill;
- access roads, services corridors and pipeline/HV power routes; and
- the solar farm extension and associated infrastructure.

Figure 6
Abra Site Layout and Surface Water Catchments

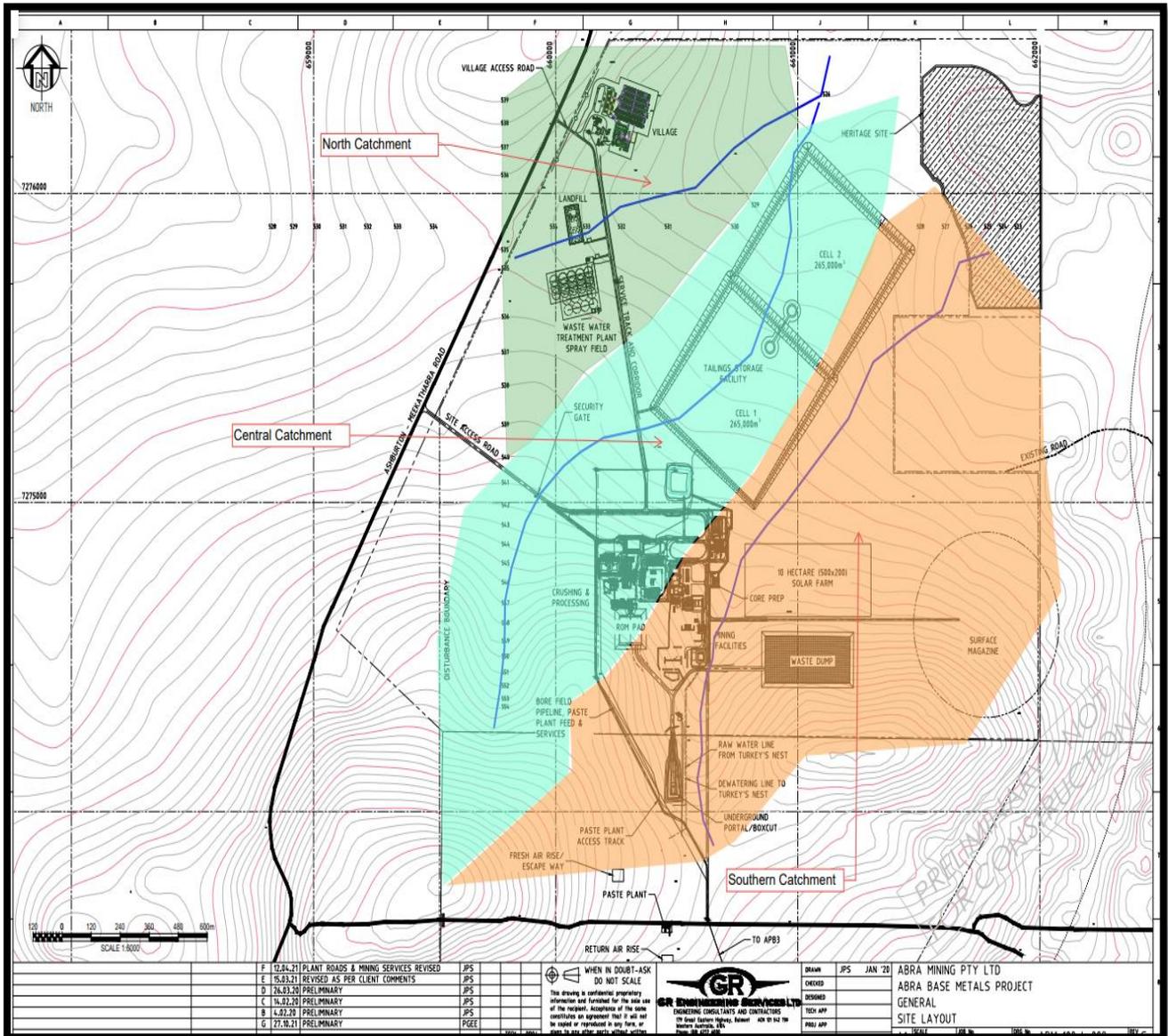


Figure 6 illustrates the Abra Mine operational footprint subdivided into three local surface-water catchments (North, Central and Southern). Catchment boundaries are overlain on 1 m contours and existing/proposed infrastructure, including the village, landfill, wastewater treatment plant and spray field, tailings storage facility (TSF) Cells 1 and 2, ROM pad and crushing plant, waste dump, solar farm, surface magazine and access roads.

Runoff from the North Catchment (green polygon) drains overland from the western hillslope across the village, landfill and wastewater treatment spray field, before being directed via drains and bunds toward the

TSF and internal drainage network. The Central Catchment (aqua polygon) encompasses the process plant, ROM pad and TSF footprint; all runoff from this area is captured and managed within the mine's-controlled water system (TSF collection drains, sumps, and plant water management structures). The Southern Catchment (orange polygon) drains the waste dump, solar farm and southern plant/portal areas toward internal sumps and constructed drainage features before attenuating across the lower slopes. No catchment drains directly to permanent surface-water features; all flows are ephemeral and associated with high-intensity rainfall events.

This catchment layout demonstrates that:

- surface water generated across the operational footprint is contained and managed within three discrete, engineered catchments;
- clean-water diversion drains and bunds along the western hillslope divert upslope runoff around key infrastructure, reducing erosion risk and limiting contact between clean and potentially contaminated water; and
- downstream of the site, natural flow paths are maintained, with runoff re-joining existing ephemeral drainage lines that ultimately contribute to Five Mile Creek and the Ethel River system.

In the context of surface water and land degradation:

- Most of the additional 81 ha of clearing will occur on already modified or partially disturbed surfaces within the existing operational footprint (e.g. TSF, ROM, plant, laydowns, waste dump). These areas are designed for industrial use and are already integrated into the site's surface-water management system.
- No new permanent watercourses or wetlands will be directly impacted. Clearing is confined to the existing mining hub, and no clearing is proposed within the main channel of Five Mile Creek or other mapped major drainage lines.
- Where minor ephemeral drainage lines are intersected by new infrastructure (e.g. TSF drains, access roads, services corridors), surface flows will be maintained or reinstated downstream by incorporating culverts, flood ways, cross-drainage structures and local diversion bunds, consistent with Condition 8(b) of CPS 10170/1.
- The TSF, plant and landfill expansions are already subject to Part V works approvals and licences and are managed under the site's Surface Water Management Plan and Erosion and Sediment Control procedures. These instruments require:
 - design of drains and sumps to contain runoff from extreme rainfall events;
 - progressive stabilisation of embankments, stockpiles and batters; and
 - monitoring of erosion and sediment movement, with maintenance as required.
- The requirement under Condition 4 that the purpose of clearing must be enacted within six (6) months will continue to apply. This ensures that:
 - cleared ground is quickly brought into active use (TSF construction, ROM expansion, laydown development), minimising the period of exposed bare soil; and
 - decommissioned or rationalised areas can be progressively reshaped, ripped and rehabilitated, reducing long-term erosion risk.

Given the constrained location of the additional clearing within the existing operational catchments, the absence of new disturbance to permanent watercourses, and the application of existing drainage and erosion controls, the proposed increase in authorised clearing to 150 ha is not expected to materially increase the risk of off-site land degradation or adverse impacts to surface-water regimes beyond those previously assessed under CPS 10170/1.

5. Native Title

The Abra Mine is located on the traditional lands of the Nharnuwangga, Wajarri and Ngarlawangga peoples, whose native title rights and interests have been recognised by the Federal Court over a large area of the Upper Gascoyne region (determination WAD72/1998).

The Project lies within this determined native title area. Endurance Mining Pty Ltd maintains ongoing engagement with the Nharnuwangga, Wajarri and Ngarlawangga Traditional Owners through their nominated representative body (including Jidi Jidi Aboriginal Corporation) on matters relating to land access, heritage surveys and on-Country activities.

Engagement focuses on:

- undertaking heritage surveys ahead of new ground disturbance
- incorporating Traditional Owner feedback into project design and scheduling
- providing opportunities for on-Country monitoring and cultural site visits where requested.

This consultation will continue for the life of the Project and is consistent with the Native Title Act 1993 (Cth) and relevant land-access and heritage agreements.

5.1 Aboriginal Heritage

A desktop review of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Cultural Heritage Inquiry System (ACHIS) for the CPS 10170/1 permit area identified one registered Aboriginal heritage place intersecting the broader project area. The exact location and attributes of this place are culturally sensitive and are not reproduced in this document.

Key points relevant to this amendment are:

- The approved mining layout and the requested additional clearing (up to a revised total of 150 ha) have been designed to avoid direct disturbance to the registered place and any other known areas of cultural sensitivity.
- Multiple archaeological and ethnographic heritage surveys have been completed across the Abra project footprint between 2013 and 2018, with follow-up surveys undertaken in 2022, by qualified heritage consultants (including Terra Rosa Cultural Resource Management) in partnership with Nharnuwangga, Wajarri and Ngarlawangga knowledge holders. These surveys have been used to refine infrastructure locations, haul routes and laydown areas so that heritage exclusion zones are clearly defined and maintained.
- The registered heritage place is protected on the ground by a dedicated heritage exclusion fence and warning signage. The integrity of this fenceline is checked as part of monthly environmental / heritage inspections, with any damage or access risks rectified promptly.
- Any new works within unsurveyed areas will be preceded by additional heritage surveys and consultation with Traditional Owners where required.

Endurance Mining will continue to manage Aboriginal heritage in accordance with the Aboriginal Heritage Act 1972 (WA) and associated DPLH guidelines. This includes:

- obtaining and complying with relevant consents or approvals where avoidance is not possible
- immediately ceasing work and notifying Traditional Owners and DPLH if any previously unrecorded cultural material or places are identified during ground-disturbing activities
- maintaining up-to-date GIS mapping of heritage exclusion zones and incorporating these into the Ground Disturbance Permit (GDP) process and routine site inspection program.

On this basis, the proposed additional clearing associated with CPS 10170/1 is not expected to result in damage to, or unauthorised disturbance of, Aboriginal heritage, provided the existing survey, fencing and GDP controls continue to be implemented and maintained.

5.2 European Heritage

All State-registered heritage places are protected under the Heritage Act 2018 (WA) and are documented in the State’s inHerit database. A search of inHerit and local government heritage inventories for the Shire of Upper Gascoyne indicates:

- no State-registered or locally listed European heritage places occur within the Abra Mine footprint or the CPS 10170/1 permit area; and
- mapped heritage places in the broader Upper Gascoyne region are associated primarily with pastoral homesteads and historical infrastructure located well away from the Project.

Mining operations and the requested increase in authorised clearing to 150 ha will therefore not impact any known European heritage places.

Endurance Mining will periodically review inHerit and local heritage registers as part of its approvals due-diligence process and will update this assessment if new heritage listings are created in the region.

6. Assessment Against Clearing Principles

The proposed amendment to CPS 10170/1 has been assessed against the ten clearing principles set out in Schedule 5 of the Environmental Protection Act 1986. This assessment considers the biological, hydrological, landform and conservation values present within the Abra Project area, drawing on flora, vegetation and fauna surveys undertaken since 2018, regional biophysical datasets, and Endurance Mining’s operational footprint constraints (**Table 9**). The evaluation focuses on whether the proposed increase in clearing (to 150 ha) is likely to be at variance with any principle, considering the highly disturbed nature of the existing mining hub, the extensive availability of similar vegetation and habitats across the broader Gascoyne region, and the continued application of CPS 10170/1 management conditions.

Table 9 - Assessment of proposed clearing at Abra against the native vegetation clearing principles

Clearing Principle	Assessment (Abra site-specific)	Outcome
(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.	The CPS 10170/1 permit area occurs within the Gascoyne bioregion (Augustus subregion) and supports mulga-dominated shrublands typical of the Jamindie, Three Rivers and Collier land systems. Flora and vegetation surveys undertaken for Abra (2018–2019) recorded a moderate level of species richness that is representative of the broader region. No Threatened flora or Threatened Ecological Communities have been recorded within the CPS 10170/1 envelope, and similar vegetation is very extensive and well represented outside the project area. The proposed additional clearing is confined to, or immediately adjacent to, existing mine disturbance and will not materially reduce local or regional biodiversity values.	Unlikely to be at variance with Principle (a).
(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is	Fauna assessments for Abra have identified common arid-zone fauna assemblages associated with mulga shrublands, stony plains and minor drainage features.	Unlikely to be at variance

necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.	Potential habitat for species such as bilby and western pebble-mound mouse occurs broadly in the region; however, these species have not been recorded within the permit area and extensive similar habitat is available off-lease. The proposed amendment is restricted to the existing mining hub (TSFs, ROM, WRD, plant, camp and laydowns) and will predominantly affect already fragmented or disturbed habitats. Directional clearing and fauna-displacement procedures will continue to be implemented under CPS 10170/1.	with Principle (b).
(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	Baseline flora surveys for the Abra Project did not record any Threatened (Declared Rare) flora within the CPS 10170/1 area. A small number of Priority flora species have been recorded or predicted at the broader project scale, but suitable habitat is widespread regionally and the proposed additional clearing does not target known Priority flora populations. Progressive avoidance and micro-siting of infrastructure within the existing disturbed footprint further reduces the likelihood of impacts to any undiscovered significant flora.	Unlikely to be at variance with Principle (c).
(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a Threatened Ecological Community.	No Threatened or Priority Ecological Communities (TECs/PECs) are mapped or have been identified within the Abra mine area or the CPS 10170/1 permit boundary. Vegetation within the amendment area comprises widespread mulga shrubland associations that are not listed as TECs or PECs at State or Commonwealth level.	Not at variance with Principle (d).
(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.	The regional vegetation association (Beard / Shepherd association 18 – “low woodland; mulga (Acacia aneura)”) retains >99% of its pre-European extent at the State, bioregion, subregion and Shire scales, and is poorly represented in formal reserves but remains very extensive across the Gascoyne. Within this context, the Abra disturbance footprint (including the proposed additional ~81 ha) represents a very small proportion of the remaining vegetation extent. The amendment therefore does not affect a regionally significant remnant in an otherwise extensively cleared landscape.	Not at variance with Principle (e).
(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	The project area is situated on hardpan plains and low rises with ephemeral drainage features, including Five Mile Creek which flows north towards the Ethel River. No permanent wetlands occur within the CPS 10170/1 envelope. The additional clearing for TSF Cell B2, ROM expansions, laydowns and borrow areas has been designed to avoid major drainage lines and riparian zones where practicable. Where minor drainage features are intersected, CPS 10170/1 conditions require maintenance or reinstatement of downstream surface flows and appropriate erosion/sediment controls. On this basis, impacts to	Unlikely to be at variance with Principle (f).

	watercourse-associated vegetation are localised and manageable.	
(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	The Jamindie and Three Rivers land systems are generally resistant to erosion where surface cover is maintained, while parts of the Collier system can be more erosion-prone if disturbed. Much of the proposed additional clearing is located on already disturbed or engineered surfaces (TSF, ROM, WRD, plant and laydowns). Topsoil management, staged clearing, drain design and rehabilitation commitments under the Mining Proposal / Mine Closure Plan and CPS 10170/1 conditions are expected to minimise risks of wind and water erosion, salinisation or secondary land degradation.	Unlikely to be at variance with Principle (g).
(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	The nearest conservation reserve is Collier Range National Park , located approximately 3.8 km east of the Abra mine. The CPS 10170/1 area lies entirely within pastoral lease and mining tenure and does not overlap any Environmentally Sensitive Area or conservation reserve. Given the separation distance, the relatively small scale of the proposed additional clearing, and its confinement to an existing mining hub, the amendment is not expected to materially affect the environmental values or management objectives of Collier Range National Park or any other conservation area.	Not at variance with Principle (h).
(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.	Groundwater in the area occurs at depths typically >40 m below ground level and is generally brackish to saline, with limited beneficial use outside mining operations. Surface water is confined to short-lived flows in ephemeral creeks and sheet flow over hardpan plains following intense rainfall. TSF, WRD and other infrastructure are regulated under Part V of the EP Act and the Rights in Water and Irrigation Act 1914, with design and operational controls to protect water quality. Additional clearing within the existing operational footprint is not expected to significantly alter recharge patterns or introduce new sources of contamination beyond those already assessed and regulated.	Unlikely to be at variance with Principle (i).
(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.	The Project area occurs in a semi-arid region with mean annual rainfall of ~239 mm and high potential evaporation. Surface flows are episodic, typically associated with cyclonic or intense convective rainfall. The proposed amendment represents a modest increase in cleared area within a large, largely undeveloped catchment and will not materially change catchment-scale runoff characteristics. Site design incorporates drains, diversion bunds and containment structures to manage stormwater around TSF, plant and waste facilities. Consequently, the additional clearing is not expected to cause or exacerbate flooding on or off the lease.	Unlikely to be at variance with Principle (j).

Given the small scale of additional clearing relative to regional extents, the absence of TECs/PECs or threatened species, and the location within an established mining hub, environmental offsets are not considered warranted in accordance with the WA Environmental Offsets Policy and Guidelines.

Overall, the assessment concludes that the proposed additional clearing under CPS 10170/1 is unlikely to be at variance with any of the ten clearing principles. Vegetation types affected are widespread and well-represented regionally; no Threatened flora, TECs or high value /critical fauna habitats occur within the amendment area; and the clearing remains confined to an established mining footprint already subject to approved environmental controls. Potential interactions with minor drainage features and erosion-prone soils can be effectively managed through existing permit conditions, the site EMS, and the Mining Proposal's mitigation measures.

7. Clearing Process (Abra Mine Site – CPS 10170/1)

Vegetation clearing for the Abra Base Metals Project will continue to use established, controlled methods consistent with Endurance Mining's Environmental Management System (EMS), the Abra Mine Closure Plan and Clearing Permit CPS 10170/1. The requested increase in authorised clearing to 150 ha does not alter the existing management framework.

7.1 Hierarchy of Controls

Endurance applies the hierarchy of controls in Condition 6 of CPS 10170/1 to all new disturbance and will continue to do so for the additional clearing:

1. Avoidance

- Prioritise new infrastructure within existing cleared or highly modified areas (ROM, TSF, plant, laydowns).
- Avoid riparian zones, defined drainage lines and heritage exclusion areas wherever practicable.
- Integrate environmental and heritage constraints into early mine planning and the Ground Disturbance Permit (GDP) process.

2. Minimisation

- Limit clearing to the minimum footprint required for safe operation (roads, pads, pipelines, drains).
- Micro-site tracks and pads to use natural clearings and previously disturbed ground.
- Stage clearing so areas are opened only shortly before construction or mining.

3. Impact reduction and management

- Apply weed hygiene (clean-downs, targeted weed control around high-risk areas).
- Maintain/reinstate surface water flows using culverts, drains and floodways in line with Condition 8.
- Salvage and stockpile topsoil and suitable growth media for rehabilitation, managing stockpiles to minimise erosion and weeds.
- Use water carts and speed controls to manage dust and protect adjacent vegetation and fauna habitat.

These controls are embedded in the EMS, GDP process and contractor management system and already apply to all clearing under CPS 10170/1.

7.2 Clearing Methodology

All clearing under CPS 10170/1, will be undertaken in accordance with:

- Environmental Protection Act 1986 and Environmental Protection (Clearing of Native Vegetation) Regulations 2004
- Clearing Permit CPS 10170/1 and relevant works approvals/licences

- Endurance Mining’s Internal Clearing Permit / GDP procedure.

Authorisation and pre-clearing setup

- No ground disturbance may occur without an approved GDP endorsed by the Environment Team and relevant managers.
- A surveyor/technician will peg and flag the approved clearing boundary and provide GIS files to operators.
- Environmental/heritage spotters will attend initial works where required to verify avoidance of drainage features, heritage buffers and sensitive vegetation.
- Pre-start/toolbox meetings will brief crews on clearing limits, no-go areas, fauna management, topsoil requirements and drainage considerations.

Clearing techniques

- Use slow, directional clearing into adjacent uncleared vegetation to allow fauna to disperse (Condition 5).
- Use raised blade clearing where practicable to retain soil structure and seed bank.
- Where raised-blade clearing is not suitable, strip topsoil to ~150 mm, stockpile in approved locations and label for future use.
- Stockpile woody debris/logs separately for later use in rehabilitation as habitat and erosion controls.

Post-clearing survey and records

- Surveyors will complete a “pickup” survey to capture the actual disturbance footprint.
- Disturbance polygons will be added to the CPS 10170/1 internal clearing register and used for annual reporting to DWER and DMIRS.
- Cleared areas not brought into use within the permit timeframe will be assessed for interim stabilisation or early rehabilitation.

This approach is consistent with historical clearing under CPS 8234/1, CPS 8558/1 and CPS 10170/1, ensuring continuity and compliance.

7.3 Progressive Rehabilitation and Bowgada Seeding Trial

Although much of the Abra footprint (TSF, ROM, plant and underground infrastructure) will remain operational for most of the mine life, Endurance has commenced progressive rehabilitation, with approximately 30 ha of previously cleared disturbance now subject to rehabilitation works. These works include:

- Recontouring and stabilising redundant pads and tracks to blend with surrounding landforms and reinstate drainage.
- Respreading salvaged topsoil on stable, closure-compatible surfaces.
- Returning woody debris to create microsites, reduce erosion and provide future fauna habitat.

Bowgada (*Acacia ramulosa*) Direct Seeding Trials

To evaluate the feasibility of direct seeding as a long-term rehabilitation technique, Abra is undertaking small-scale Bowgada (*Acacia ramulosa*) direct-seeding trials on selected rehabilitation areas (Airport rehabilitation and an exploration rehabilitation domain). These are trial plots only and are not yet implemented across the full 30 ha or the additional 80 ha of potential future rehabilitation area authorised under the amended clearing permit.

Seed source and collection:

- Seed is sourced from healthy local bowgada stands in the wider Abra landscape, in consultation with Traditional Owners and under appropriate DBCA seed collection licences/guidance.

- Collection locations, dates and batch IDs are recorded; seed is cleaned and stored appropriately before use.

Trial design

- Permanently marked trial plots (e.g. 20 × 20 m reference blocks with 10 × 10 m seeded cores) have been established on prepared rehabilitation surfaces.
- Seed is sown at a calibrated rate of ~40 kg/ha by hand broadcasting and light raking into topsoil, as a trial application only.
- Sowing is timed to coincide with the first substantial wet-season rainfall event to maximise natural germination without artificial watering.

Monitoring and evaluation

- Trial plots are monitored for germination, survival, growth, weed pressure and maintenance effort over the first year using fixed quadrats and photo points.
- Success criteria for density, survival and cost per established plant are defined in a Rehabilitation Trial Plan; outcomes will determine whether and how direct seeding is scaled up for broader application.

Reporting

- Progressive rehabilitation over the 30 ha and the Bowgada seeding trials are documented in rehabilitation and monitoring reports submitted to DMIRS, demonstrating early learning and continual improvement in closure performance

7.4 Integration into Closure Planning

The additional 80 ha of clearing under the CPS 10170/1 amendment will be assigned to existing closure domains (TSF, WRD/ROM, plant and services, landfill, laydowns). For each domain, closure design will:

- incorporate progressive rehabilitation as areas become surplus to operational needs
- specify topsoil re-use and direct-seeding approaches (e.g. Bowgada and other local species) informed by trial results
- deliver final landforms that are safe, stable, non-polluting and compatible with surrounding land uses and environmental values.

Overall, by combining strict avoidance/minimisation, controlled clearing practice and an expanding progressive rehabilitation and seeding program, Endurance considers the additional clearing can be undertaken without materially increasing residual environmental risk and remains consistent with the objectives of CPS 10170/1 and the Abra Mine Closure Plan.

8. Environmental Management

Environmental risks associated with clearing under CPS 10170/1 are managed through Abra's site-wide Environmental Management System (EMS), which is underpinned by Endurance Mining's Environmental Policy and Mining Proposal/Closure Plan commitments. The EMS incorporates procedures and work instructions for ground disturbance, topsoil and landform management, fauna interaction, weed and biosecurity control, spill response and water management.

The proposed increase in authorised clearing to **150 ha** will be undertaken within this existing framework. No new environmental aspects or pathways are introduced by the amendment; rather, the additional disturbance will be managed using controls that are already in place and operating effectively across the site.

8.1 Air Quality

Dust generation from clearing, soil stripping, traffic on unsealed roads and construction activities is managed through a combination of planning and operational controls:

- Supervisors check weather forecasts and on-site wind conditions prior to and during works and can defer high-risk tasks during strong winds.
- Water carts are used on active work areas; stockpile faces and access roads as required.
- Haul roads and major tracks are graded and maintained to limit dust lift-off.
- Works are staged so that large areas of loose, exposed soil are not left open for extended periods.

These measures are designed to keep dust impacts localised and protect surrounding vegetation and workers.

8.2 Land and Soils

Soils within the CPS 10170/1 footprint are shallow and often stony, with hardpan development in places. Once vegetation is removed, they can be vulnerable to erosion and compaction, which in turn affects rehabilitation outcomes.

Key management measures include:

- Daily pre-start inspections of machinery to identify and fix any leaks that could contaminate soil.
- Spill kits and hydrocarbon response materials are positioned in active work areas, with staff trained in immediate containment and clean-up.
- Topsoil removed to a nominal depth of ~150 mm (and deeper growth media where appropriate), with stripping scheduled in dry conditions only.
- Soil stockpiles formed as low windrows or mounds (<2 m height) with irregular surfaces to maintain structure and seed/microbial viability.
- Woody material stockpiled separately for later placement on rehabilitation areas.

These controls maintain soil quality for future rehabilitation and reduce the risk of wind and water erosion.

8.3 Fauna

The Abra mine supports a fauna assemblage typical of arid mulga environments. No Threatened fauna species are known from within the current CPS 10170/1 clearing envelope, but several conservation-significant species are known or predicted from the broader region and suitable habitat occurs locally.

To reduce fauna impacts during clearing and subsequent operations:

- Site speed limits are enforced, with lower limits applied in high-risk areas or during poor visibility.
- Clearing progresses slowly in a single direction to allow fauna to move into adjacent undisturbed habitat, consistent with CPS 10170/1 fauna conditions.
- Pre-clearing checks are undertaken by trained personnel to identify nests, burrows, dens or high-use fauna areas; these are buffered or avoided where practicable.
- Rubbish, food waste and other attractants are managed in accordance with site procedures to avoid attracting wildlife to operational areas.
- All personnel receive fauna awareness training and are instructed not to feed, handle or interfere with wildlife.

These actions minimise direct mortality and help maintain habitat connectivity around disturbed areas.

8.4 Vegetation

The CPS 10170/1 area is dominated by mulga woodland and shrubland, with localised riparian and drainage-line vegetation. Direct impacts from clearing are managed primarily through planning and strict adherence to approved boundaries:

- New infrastructure is sited preferentially within existing disturbed footprints where practicable.
- Disturbance limits are set during mine planning and physically marked in the field; operators are briefed on “no-go” areas before works commence.
- Clearing is undertaken under an approved Ground Disturbance Permit (GDP), which incorporates heritage, drainage and environmental constraints.
- Where feasible, individual mature trees and patches providing shade or habitat value are retained within otherwise disturbed areas.
- Saline pipelines and dewatering infrastructure are managed (freeboard, containment, inspections) to prevent vegetation dieback from spills or leaks.

This approach keeps vegetation loss to the minimum necessary and limits indirect stress on retained communities.

8.5 Weeds and Biosecurity

Weed introduction and spread is a key long-term risk for successful rehabilitation in remote arid environments. To manage this risk:

- All heavy equipment and contractor vehicles are required to arrive on site free of soil, seeds and plant material; spot checks are undertaken on high-risk fleets.
- Vehicle movements are confined to designated roads, tracks and clearing envelopes.
- Seasonal inspections target high-risk areas such as laydowns, borrow pits, TSF construction zones and soil stockpiles.
- Declared or aggressive weeds are treated promptly (e.g. targeted spraying or manual removal) before seed set.
- Topsoil from any known weed-affected areas is identified and, if necessary, managed separately for controlled use.

These measures support the maintenance of a largely weed-free baseline and protect the success of current and future rehabilitation.

8.6 Surface Water and Drainage

Surface water at Abra is ephemeral, with flow events driven by intense rainfall associated with cyclonic systems and thunderstorms. Within the CPS 10170/1 boundary, drainage occurs via minor channels, hardpan run-off and shallow micro-catchments rather than permanent creeks.

Clearing and associated earthworks are managed to:

- Capture and divert off-site run-on around operational areas using constructed drains, bunds and contour banks where necessary.
- Maintain or reinstate natural flow paths downstream of infrastructure where minor drainage lines are intersected (e.g. via culverts, floodways or cross-drainage).
- Design and locate stockpiles, pads and tracks to minimise erosion and sediment transport.
- Avoid undertaking large-scale stripping or batter works during forecast high-intensity rainfall events where practicable.

- Prevent hydrocarbon, saline water or other contaminants from entering surface runoff through bunding, containment and routine inspection.

These controls are consistent with Abra's water management procedures and Part V licensing and ensure that clearing activities do not materially alter downstream hydrology or water quality.

9. Record-Keeping and Reporting

In accordance with Condition 9 of CPS 10170/1, Endurance Mining maintains detailed records for all clearing undertaken under the permit, including:

- location and extent of clearing (GIS polygons and GPS coordinates)
- date(s) of clearing
- area cleared (hectares)
- management actions implemented in relation to Conditions 4–8 (staging, fauna management, avoidance/minimisation measures, weed hygiene and drainage management).

This data is consolidated in the internal clearing register, which tracks cumulative clearing and remaining allowance under each permit:

- Appendix A1 – CPS 8234/1 Clearing Register (Internal)
- Appendix A2 – CPS 10170/1 Clearing Register (Internal).

Consistent with Condition 10 of CPS 10170/1, Abra submits an annual report to the CEO by 31 July each year summarising:

- total area cleared under CPS 10170/1 in the preceding financial year
- mapped locations and purposes of clearing
- confirmation that clearing has been undertaken in accordance with permit conditions and site procedures
- any incidents, non-compliances or corrective actions relevant to vegetation clearing.

To date, clearing under CPS 10170/1 has been undertaken in accordance with permit conditions, and no unauthorised clearing events have been identified. The requested amendment to increase the clearing cap to 150 ha will not alter this record-keeping or reporting obligations; all additional disturbance will be captured in the internal register and reported annually under the existing compliance framework.

10. Conclusion and Key Findings

Endurance Mining Pty Ltd seeks to amend Native Vegetation Clearing Permit CPS 10170/1 to increase the total authorised clearing from 70 ha to 150 ha and to extend the permit duration to five (5) years from the date of issue of the amended permit. The amended authorisation is required to accommodate essential life-of-mine infrastructure, including TSF Cell B2, associated borrow pits, ROM and stockpile expansions, laydowns, landfill development, services corridors and a solar-farm extension, all within the existing CPS 10170/1 permit boundary.

Based on the information presented in this Supporting Report, the following key findings are made:

Existing footprint and clearing history

- Abra has been progressively developed under CPS 8234/1, CPS 8558/1 and CPS 10170/1, together with approved Mining Proposals, Mine Closure Plans and Part V instruments.

- Under CPS 10170/1, approximately 40.8 ha of the current 70 ha authorisation has been cleared or allocated, leaving an effective balance of ~29.2 ha, which is insufficient to support the next phase of mine development.

Scale and location of proposed clearing

- The requested increase to 150 ha provides for approximately 81 ha of additional clearing, plus a modest contingency for final design refinement and survey reconciliation.
- All proposed clearing is located wholly within the existing CPS 10170/1 spatial envelope and almost entirely within, or immediately adjacent to, the established mining hub (TSFs, ROM/WRD, plant, laydowns, roads and landfill). No expansion into new greenfield areas is proposed.

Environmental values and context

- Vegetation within the permit area comprises widespread mulga-dominated shrublands and woodlands typical of the Jamindie, Three Rivers and Collier land systems. Relevant Beard/Shepherd vegetation associations retain >99% of their pre-European extent at State, bioregional, subregional and local scales.
- No Threatened or Priority Ecological Communities, Environmentally Sensitive Areas or mapped conservation reserves occur within the CPS 10170/1 boundary. The nearest conservation estate is Collier Range National Park, located approximately 3.8 km east of the mine.
- Fauna surveys have recorded a typical arid-zone assemblage with no EPBC Act or BC Act listed species identified within the mining hub. Habitats affected by the amendment are predominantly open stony-plain shrublands that are extensive and well represented in the surrounding landscape.

Hydrology, soils and land degradation

- Surface water within the permit area is limited to ephemeral drainage features and sheet flow that are already managed within three engineered catchments (North, Central and Southern) associated with existing infrastructure.
- Additional clearing will occur within these established catchments and will be managed under existing drainage, erosion and sediment-control measures. No new disturbance to major watercourses is proposed, and natural downstream flow paths will be maintained or reinstated where minor drainage lines are intersected.

Management framework and mitigation

- The amendment does not introduce new environmental aspects or pathways. Clearing will continue to be undertaken under Endurance Mining's Environmental Management System, the Ground Disturbance Permit process, and existing CPS 10170/1 conditions relating to avoidance, minimisation, fauna management, weed hygiene, topsoil handling, drainage and record-keeping.
- Progressive rehabilitation is already underway (~30 ha), and direct-seeding trials using locally sourced Bowgada (*Acacia ramulosa*) are being implemented to support future large-scale rehabilitation and closure outcomes.

Consistency with the clearing principles

- An assessment against the ten clearing principles in Schedule 5 of the Environmental Protection Act 1986 concludes that the proposed amendment is **not at variance, or is unlikely to be at variance, with any principle.**
- Vegetation types to be cleared are widespread and not under clearing pressure, no TECs or threatened flora/fauna are known from the amendment area, and potential impacts to drainage, land degradation and conservation areas are localised and manageable within the existing control framework.

Given the above, Endurance Mining considers that increasing the CPS 10170/1 clearing authorisation to 150 ha, and extending the permit term to five (5) years, can be undertaken with a low level of residual environmental risk, is consistent with the Environmental Protection Act 1986 and associated policies and guidelines, and represents an efficient use of an established mining footprint while maintaining protection of regional environmental values.



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Appendix A1

Internal Clearing Register (CPS 8234)



Permit No.	Tenement(s)	clearing from (date)	Purpose	Permit form area (ha)	reconciled survey area(ha)	Quarterly survey pickup of cleared areas filed in...	Balance area remaining
CPS 8234/1		Mine					128.373
1	G52/292	9/26/2019	Access roads, water line corridor	2.000	5.440		122.933
2	G52/292	9/26/2019	Accommodation village	6.400	6.470		116.463
3	G52/292	9/27/2019	Access road to TSF borrow pit	1.000	1.500		114.963
4	G52/292	9/27/2019	Borrow pit in TSF	3.000	2.640		112.323
5	M52/776	9/27/2019	Access roads	2.300	1.130		111.193
6	G52/292 & M52/776	10/27/2019	Bore access road and water line corridor	1.910	3.930		107.263
7	G52/292	10/12/2019	Explosive magazine	1.900	0.410		106.853
8	G52/292	11/14/2019	WWTP spray field and TSF topsoil stockpile	4.000	3.460		103.393
9	M52/776	1/20/2020	Main comms mast	0.070	0.080		103.313
10	G52/292 & M52/776	2/14/2020	Boxcut, ROM and WRD	14.870	14.780		88.533
11	G52/292	3/6/2020	Event pond and roads	1.670	1.420		87.113
12	G52/292	3/15/2020	Extension to event pond material stockpile in past plant footprint	0.650	0.000	See CP 11	87.113
13	G52/292	3/31/2020	Fuel farm area	0.220	0.290		86.823
15	G52/292	3/31/2020	Site roads	0.250	0.410		86.413
16	G52/292	3/31/2020	Turkey nest dam	0.300	0.290		86.123
17	M52/776	3/31/2020	Mine roads	0.500	1.990		84.133
18	L52/194	3/31/2020	Access roads	0.400	0.290		83.843
19	G52/292	3/31/2020	Village landfill site and roads	1.000	1.340		82.503
20	G52/292	3/31/2020	Topsoil stockpile_ROM pad	0.600	0.430		82.073
21	G52/292	3/31/2020	Topsoil stockpile_WRD	1.100	1.030		81.043
22	G52/292	3/31/2020	Site access road	1.300	1.050		79.993
23	G52/292	3/31/2020	Event pond waste stockpile	0.900	0.000	See CP 11	79.993
25	G52/292	10/27/2020	Fencing around village landfill	0.200	0.110		79.883
26	M52/776	11/18/2020	Boxcut cutback	0.280	0.000	See CP10	79.883
27	G52/292	11/26/2020	Mine turkey nest	0.310	0.480		79.403
28	G52/292	11/26/2020	UG mine area	3.850	0.000	See CP29	79.403
29	G52/292	12/8/2020	Process plant area	10.000	10.440		68.963
30	M52/776	2/11/2021	Vent rise access track	0.240	0.280		68.683
31	G42/292	2/14/2021	TSF cell A	30.280	27.080		41.603
32	M52/776	7/2/2021	Drill pads for vent rise geotech holes	0.200	0.200		41.403
33	G52/292	8/4/2021	Solar field	12.370	12.600		28.803

33	G52/292	8/4/2021	Solar field	12.370	12.600		28.803
34	G52/292	8/18/2021	Power station and gas storage	2.300	1.560		27.243
35	G52/292	8/18/2021	Expansion to borrow pit in TSF cell 2	10.000	4.680		22.563
36	G52/292	8/23/2021	Extension of power station area	0.180	0.093		22.470
37	G52/292	9/1/2021	TSF1 extension for perimeter access and drains	4.300	1.300		21.170
38	M52/776; G52/292	10/25/2021	Heritage sites fence line	2.000	2.000		19.170
39	M52/776	10/26/2021	GRES laydown area and future process plant laydown	2.500	1.860		17.310
40	G52/292	11/19/2021	Plant road widening for heavy vehicle access	0.500	0.500		16.810
41	G52/292	11/27/2021	Mine core farm compound	0.400	0.770		16.040
42	G52/292	12/17/2021	Wheel wash area	0.050	0.050		15.990
43	M52/776	1/14/2022	Paste plant area	0.230	0.490		15.500
44	G52/292	4/16/2022	Firebreak for magazine	0.036			15.464
45	M52/776	5/31/2022	Drill pad for UG dewatering	0.016			15.448
46	G52/292; M52/776	6/7/2022	Pipeline corridor to paste plant	1.000			14.448
47	M52/776	6/27/2022	Drill pad for UG dewatering bore	0.100			14.348
48	G52/292	7/25/2022	Evaporation pond overflow drain	0.300	0.130		14.218
49	M52/776	8/26/2022	Redirect tailings line to paste plant	1.000		Not progressed - superseded	13.218
50	G52/776	9/5/2022	Cube truck park and workshop	0.220	0.220		12.998
51	G52/292; M52/776	10/3/2022	Revised tailings line to paste plant. Supersedes #49	1.040	0.970		12.028
52	G52/292; M52/776	11/8/2022	Paste plant pipeline	0.030	0.048		11.980
53	G52/292; M52/776	4/3/2023	Past plant tailings road	0.600			11.380
54	G52/292	4/3/2023	Low grade stockpile	1.030	2.060		9.320
55	G52/292	5/20/2023	Scats stockpile	0.460			8.860
56	G52/292	6/9/2023	TSF Cell A - East Drainage	0.700	0.130		8.730
57	G52/0292	6/9/2023	Borrow pit Cell A	4.900	1.390	See CPS 3	7.340
58	G52/0292	7/5/2023	TSF Construction Laydown	0.950	1.710	See CPS 50	5.630
59	G52/0292	8/12/2023	Tailings Pipe relocation	0.280	0.350	See CPS 41	5.280
60	L52/0194	8/12/2023	Graves Creek Discharge pipeline	0.150	0.150		5.130
61	G52/0292	8/21/2023	Event Pond Extension	1.000			4.130
62	G52/0292	8/25/2025	Transport route	0.070			4.060
63	G52/0292	8/12/2023	Drainage Construction	0.800	2.250		1.810
	G52/0292	Unknown	Tailings storage facility		0.280	See CPS 37	1.530
14	M52/776	5/3/2020	Geotech holes for boxcut	0.100		Approved PO	
24	M52/776	5/12/2020	Geotech holes extension for boxcut	0.280			126.843

Appendix A2

Internal Clearing Register (CPS 10170/1)



Permit No.	Tenement(s)	clearing from [date]	Purpose	Permit form area (ha)	reconciled survey area(ha)	Quarterly survey pickup of cleared areas filed in	Balance area remaining
CPS 10170/1		Mine					70
64	G52/0292	10/6/2023	TSF pipeline corridor	2.100			67.900
65	G52/0292	10/9/2023	ROM Pad Extension	2.100	3.750		64.150
66	G52/0292	10/13/2023	Bore drill pad and Access track	0.637			63.513
	G52/292		Laydown or hardstand			4.89	58.623
	G52/292		Waste dump or overburden stockpile			1.18	57.443
	G52/292		Campsite carpark			4	53.443
	G52/292		Borrow Pit			2.47	50.973
67	G52/292	9/10/2024	TSF Cell B	14.79			36.183
			Borrow Pit			1.53	34.653
68	G52/292; M52/7	7/31/2025	HV cable installation	0.1448	0.1696		34.508
69	G52/292	10/7/2025	New Mine Landfill	2.62			31.888
70	G52/292	10/8/2025	Qube Truck Laydown	2.71			29.178



Appendix B

Proposed Clearing Components (CPS 10170/1) Amendment



Proposed Additional Clearing Components, Indicative (CPS 10170/1 Amendment ~81 ha)

ID	Tenement	Infrastructure / Activity	Description	Area (ha)
1	M52/776	Pipeline Corridor	Minor pipeline/power/water alignment	0.16
2	M52/776	Access Track	Operational access track	0.24
3	G52/292	Carpark	Heavy-vehicle / light-vehicle parking area	0.63
4	G52/292	Stockpile	ROM / LG ore stockpile expansion	0.40
5	G52/292	Stockpile	Additional stockpile pad	0.34
6	G52/292	Landfill	Engineered landfill (initial footprint)	0.75
7	M52/776	Laydown / Hardstand	Equipment and container laydown	0.75
8	G52/292	Workshop Laydown	Workshop / maintenance hardstand	0.76
9	M52/776	Access Track	New operational track	0.77
10	G52/292	Landfill	Secondary landfill support area	0.86
11	G52/292	Track	Internal mine road / track	1.14
12	G52/292	Pipeline Corridor	Pipeline corridor expansion	1.33
13	G52/292	Access Track	Access route upgrade	2.10
14	G52/292	Laydown / Hardstand	Operational hardstand	2.11
15	G52/292	Water Treatment Plant	WTP pad and associated works	2.16
16	G52/292	Access Track	Additional access alignment	2.23
17	M52/776	Laydown	Expanded operational laydown	2.53
18	G52/292	TS Stockpile	Tailings/stockpile area	2.63
19	G52/292	ROM	ROM pad expansion	2.69
20	G52/292	Laydown / Hardstand	General laydown area	2.88
21	G52/292	TS Stockpile	Additional stockpile	3.06
22	G52/292	Landfill	Landfill development area	3.66
23	G52/292	Borrow Pit	Borrow source for TSF/earthworks	3.98
24	G52/292	Borrow Pit	Borrow source (expansion)	4.20
25	G52/292	Borrow Pit	Additional borrow pit	4.30
26	G52/292	Stockpile	Major stockpile footprint	7.03

27	G52/292	ROM	Major ROM extension	7.19
28	M52/776	Solar Farm	Solar farm expansion area	11.76



Appendix C
Proof of ownership





MINING TENEMENT SUMMARY REPORT

GENERAL PURPOSE LEASE 52/292

Status: Live

TENEMENT SUMMARY

Area: 509.05000 HA	Death Reason :
Mark Out : 14/04/2018 17:20:00	Death Date :
Received : 17/04/2018 13:57:43	Commence : 10/07/2018
Term Granted : 21 Years	Expiry : 09/07/2039

CURRENT HOLDER DETAILS

Name and Address

ABRA MINING PTY LIMITED
MCMAHON MINING TITLE SERVICES PTY LTD, C/- MCMAHON MINING TITLE SERVICES PTY LTD, PO BOX
6301, EAST PERTH, WA, 6892, xxxx@mmts.net.au, xxxxxxxxx997

DESCRIPTION

Locality: MULGUL
Datum: DATUM IS SITUATED AT GDA CO-ORDINATES IN ZONE 50 659533 E 7274259 N
Boundary: FROM DATUM GDA CO-ORDINATES IN ZONE 50 THEN TO 659094 E 7274587 N THEN TO 660220 E 7278500 N THEN TO 662000 E 7278500 N THEN TO 662000 E 7275600 N THEN TO 661400 E 7275600 N THEN TO 661400 E 7275100 N THEN TO 662000 E 7275100 N THEN TO 662000 E 7274233 N THEN BACK TO DATUM

Area :	Type	Dealing No	Start Date	Area
	Surveyed		03/08/2018	509.05000 HA
	Granted		10/07/2018	510.00000 HA
	Applied For		14/04/2018	510.00000 HA

SHIRE DETAILS

Shire	Shire No	Start	End	Area
MEEKATHARRA SHIRE	5250	17/04/2018		509.05000 HA

RENT STATUS

Due For Year End 09/07/2026: PAID IN FULL
Due For Year End 09/07/2027: \$13,770.00

EXPENDITURE STATUS

Expended Year End : NO EXPENDITURE REQUIRED
Current Year Commitment :



MINING TENEMENT SUMMARY REPORT

MISCELLANEOUS LICENCE 52/194

Status: Live

TENEMENT SUMMARY

Area: 65.00000 HA	Death Reason :
Mark Out : N/A	Death Date :
Received : 18/05/2018 11:43:49	Commence : 28/09/2018
Term Granted : 21 Years	Expiry : 27/09/2039

CURRENT HOLDER DETAILS

Name and Address

ABRA MINING PTY LIMITED
MCMAHON MINING TITLE SERVICES PTY LTD, C/- MCMAHON MINING TITLE SERVICES PTY LTD, PO BOX
6301, EAST PERTH, WA, 6892, xxxxx@mmts.net.au, xxxxxxxxxxx997

DESCRIPTION

Locality: MULGUL
Datum: Datum situated at GDA co-ordinates in Zone 50 7277200 mN 660500 mE
Boundary: From Datum GDA co-ordinates in Zone 50 Thence 7277200 mN 660600 mE Thence 7276400 mN 660600 mE Thence 7276400 mN 660250 mE Thence 7274450 mN 659100 mE Thence 7274600 mN 658950 mE Thence 7276800 mN 660100 mE Thence 7276600 mN 660500 mE BACK TO DATUM

Area :	Type	Dealing No	Start Date	Area
	Granted		28/09/2018	65.00000 HA
	Applied For		18/05/2018	65.00000 HA

SHIRE DETAILS

Shire	Shire No	Start	End	Area
MEEKATHARRA SHIRE	5250	18/05/2018		65.00000 HA

RENT STATUS

Due For Year End 27/09/2025: PAID IN FULL
Due For Year End 27/09/2026: \$0.00

EXPENDITURE STATUS

Expended Year End : NO EXPENDITURE REQUIRED
Current Year Commitment :



MINING TENEMENT SUMMARY REPORT

MISCELLANEOUS LICENCE 52/210

Status: Live

TENEMENT SUMMARY

Area: 508.87101 HA	Death Reason :
Mark Out : N/A	Death Date :
Received : 12/07/2019 14:03:43	Commence : 25/09/2019
Term Granted : 21 Years	Expiry : 24/09/2040

CURRENT HOLDER DETAILS

Name and Address

ABRA MINING PTY LIMITED
MCMAHON MINING TITLE SERVICES PTY LTD, C/- MCMAHON MINING TITLE SERVICES PTY LTD, PO BOX
6301, EAST PERTH, WA, 6892, xxxxx@mmts.net.au, xxxxxxxx997

DESCRIPTION

Locality: Teano
Datum: Datum situated at GDA coordinates in zone 50
7274283.104mN 859533.345mE
Boundary: GDA Coordinates in Zone 50 from Datum
Thence 7274585.814mN 859094.187mE
Thence 7278500.304mN 860217.377mE
Thence 7278497.477mN 861997.498mE
Thence 7275597.621mN 862000.587mE
Thence 7275599.875mN 861398.865mE
Thence 7275098.901mN 861398.792mE
Thence 7275099.903mN 861998.439mE Thence
7274232.581mN 862001.177mE Back to Datum

Area :	Type	Dealing No	Start Date	Area
	Granted		25/09/2019	508.87101 HA
	Applied For		12/07/2019	509.00000 HA

SHIRE DETAILS

Shire	Shire No	Start	End	Area
MEEKATHARRA SHIRE	5250	12/07/2019		508.87101 HA

RENT STATUS

Due For Year End 24/09/2025: PAID IN FULL
Due For Year End 24/09/2026: \$0.00

EXPENDITURE STATUS

Expended Year End : NO EXPENDITURE REQUIRED



MINING TENEMENT SUMMARY REPORT

MINING LEASE 52/776

Status: Live

TENEMENT SUMMARY

Area: 999.80000 HA	Death Reason :
Mark Out : 13/11/2000 12:56:00	Death Date :
Received : 14/11/2000 10:45:00	Commence : 22/12/2000
Term Granted : 21 Years (Renewed)	Expiry : 21/12/2042

CURRENT HOLDER DETAILS

Name and Address

ABRA MINING PTY LIMITED
MCMAHON MINING TITLE SERVICES PTY LTD, C/- MCMAHON MINING TITLE SERVICES PTY LTD, PO BOX
6301, EAST PERTH, WA, 6892, xxxx@mmts.net.au, xxxxxxxxxxxx997

DESCRIPTION

Locality: ABRA (ETHEL CREEK)
Datum: DATUM SITUATED ABOUT 6800 METRES BEARING
90 DEGREES FROM TRIG STATION TMA
Boundary: THENCE: 2000 METRES BEARING 360 DEGREES
5000 METRES BEARING 90 DEGREES 2000 METRES
BEARING 180 DEGREES 5000 METRES BEARING
270 DEGREES BACK TO DATUM. BEING IDENTICAL
TO LATE MINING LEASE 52/85 AND BEING A PART
SECTION 67 CONVERSION OF EXPLORATION
LICENCE 52/1455

Area :	Type	Dealing No	Start Date	Area
	Surveyed		04/10/2007	999.80000 HA
	Granted		22/12/2000	1,000.00000 HA
	Applied For		13/11/2000	1,000.00000 HA

SHIRE DETAILS

Shire	Shire No	Start	End	Area
MEEKATHARRA SHIRE	5250	13/11/2000		999.80000 HA

RENT STATUS

Due For Year End 21/12/2025: PAID IN FULL
Due For Year End 21/12/2026: \$29,300.00

EXPENDITURE STATUS

Expended Year End 21/12/2024: EXPENDED IN FULL
Current Year Commitment : \$100,000.00

Appendix D

Protected Matters - MNES layers - November 26th, 2025



Appendix E

Stantec. (2018). *Abra flora, fauna and vegetation survey. IBSA-2018-0056 – “Detailed flora and vegetation survey, Level 1 fauna survey conducted for Galena Mining Ltd, for the Mining Lease M52/766 Exploration Lease E52/1455.”*



Western Australia

Oaths, Affidavits and Statutory Declarations Act 2005

Statutory Declaration

I, Craig Fawcett (name of person making declaration)
of Endurance Mining Pty Ltd (address of person making declaration)
occupation Executive General Manager (occupation of person making declaration)

sincerely declare as follows:

Gavin Lee, Sustainability Manager, has the delegated authority to lodge permit applications + amendment on behalf of Endurance Mining Pty Ltd.

(insert above the content of the statutory declaration; use numbered paragraphs if content is long)

This declaration is true and I know that it is an offence to make a declaration knowing that it is false in a material particular.

This declaration is made under the *Oaths, Affidavits and Statutory Declarations Act 2005*.

At Abra Mine Site (place)
On 19th August 2025 (date)
By [Signature] {Signature of person making the declaration}

In the presence of

[Signature] {Signature of authorised witness}
Dean Jarvis {Name of authorised witness}
Mining Engineer {Qualification as such a witness}

Appendix F

List of GIS data supplied (CPS10170_Amendment_Shapefiles_20251128.zip)



Shapefile name	Description	Source
1_SurveyDetails_py.shp	Overall biological survey extent polygon	Stantec (2018/2019 surveys)
2A_SampleSites_pt.shp	Flora / fauna sample site locations (points)	Stantec
2C_VegetationMapping_py.shp	Vegetation community mapping polygons	Stantec
2D_VegetationCondition_py.shp	Vegetation condition (Keighery scale) polygons	Stantec
2F_FaunaHabitat_py.shp	Mapped terrestrial fauna habitat types	Stantec
Clearing_Areas_20251101.shp	Existing cleared disturbance as at 1 Nov 2025	Endurance Mining
CPS_10170_1_Boundary.shp	CPS 10170/1 clearing permit boundary	Endurance Mining
Heritage_FenceLine_20251128.shp	Heritage exclusion fence alignment	Endurance Mining / Terra Rosa
Heritage_Sites_20251101.shp	Registered / survey heritage sites (points/polygons)	Endurance Mining / Terra Rosa
Indicative_Clearing_Areas_20251128.shp	Proposed additional clearing areas for CPS 10170/1 amendment	Endurance Mining
Rehabilitated_Airstrip_20251101.shp	Airstrip rehabilitation areas	Endurance Mining
Rehabilitated_Areas_20251101.shp	Other mine rehabilitation areas within CPS 10170/1	Endurance Mining



Appendix G

Authority for Gavin Lee (Endurance Mining Pty Ltd) to Act on Behalf of Abra Mining Pty Limited



Western Australia

Oaths, Affidavits and Statutory Declarations Act 2005

Statutory Declaration

I, Craig Fawcett (name of person making declaration)
of Endurance Mining Pty Ltd (address of person making declaration)
occupation Executive General Manager (occupation of person making declaration)

sincerely declare as follows:

Gavin Lee, Sustainability Manager, has the delegated authority to lodge permit applications + amendment on behalf of Endurance Mining Pty Ltd.

(insert above the content of the statutory declaration; use numbered paragraphs if content is long)

This declaration is true and I know that it is an offence to make a declaration knowing that it is false in a material particular.

This declaration is made under the *Oaths, Affidavits and Statutory Declarations Act 2005*.

At Abra Mine Site (place)
On 19th August 2025 (date)
By [Signature] (Signature of person making the declaration)

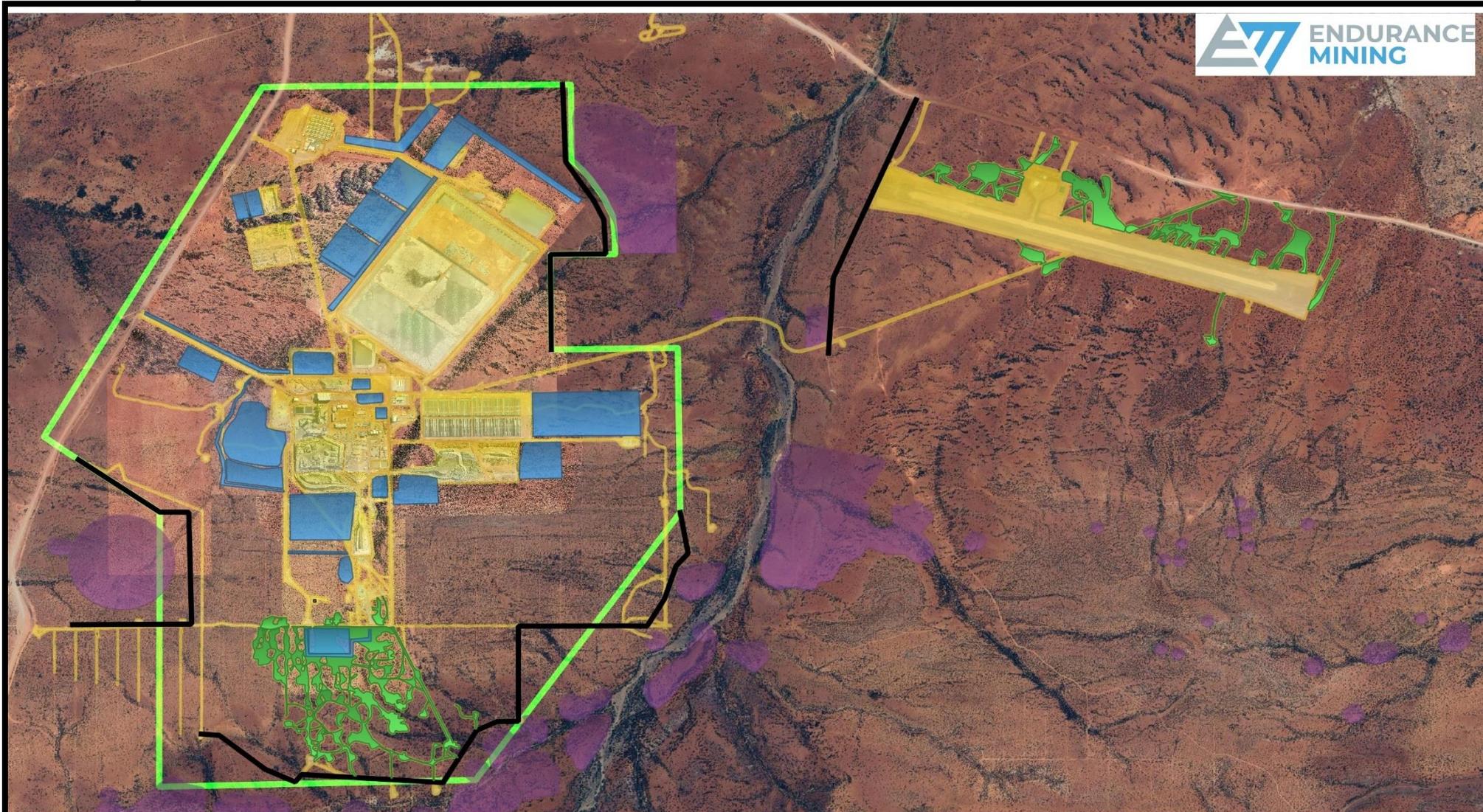
In the presence of

[Signature] (Signature of authorised witness)
Dean Jarvis (Name of authorised witness)
Mining Engineer (Qualification as such a witness)

Appendix H

Map of Existing and Proposed Clearing, Heritage, Site and Clearing boundary

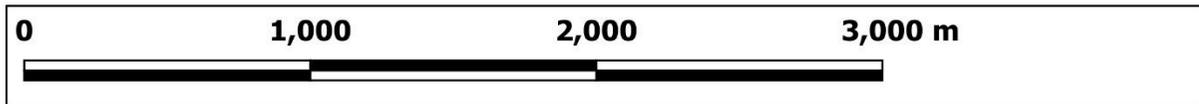




**Abra Base Metals Project – Existing and
Proposed Clearing within CPS 10170/1
(2025)**

Date: 26 November 2025
 Author: Lance Thomas Ridley
 Scale: 1:18,743.658596
 Projection: GDA 1994 MGA Zone 50

- CPS10170_Proposed_Clearing_Areas_2025
- RehabilitatedAreas_20251101
- Heritage Fence Line
- Clearing Areas 20251101
- Heritage_sites
- CPS_10170_1 Boundary





END OF REPORT

