



Earl Grey Lithium Project Life of Mine Updates to supporting information

Covalent Lithium

Report

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We acknowledge the Traditional Custodians of Country throughout Australia and their connection to land, sea and community.

We pay our respect to Elders past, present and emerging and in the spirit of reconciliation we commit to working together for our shared future where every person is respected, valued and has strong sense of belonging.

Caring for Country The Journey of JBS&G
Artist: Patrick Caruso, Eastern Arrernte

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Abbreviations

Term	Definition
CPS	Clearing permit system
Cth	Commonwealth
DCCEEW	Department of Climate Change, Energy, the Environment, Water (Cth)
ERD	Environmental Review Document
EPA	Environmental Protection Authority (WA)
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EPBC Act	<i>Environment Protection Biodiversity Conservation Act 1999 (Cth)</i>
ha	hectares
LoM	Life of mine
MS 1199	Ministerial Statement 1199, issued under the EP Act for the current mining activities

1. Introduction

Covalent Lithium Pty Ltd (the Proponent) referred the Earl Grey Lithium Project Life of Mine Proposal (LoM) to the Environmental Protection Authority (EPA) and Department of Climate Change, Energy, the Environment and Water (DCCEEW) for assessment in 2023.

The proposal is currently under separate assessment by EPA and DCCEEW:

- “Assess- Additional Assessment Information” under the *Environmental Protection Act 1986* (EP Act) by EPA, with a current Request for further information (2 February 2024) in process; and
- “Preliminary Documentation” under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

As part of the proponent’s ongoing site studies, additional information is now available to support the completion of the assessment and close out the Request for Further Information (RFI) from DWER. This addendum provides additional information to support the responses provided in the RFI table.

1.1 Additional supporting information

The additional information relates to the following key factors:

- Flora and Vegetation
 - updated impact calculations for priority species based on additional survey effort and revision of multiple year datasets; this information is provided as a separate document “Revised Impact Assessment for Conservation Significant Flora, JBS&G 2024” (Revised Impact Assessment); and
 - flora avoidance areas; addressed in Section 2 and also within the Revised Impact Assessment.
- Terrestrial Fauna
 - Updated mallee fowl mound impact data (data previously provided was missing some database points, due to spatial data error in data supply).

Further information is also provided in support of cumulative impact assessment, the January 2025 bushfire impact; and Aboriginal Cultural Heritage.

2. Flora and Vegetation

2.1 Updated information for Section 6.6.2 of ERD Vegetation

The following information supersedes the information provided in the ERD Section 6.6.2.

Regional Vegetation Associations

The Proposal is located in the Southern Cross subregion of the Coolgardie Bioregion, based on the Interim Biogeographic Regionalisation for Australia (IBRA) classifications (Figure 15). Two regional vegetation system associations mapped by Beard (1980) are represented within the Development Envelope, being 'Forrestania 511' and 'Skeleton Rock 519'. Forrestania 511 is characterised by salmon gum and morrel medium woodland. Skeleton Rock 519 is characterised by shrublands, and mallee scrub dominated by *Eucalyptus eremophila*.

The Proposal is located within a region with largely intact native vegetated, with > 80,000 ha of native vegetation occurring within a 10 km radius of the Proposal (Figure 14). Clearing of the vegetation associations to date has been limited, with a notable extent of these vegetation associations protected within conservation reserves.

Table 2-1: Extent of Regional Vegetation Associations (Table 10 ERD)

Vegetation Association	area in Southern Cross Subregion (pre-European extent, ha)	% Cleared	% in Conservation reserves
Forrestania 511	> 150,000	< 0.5 %	10 %
Skeleton Rock 519	> 55,000	1 %	28 %

(Data source: Government of Western Australia 2019)

Priority Ecological Community

The Proposal coincides with part of the mapped area of a DBCA-classified 'Priority' ecological community named 'Ironcap Hills vegetation complexes (Mt Holland, Middle, North and South Ironcap Hills, Digger Rock and Hatter Hill) (banded ironstone formation)' (herein referred to as the 'Ironcap Hills PEC'), with a mapped extent of > 11,800 ha, as shown in Figure 2.1.

The DBCA (2022b) identifies the Ironcap Hills PEC as a 'Priority 3' ecological community (DBCA-P3), with the key threats being vegetation clearing associated with mining (including exploration) and agricultural grazing. The DBCA (2022b) describes the Ironcap Hills PEC as vegetation assemblages on skeletal soils derived from banded ironstone and massive laterites on deeper soils derived from greenstone or decomposing laterites and includes species rich shrublands or mallee shrublands containing local endemics.

Whilst noting the area of the Proposal coincides with the mapped area of the Ironcap Hills PEC, the vegetation within the area of the Proposal is more consistent with Eucalyptus woodland characteristic of flat areas of the Bioregion. The majority of the Development Envelope is situated on sandy, sandy clay or clay loam flats and gentle slopes supporting Eucalyptus mallee woodlands over Melaleuca shrublands, interspersed with dense Allocasuarina scrub. No vegetation units associated with banded ironstone formation geology occur within the Development Envelope.

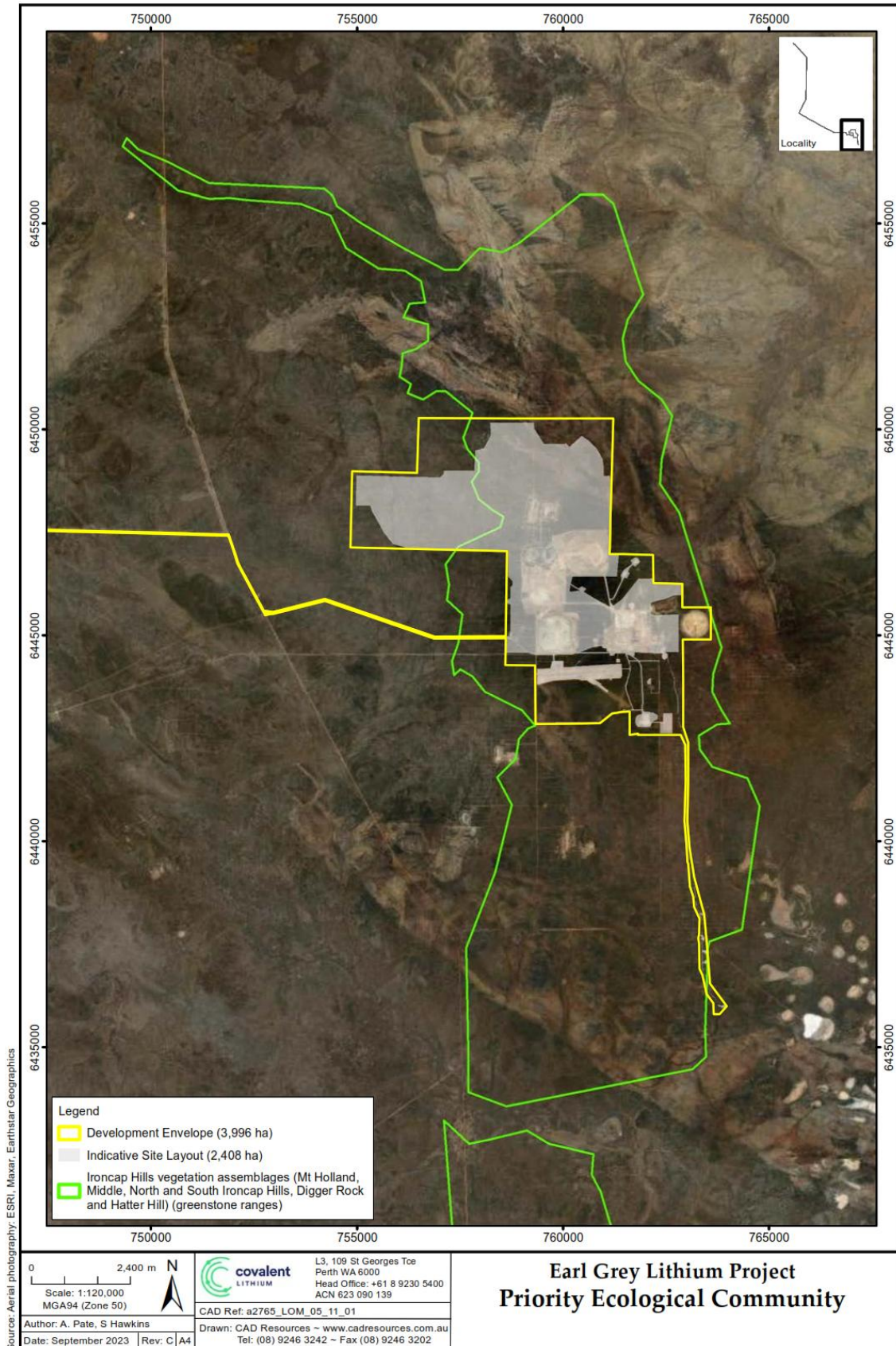


Figure 2-1: Priority Ecological Community

Table 2-2: Priority Ecological Community Extent within the Development Envelope (Table 22 ERD).

priority ecological community	REGIONAL EXTENT (Mapped Area, ha)	Development Envelope (3,996 ha)	PROJECT Disturbance Footprint (848 ha)	PROPOSAL Disturbance Footprint (2,408 ha)
Ironcap Hills PEC (DBCA-P3)	> 11,800 ha	2,853 ha	758 ha	1,829 ha

Note: Calculation values for the Ironcap Hills PEC within the Development Envelope, Project and the Proposal does not exclude areas of previously cleared / disturbed lands as identified in Figure 11 [Refer to Figure 5-1]

Two studies of the Ironcap Hills PEC have been completed by Gibson (2004) and Thompson & Allen (2013), with the more recent study focused on the Mt Holland area in the vicinity of the Proposal.

The majority of the Survey Area is situated within the buffer of the Ironcap Hills Vegetation assemblages (Mt Holland, Middle, North and South Ironcap Hills, Digger Rock and Hatter Hill) (banded ironstone), Priority 3 ecological community. Matisse (2018b) conducted a statistical comparison between the vegetation units in the Development Envelope (for the Project) and the Ironcap Hills PEC and determined a notable dissimilarity, primarily due to the different suite of flora taxa and the differences in species assemblage.

Further analysis of the similarity between vegetation communities defined within the Survey Area and those defined by Gibson (2004a) from survey quadrats established on Middle and South Ironcap, Hatter Hill and Digger Rock, and which are the basis for the vegetation types which are associated with the Ironcap Hills PEC, did not demonstrate a statistically significant level of similarity (Matisse 2023c). Therefore while the Development Envelope is situated within the Ironcaps Hills PEC, the vegetation within the Development Envelope is not statistically representative of the vegetation communities which define the PEC.

Vegetation Units

The majority of the Proposal is situated on sandy, sandy clay or clay loam flats and gentle slopes supporting *Eucalyptus* mallee woodlands over *Melaleuca* shrublands. The western portion of the Matisse (2023c) Survey Area was dominated by the *Allocasuarina acutivalvis/Allocasuarina spinosissima/Eucalyptus burracoppinensis* shrublands and low woodlands on sandy soils. The central and eastern portions of the Survey Area supported mixed Eucalypt mallee woodlands on sandy clay to clay soils. Both historical and the western portion of the Survey Area was dominated by the *Allocasuarina acutivalvis/Allocasuarina spinosissima/Eucalyptus burracoppinensis* shrublands and low woodlands on sandy soils. The central and eastern portions of the Survey Area supported mixed Eucalypt mallee woodlands on sandy clay to clay soils. Both historical and contemporary survey data supports them being common vegetation types within the bioregion.

A total of 33 vegetation units have been defined by the biological surveys within the Survey Area, of which 27 vegetation units occur within the Development Envelope (with 6 vegetation units occurring only outside of the Development Envelope). Of the 27 vegetation units occurring within the Development Envelope, 24 vegetation units coincide with the Disturbance Footprint for the Proposal. Table 13 identifies the mapped vegetation units of the Survey Area, and the area of each vegetation unit coinciding with the Disturbance Footprint for both the Project and the Proposal¹.

As described by Matisse (2023c), vegetation unit W28 is a 'new' vegetation unit not previously considered in the environmental assessment of the Project. This community was a variation on the mixed eucalypt woodland with a mixed *Melaleuca* understorey. The species present were, like the other mixed eucalypt woodlands

¹ Note values may differ from Covalent (2019, 2022a) due to more recent biological survey data.

mapped, common in the bioregion. Mattiske (2023c) identifies that on review of the vegetation units it was considered appropriate to merge vegetation unit MW8 into the vegetation units MW6 and MW7.

One vegetation community, located in the northern part of the Survey Area was of conservation significance. This was a patch of S3 vegetation. This vegetation community contains the Threatened taxon *Banksia dolichostyla*.

The Development Envelope includes large cleared / disturbed areas from previous works associated with the previously abandoned Mt Holland Mine Site. The majority of these areas are completely cleared (devoid of vegetation), however, parts of these areas may still contain small residual patches/individuals in degraded condition, which whilst still comprising some native flora taxa have been deemed as functionally cleared.

As noted in Covalent (2019, 2022a), the biological surveys identified vegetation units H1 (4 ha) and W17 (3 ha) as potentially restricted based upon the current survey information. The more recent biological surveys by Mattiske (2023c) for the Proposal has identified additional restricted vegetation units W23 (1 ha) and W23b (4 ha). The Disturbance Footprint for the Proposal does not coincide with any of these restricted vegetation units.

Based on the Indicate Site layout for the Proposal, the environmental impacts to the following vegetation units may be considered significant as a proportion of the mapped Survey Area:

Vegetation Units -

- W19 (54 % of total 69 ha mapped area)
- W12 (59 % of total 316 ha mapped area)
- W11 (62 % of total 692 ha mapped area)
- MW6 (71 % of total 112 ha mapped area)
- W25 (79 % of total 63 ha mapped area)
- W28 (87 % of total 52 ha mapped area)
- MW7 (98 % of total 63 ha mapped area).

Based upon the above, whilst the proportional impact to vegetation units W11 and W12 are high (> 50 %) the impact of the Proposal may not be significant in consideration of the large extent of each vegetation unit that will remain (> 100 ha). For the remaining vegetation units W19, MW6, W25, W28 and MW7 that will have a limited extent after implementation of the Proposal (1 ha to 32 ha remaining), the environmental impact may be considered significant.

Overall, Mattiske (2023c) note that, with the exception of the S3 vegetation community, the vegetation present which comprised mallee woodlands and shrublands, was consistent with both the pre-European vegetation association which intersects the Survey Area, and with Beards (1990) description of the vegetation of the Roe Botanical District, within which the Survey Area is situated. The mallee woodlands present, are common across the district, and the species present are typical (Beard 1972, 1990). Whilst superficially, based on the areas of each vegetation community mapped across the Project, impacts to some vegetation communities may appear be high, in the context of the regional distribution of these vegetation types, the impacts are minor, representing <0.1% on a regional pre-European vegetation association scale.

Further biological surveys beyond the current Survey Area may be expected to record a greater extent of each of the above vegetation units; which in turn would reduce the proportional impact of the Proposal to each of the above vegetation units. This expectation is supported by the mapped boundary of several of these vegetation units occurring against the Survey Area boundary (with the vegetation units likely to extend beyond that boundary line) and by the progressive biological surveys since 2017 continuing to record increases in the mapped extent of the majority of vegetation units as the Survey Area has increased. Whilst noting this expectation, an increase in all of the vegetation units is not guaranteed and the extent of any increase cannot

be predicted; further biological survey beyond the Survey Area would be necessary to confirm any increase in the mapped extent of these vegetation units.

Table 2-3: Vegetation Units

Note: All values rounded to nearest 1 ha / 1 % value. Error in total of values may occur due to rounding of individual values.

VEGETATION UNIT CODE & DESCRIPTION	FIELD SURVEY RECORDS (AREA ha)			
	SURVEY AREA (6,777 ha)	DEVELOPMENT ENVELOPE (3,996 HA)	PROJECT DISTURBANCE FOOTPRINT (848 ha) (% of Survey Area) [+0–10m, +10–50 m]	PROPOSAL DISTURBANCE FOOTPRINT (2,408 ha) (% of Survey Area) [+0–10m, +10–50m]
WOODLANDS				
W4: <i>Eucalyptus eremophila</i> , <i>Eucalyptus salubris</i> low mallee woodland over <i>Exocarpos aphyllus</i> , <i>Melaleuca eleuterostachya</i> , <i>Melaleuca sparsiflora</i> mid sparse shrubland over <i>Acacia tetraptera</i> , <i>Acacia hystrix</i> ssp. <i>hystrix</i> low sparse shrubland on orange-brown sandy clay soils with ironstone or quartz pebbles on flats and slopes.	366	95	1 (<1%) [2, 11]	70 (19%) [4, 16]
W5: <i>Eucalyptus burracoppinensis</i> , <i>Allocasuarina acutivalvis</i> low open mallee woodland over <i>Melaleuca cordata</i> , <i>Hakea erecta</i> , <i>Thryptomene kochii</i> mid sparse shrubland over <i>Drummondita hassellii</i> , <i>Hibbertia rostellata</i> , <i>Hibbertia stowardii</i> , <i>Euryomyrtus maidenii</i> low sparse shrubland on gravelly orange-brown clayey sand soils on flats and slopes.	272	45	3 (1%) [2, 9]	6 (2%) [2, 10]
W6: <i>Eucalyptus burracoppinensis</i> , <i>Allocasuarina acutivalvis</i> , <i>Allocasuarina spinosissima</i> low open mallee woodland over <i>Hakea erecta</i> , <i>Petrophile stricta</i> , <i>Banksia laevigata</i> ssp. <i>fuscolutea</i> mid sparse shrubland over <i>Drummondita hassellii</i> , <i>Micromyrtus erichsenii</i> , <i>Melaleuca cordata</i> low sparse shrubland on yellow brown sandy soils on flats.	204	9	3 (2%) [4, 16]	3 (2%) [4, 16]
W7: Burnt <i>Eucalyptus</i> sp. (<i>E. flocktoniae</i> ssp. <i>flocktoniae</i> , <i>E. prolixa</i> , <i>E. salmonophloia</i> , <i>E. eremophila</i> , <i>E. capillosa</i> , <i>E. salubris</i>) low open woodland over <i>Melaleuca pauperiflora</i> ssp. <i>pauperiflora</i> mid sparse shrubland over <i>Acacia erinacea</i> , <i>Santalum acuminatum</i> , <i>Daviesia argillacea</i> low sparse shrubland on orange-brown sandy clay soils on flats.	87	0	0 (0%) [0, 0]	0 (0%) [0, 0]
W8: <i>Eucalyptus salmonophloia</i> , <i>Eucalyptus prolixa</i> , <i>Eucalyptus urna</i> mid mallee woodland over <i>Santalum acuminatum</i> , <i>Melaleuca eleuterostachya</i> mid sparse shrubland over <i>Daviesia argillacea</i> , <i>Acacia hemiteles</i> , <i>Acacia merrallii</i> low sparse shrubland on red brown sandy clay flats.	259	14	< 1 (<1%) [<1, <1]	10 (4%) [<1, 3]
W9: <i>Eucalyptus</i> sp. (<i>E. urna</i> , <i>E. salubris</i> , <i>E. prolixa</i> , <i>E. flocktoniae</i> ssp. <i>flocktoniae</i>) low open woodland over <i>Daviesia argillacea</i> , <i>Melaleuca pauperiflora</i> ssp. <i>pauperiflora</i> , <i>Dodonaea stenozyga</i> mid sparse shrubland over <i>Acacia merrallii</i> , <i>Grevillea acuaria</i> , <i>Daviesia argillacea</i> low sparse shrubland.	575	285	45 (8%) [17, 71]	62 (11%) [18, 75]
W10: <i>Eucalyptus</i> sp. (<i>E. flocktoniae</i> ssp. <i>flocktoniae</i> , <i>E. urna</i> , <i>E. cylindriflora</i> , <i>E. rigidula</i>) low open woodland over <i>Melaleuca pauperiflora</i> ssp. <i>pauperiflora</i> mid open shrubland over <i>Acacia merrallii</i> , <i>Daviesia scoparia</i> low sparse shrubland on red clay soils on flats.	55	32	0 (0%) [4, 16]	6 (11%) [4, 16]
W11: <i>Eucalyptus flocktoniae</i> ssp. <i>flocktoniae</i> , <i>Eucalyptus eremophila</i> , <i>Eucalyptus rigidula</i> low mallee woodland over <i>Melaleuca lateriflora</i> , <i>Melaleuca depauperata</i> , <i>Exocarpos aphyllus</i> mid sparse shrubland over <i>Melaleuca</i> sp. Broombrush complex, <i>Grevillea acuaria</i> , <i>Acacia hystrix</i> ssp. <i>hystrix</i> low sparse shrubland on orange-brown clay soils on flats.	692	497	113 (16%) [12, 35]	429 (62%) [3, 12]
W12: <i>Eucalyptus eremophila</i> , <i>Eucalyptus cylindriflora</i> low open mallee woodland over <i>Melaleuca lateriflora</i> , <i>Melaleuca eleuterostachya</i> , <i>Melaleuca acuminata</i> mid sparse shrubland over <i>Grevillea acuaria</i> , <i>Daviesia argillacea</i> low sparse shrubland on yellow brown to red brown sandy clay soils on flats.	316	248	15 (5%) [4, 15]	185 (59%) [6, 23]
W13: <i>Eucalyptus rigidula</i> low open mallee woodland over <i>Allocasuarina spinosissima</i> , <i>Santalum acuminatum</i> , <i>Hakea erecta</i> mid sparse shrubland over <i>Micromyrtus erichsenii</i> , <i>Persoonia coriacea</i> , <i>Thryptomene kochii</i> low sparse shrubland on yellow brown to orange-brown clayey sands on flats and slopes.	428	325	75 (18%) [12, 45]	121 (28%) [11, 46]
W14: Burnt <i>Eucalyptus salmonophloia</i> mid open woodland over <i>Santalum acuminatum</i> mid sparse shrubland over <i>Acacia hemiteles</i> , <i>Senna artemisioides</i> ssp. <i>filifolia</i> low sparse shrubland on orange-brown clay spoils on flats.	61	19	0 (0%) [3, 16]	0 (0%) [3, 16]
W15: Burnt <i>Allocasuarina acutivalvis</i> , <i>Eucalyptus</i> sp. (<i>E. cylindriflora</i> , <i>E. eremophila</i> , <i>E. gracilis</i> , <i>E. rigidula</i> , <i>E. burracoppinensis</i>) low open mallee woodland over <i>Santalum acuminatum</i> mid sparse shrubland over <i>Persoonia coriacea</i> , <i>Daviesia argillacea</i> , <i>Acacia hemiteles</i> low sparse shrubland.	184	14	0 (0%) [1, 7]	7 (4%) [1, 7]
W16: Burnt <i>Eucalyptus</i> sp. (<i>E. burracoppinensis</i> , <i>E. eremophila</i> , <i>E. sp.</i>) low open mallee woodland over <i>Melaleuca eleuterostachya</i> , <i>Santalum acuminatum</i> , <i>Acacia assimilis</i> mid sparse shrubland over <i>Dampiera tenuicaulis</i> var. <i>curvula</i> , <i>Glischrocaryon aureum</i> , <i>Dampiera eriocephala</i> low sparse forbland on orange red gravelly sandy loam soils on flats.	310	225	0 (0%) [0, 0]	154 (50%) [2, 6]

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W17: <i>Eucalyptus capillosa</i> low open mallee woodland over <i>Hakea pendens</i> , <i>Hakea subsulcata</i> , <i>Santalum acuminatum</i> mid sparse shrubland over <i>Westringia cephalantha</i> , <i>Rinzia sessilis</i> , <i>Hibbertia ancistrophylla</i> low sparse shrubland on lateritic red brown clayey sand on slopes and ridges.	3	3	0 (0%) [0, <0]	0 (0%) [0, <0]
W18: <i>Eucalyptus rigidula</i> low open mallee woodland over <i>Melaleuca</i> sp. Broombrush complex, <i>Hakea erecta</i> , <i>Allocasuarina spinosissima</i> mid sparse shrubland over <i>Hibbertia gracilipes</i> , <i>Drummondita hassellii</i> , <i>Cyathostemon heterantherus</i> low sparse shrubland on yellow brown sandy soils on flats.	114	21	< 1 (<1%) [2, 8]	17 (15%) [2, 9]
W19: <i>Eucalyptus prolixa</i> low open mallee woodland over <i>Santalum acuminatum</i> , <i>Daviesia argillacea</i> mid sparse shrubland over <i>Acacia merrallii</i> , <i>Grevillea acuarua</i> low sparse shrubland on orange-red brown sandy clay soils on flats.	69	54	19 (28%) [2, 5]	37 (54%) [2, 6]
W20: Burnt <i>Eucalyptus salmonophloia</i> , <i>Eucalyptus urna</i> , <i>Eucalyptus tenuis</i> mid open mallee woodland over <i>Melaleuca pauperiflora</i> ssp. <i>pauperiflora</i> mid sparse shrubland over <i>Daviesia argillacea</i> , <i>Acacia deficiens</i> , <i>Daviesia grahamii</i> low sparse shrubland on red brown clay soils on flats.	48	17	6 (12%) [1, 2]	7 (14%) [1, 2]
W21: <i>Eucalyptus eremophila</i> low open mallee woodland over <i>Melaleuca</i> sp. Broombrush complex mid open shrubland over <i>Acacia acanthoclada</i> ssp. <i>acanthoclada</i> , <i>Dampiera sacculata</i> , <i>Lepidosperma</i> sp. low sparse shrubland on grey-brown clayey sand soils on flats and slopes.	21	7	< 1 (<1%) [1, 3]	< 1 (< 1%) [1, 3]
W22: <i>Eucalyptus eremophila</i> low open mallee woodland over <i>Melaleuca</i> sp. Broombrush complex, <i>Grevillea oncogyne</i> , <i>Melaleuca eleuterostachya</i> mid sparse shrubland over <i>Westringia cephalantha</i> , <i>Melaleuca condylosa</i> , <i>Phebalium obovatum</i> low sparse shrubland on slightly gravelly yellow-orange-brown clay soils on flats and slopes.	134	113	< 1 (<1%) [1, 3]	55 (41%) [1, 5]
W23: <i>Eucalyptus longicornis</i> mid open woodland over <i>Eremophila ionantha</i> , <i>Dodonaea stenozyga</i> , <i>Rhagodia preissii</i> ssp. <i>preissii</i> low sparse shrubland on brown sandy clay on mid-lower slopes.	1	0	0 (0%) [0, 0]	0 (0%) [0, 0]
W23b: Burnt <i>Eucalyptus</i> ? <i>longicornis</i> , <i>Eucalyptus flocktoniae</i> ssp. <i>flocktoniae</i> mid open woodland over <i>Eremophila densiflora</i> ssp. <i>pubiflora</i> , <i>Acacia</i> ? <i>pachypoda</i> , <i>Melaleuca acuminata</i> ssp. <i>acuminata</i> low sparse shrubland on brown sandy clay on mid-lower slopes.	4	0	0 (0%) [0, 0]	0 (0%) [0, 0]
W24: Burnt <i>Eucalyptus flocktoniae</i> ssp. <i>flocktoniae</i> low open mallee woodland over <i>Microcorys obovata</i> , <i>Daviesia aphylla</i> , <i>Grevillea huegelii</i> low sparse shrubland on light brown – yellow sandy clay on lower slopes.	19	0	0 (0%) [0, 0]	0 (0%) [0, 0]
W25: <i>Eucalyptus eremophila</i> mid mallee woodland over <i>Melaleuca</i> sp. Broombush complex, <i>Melaleuca eleuterostachya</i> , <i>Melaleuca lateriflora</i> mid open shrubland over <i>Darwinia</i> sp. Karonie, <i>Lepidosperma</i> sp., <i>Persoonia coriacea</i> low sparse shrubland on orange-brown fine sandy loam in drainage areas.	26	21	0 (0%) [0, 0]	21 (79%) [<1, 1]
W26: <i>Eucalyptus capillosa</i> , <i>Callitris columellaris</i> low open woodland over <i>Melaleuca condylosa</i> , <i>Melaleuca sparsiflora</i> , low open shrubland on light brown sandy clay with variable quartzite rocks and laterite outcropping.	40	40	0 (0%) [0, 0]	18 (46%) [<1, 2]
W28: <i>Eucalyptus platycorys</i> , <i>Eucalyptus rigidula</i> and <i>Eucalyptus eremophila</i> mid open woodland over <i>Daviesia aphylla</i> , <i>Melaleuca johnsonii</i> and <i>Grevillea oncogyne</i> mid sparse shrubland over <i>Melaleuca lateriflora</i> , <i>Melaleuca spicigera</i> low open sparse shrubland on clayey sands on flats and gentle slopes.	52	52	0 (0%) [0, 0]	46 (87%) [<1, 2]
MALLEE WOODLAND				
MW6: <i>Allocasuarina spinosissima</i> , <i>Eucalyptus burracoppinensis</i> mid open mallee woodland over <i>Melaleuca laxiflora</i> , <i>Acacia acuminata</i> , <i>Thryptomene kochii</i> mid open shrubland over <i>Drummondita hassellii</i> , <i>Microcybe ambigua</i> low sparse shrubland on grey-brown to orange-brown clay to clayey sand on flats.	112	83	46 (42%) [1, 4]	80 (71%) [1, 4]
MW7: <i>Callitris canescens</i> , <i>Allocasuarina acutivalvis</i> low open woodland over <i>Melaleuca</i> sp. Broombrush complex, <i>Acacia acuminata</i> , <i>Allocasuarina spinosissima</i> mid sparse shrubland on orange-brown clay soils on flats and slopes.	63	63	40 (63%) [3, 9]	62 (98%) [<1, 1]
SHRUBLAND				

VEGETATION UNIT CODE & DESCRIPTION	FIELD SURVEY RECORDS (AREA ha)			
	SURVEY AREA (6,777 ha)	DEVELOPMENT ENVELOPE (3,996 HA)	PROJECT DISTURBANCE FOOTPRINT (848 ha) (% of Survey Area) [+0–10m, +10–50 m]	PROPOSAL DISTURBANCE FOOTPRINT (2,408 ha) (% of Survey Area) [+0–10m, +10–50m]
S1: <i>Allocasuarina acutivalvis</i> , <i>Allocasuarina spinosissima</i> tall closed shrubland over <i>Thryptomene kochii</i> , <i>Hakea subsulcata</i> , <i>Micromyrtus erichsenii</i> mid sparse shrubland on lateritic orange-red clay soils on flats and lower slopes.	65	27	2 (3%) [3, 7]	4 (7%) [2, 6]
S2: <i>Allocasuarina acutivalvis</i> , <i>Eucalyptus burracoppinensis</i> , <i>Allocasuarina spinosissima</i> tall open shrubland over <i>Thryptomene kochii</i> , <i>Micromyrtus erichsenii</i> , <i>Hakea erecta</i> mid sparse heathland over <i>Drummondita hassellii</i> , <i>Hibbertia stowardii</i> , <i>Euryomyrtus maidenii</i> low sparse shrubland on orange-brown clayey sand soils on flats.	1,345	681	68 (5%) [7, 27]	478 (36%) [12, 48]
S3: <i>Allocasuarina acutivalvis</i> , <i>Eucalyptus burracoppinensis</i> tall sparse shrubland over <i>Banksia purdieana</i> , <i>Banksia dolichostyla</i> , <i>Hakea subsulcata</i> mid sparse shrubland over <i>Thryptomene kochii</i> , <i>Persoonia coriacea</i> low sparse shrubland on gravelly yellow brown to orange-brown clay to clayey sandy soils on flats.	110	69	3 (3%) [6, 22]	7 (6%) [6, 22]
S3b: <i>Allocasuarina campestris</i> , <i>Acacia assimilis</i> , <i>Allocasuarina acutivalvis</i> mid sparse shrubland over <i>Grevillea oncogyne</i> , <i>Santalum acuminatum</i> , <i>Banksia purdieana</i> low isolated shrubs on gravelly yellow brown to orange-brown clay to clayey sandy soils on hill tops.	25	0	0 (0%) [0, 0]	0 (0%) [0, 0]
S4: <i>Eucalyptus</i> sp. Southern Wheatbelt, <i>Allocasuarina spinosissima</i> , <i>Allocasuarina acutivalvis</i> low open mallee woodland over <i>Hakea invaginata</i> , <i>Melaleuca cordata</i> , <i>Micromyrtus erichsenii</i> mid sparse shrubland over <i>Acacia</i> sp. <i>Forrestania</i> , <i>Hibbertia</i> spp. low sparse shrubland on light orange gravelly clay on upper-mid slopes.	14	< 1	0 (0%) [0, 0]	0 (0%) [0, 0]
HEATHLAND				
H1: <i>Melaleuca cliffortioides</i> , <i>Allocasuarina campestris</i> , <i>Dodonaea adenophora</i> mid open heathland over <i>Grevillea lissopleura</i> , <i>Trymalium myrtillus</i> ssp. <i>myrtillus</i> low sparse shrubland on rocky red-brown sandy clay soils on slopes.	4	0	0 (0%) [0, 0]	0 (0%) [0, 0]
CLEARED / DEGRADED				
CL: Cleared land, includes isolated small patches of degraded vegetation.	696	937	406	523
TOTAL	6,777	3,996	848	2,408

2.2 Flora avoidance areas

As part of the mine development and planning process, the expanded knowledge of the locations of conservation significant flora taxa, in particular the threatened flora *Banksia dolichostyla*, was used to inform the final disturbance footprint proposed for the LoM within the Development Envelope. This final design deliberately excluded areas of existing flora exclusion zones (FEZ's) and populations of conservation significant flora. The total area to be avoided is 93 ha within the 4009 ha Development Envelope (revised total as per s43A submission), as shown in Figure 2-2.

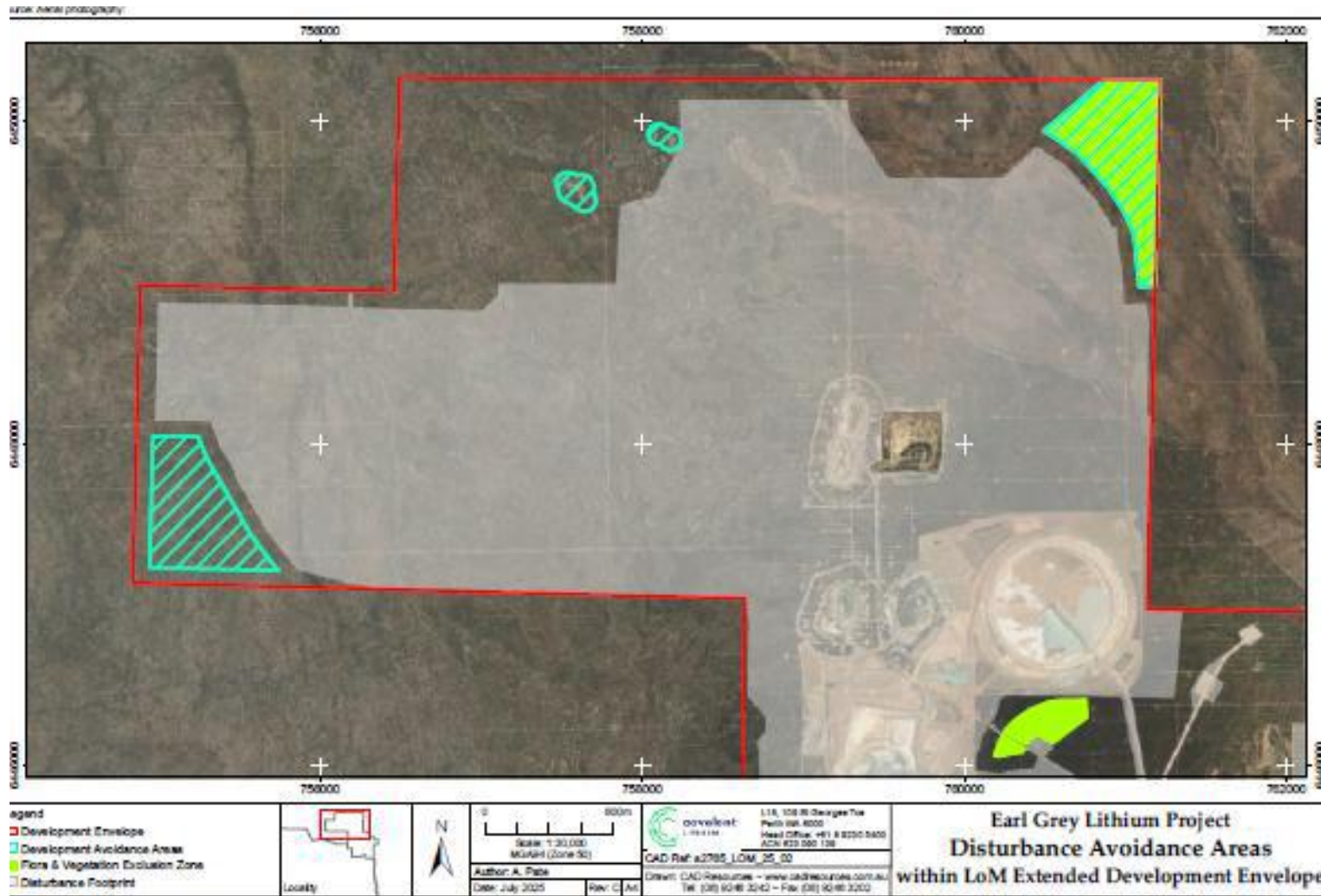


Figure 2-2: Flora avoidance areas

3. Terrestrial Fauna

3.1 Revised impacts to Malleefowl mounds

As described in Section 7.6.1 of the ERD, the Proponent's mining operations, has removed 1 recently active Malleefowl (*Lieopoa ocellata*) nest mound (MM23) and 5 inactive nest mounds (MM03, MM05, MM06, MM13 and MM30; as identified in Figure 13 of the ERD). The nest mound (MM23) was removed by Covalent outside of the Malleefowl breeding period (i.e., at a time when the nest mound was not being used for breeding and did not contain eggs) consistent with the approach outlined within the Proponent's approved Terrestrial Fauna Environmental Management Plan.

Consistent with current approvals (including MS 1199), the Proponent will not remove active Malleefowl mounds within the development envelope.

In correction of a spatial data error in the mapping provided for the ERD, Figure 3-1 provides an update to the impacts to Malleefowl mounds associated with the proposal, which is summarised in Table 3-1.

Table 3-1: Impacts to Malleefowl mounds

Type of Mound	Number impacted within LoM Footprint	Number removed – existing mining operations	Cumulative loss of Malleefowl mounds
Recently active nest mound (orange dot in Figure)	2	1	3
Inactive nest mound (brown dot in Figure)	25	0	25
TOTAL	27	1	28 (47%)¹

1: Total number of mounds within and outside of Development Envelope as per Figure 3-1 = 56

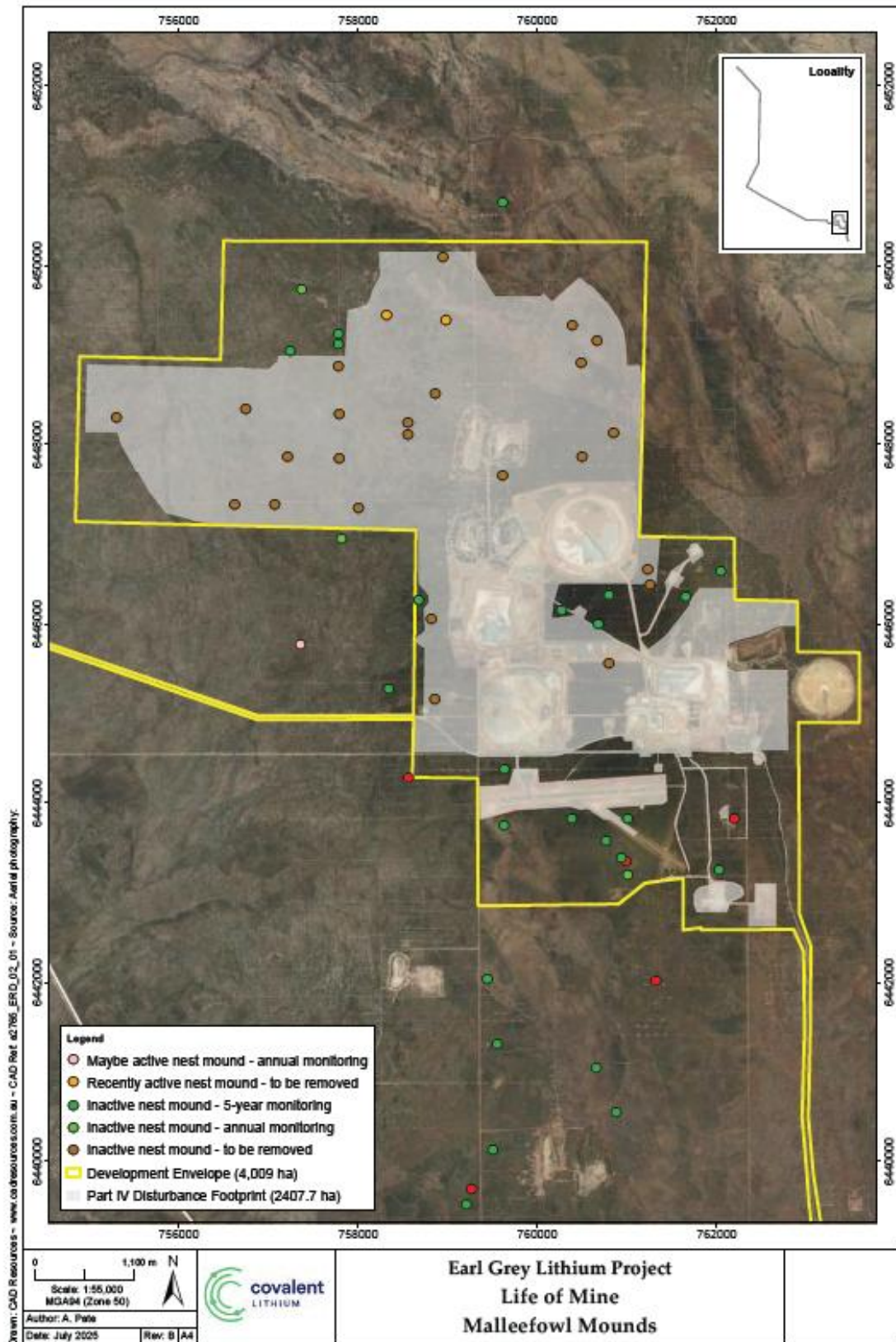


Figure 3-1: Malleefowl Mounds to be impacted within Development Envelope

4. Cumulative impacts

The following information updates and supersedes the text provided in Section 11.2 of the ERD.

4.1 Consideration of Cumulative Impacts (Updated Section 11.2 ERD)

Cumulative impact assessment is considered where there is a likelihood of significant impacts on identified environmental values from more than one activity (MCA 2015).

Cumulative environmental impacts are the successive, incremental, and interactive impacts on the environment of a proposal with one or more past, present and reasonably foreseeable future activities (EPA 2021). The EPA (EPA 2021) defines reasonably foreseeable future activities as:

Third party (or proponent) activities which are already approved, are in a government approvals process, or are otherwise reasonably likely to proceed:

- *for proposals assessed at the level of environmental review – at the time an Environmental Review Document (ERD) for a proposal is accepted; or*
- *or proposals assessed at the level of assessment on referral information – at the time the final referral or required additional information is accepted; and*
- *existing activities that are reasonably expected to be ongoing.*

The key environmental factors, values and issues considered in the cumulative impact assessment are 'Flora and Vegetation' and 'Terrestrial Fauna', within the local and regional context of the Southern Cross Subregion of the Coolgardie Bioregion (described in Section 2.19). The extent of the Subregion is shown in Figure 31.

Biological field surveys have recorded a variety of flora taxa, vegetation units and terrestrial fauna taxa of conservation significance, and as a whole, the area of the Proposal and surrounds has significant biodiversity value. The significant biodiversity values of the area are acknowledged and accepted by Covalent within this assessment document.

An assessment of cumulative impacts to flora and vegetation values and terrestrial fauna values can only be considered in broad context, noting much of the local area beyond the Development Envelope has not been subject to detailed biological surveys.

The cumulative impacts to flora and vegetation and fauna habitat within the local context have been assessed individually in Section 5 *Flora and Vegetation* and Section 6 *Terrestrial Fauna* respectively.

The regional cumulative impacts within a regional context are described below, with consideration to third-party activities either currently under assessment or existing. The relevance of each of the third-party activities identified considers likely zone of influence beyond which impacts become non-detectable on the identified environmental factors and associated values. The predicted impacts are those considered relevant to the life of the Proposal, that is approximately 50 years. For the purposes of this assessment, relevant existing third-party activities that have been are those located within an approximate 10 km (local) and 20 km (regional) radius of the proposal within the Southern Cross IBRA Subregion, as listed in Table 21, and shown in Figure 32.

Information regarding in-scope third party activities and proximity to the Development Envelope has been obtained from publicly available information sourced from Government spatial data sets and websites (including: DWER-076; DBCA-011, IBRA version 7; CPS viewer <https://cps.dwer.wa.gov.au/>; www.epa.gov.au).

Table 4-1: Third-party activities considered in cumulative impact assessment

Activity	Proximity to the Proposal (from nearest boundary of DE)	Area approved to clear (ha)
Reasonably foreseeable activities		
None within 20km of the Development Envelope within the Southern Cross Subregion of the Coolgardie IBRA Region	N/A	N/A
Existing approved activities		
Western Areas Nickel Pty Ltd Clearing permit CPS 6833/3 Mineral exploration	1.7 km to the north (within Jilbadji Nature Reserve)	10
Montague Resources Australia Pty Ltd, E77/2244 Clearing permit CPS 912/1 Mineral exploration	3km to the north (within Jilbadji Nature Reserve)	3.71
Western Areas Nickel Pty Ltd Clearing permit CPS 6365/2 Mineral exploration	15 km to the north east (within Jilbadji Nature Reserve)	10
Montague Resources Australia Pty Ltd Clearing permit CPS 9200/1 Mineral exploration	15 km to the north (within Jilbadji Nature Reserve)	14
Western Areas Nickel Pty Ltd Clearing permit CPS 8833/1 Mineral exploration	13.5 km to the north (within Jilbadji Nature Reserve)	40.08
Forrestania Gold NL Clearing permit CPS 2061/1 Clearing permit CPS 5524/1 Clearing permit CPS 2075/1 Mineral exploration	13.5 km to the north (within Jilbadji Nature Reserve)	0.05 0.2 0.05
Western Areas Nickel Pty Ltd Clearing permit CPS 7014/2 Mineral exploration	12 km to the south	5
Spurge Apiaries Clearing permit CPS 4661/3 Apiculture	18 km to the south	16.85
Montague Resources Australia Pty Ltd Clearing permit CPS 9022/1 Mineral exploration	20 km to the south	1.62

Activity	Proximity to the Proposal (from nearest boundary of DE)	Area approved to clear (ha)
HR Forrester Pty Ltd Clearing permit CPS 4650/1 Mineral exploration	17 km to the south west	0.67
Reed Exploration Pty Ltd Clearing permit CPS 8817/1 Mineral exploration	19.7 km to the south west	1
Hannans Reward Ltd Clearing permit CPS 3013/2 Mineral exploration	19.6 km to the south west	12
Western Areas Limited Clearing permit CPS 6672/2 Clearing permit CPS 5247/1 Mineral exploration	20 km to the south west	9 10
Shire of Kondinin Clearing permit CPS 8589/1 Extractive industry	25 km to the south east	4.16
RW Brown and CJ Brown Clearing permit CPS 8401/1 Mineral production	24 km to the south east	2.53
Convergent Minerals Limited, M77/1065 (existing mine site, previous clearing permit CPS6316/1 now expired)	2km to the south	30
Shire of Yilgarn, Road upgrade Clearing permit CPS 10049/1	2.5 km to the west at nearest point	234.81
TOTAL APPROVED CLEARING OF NATIVE VEGETATION	Within 20km of DE	405.73

As described in Section 6.6, the Proposal is located within a region with largely intact native vegetated, with > 80,000 ha of native vegetation occurring within a 10 km radius of the Proposal and clearing of the vegetation to date has been limited, with a notable extent of vegetation protected within conservation reserves.

The cumulative impact of clearing of native vegetation within the Southern Cross subregion, in a regional context, is shown in Table 22, and accounts for a reduction in the remaining extent of vegetation within this subregion by 0.05%.

Table 4-2: Cumulative Assessment of Impacts on PRE-EUROPEAN Vegetation within the Southern Cross subregion

Pre-European Area ha	Current Extent Remaining Ha (%)	Pre-European (%) in DBCA Managed Lands	Cumulative Impact Assessment			
			Revised Proposal Disturbance Footprint (ha)	Third Party Activities (ha)	Total Disturbance of all Activities (ha)	Current Extent remaining after all activities (ha%)
6,010,832.78	5,773,838.44 (96.06%)	24.02	2408 (of which 1885 ha is clearing)	406	2814	5,771,024.44 (96.01%)

Source: DBCA Statewide Vegetation Statistics March 2019, www.data.wa.gov.au

The Proposal clearing of 1885 ha is not considered on a local scale to be environmentally significant with respect to flora and vegetation values and fauna habitat., particularly given the extent of remaining vegetation, of which a proportion is located within nearby reserves (e.g. Jilbadji Reserve). The clearing of 1885 ha of native vegetation for the proposal, in addition to 406 ha approved to be cleared for third party activities within 20 km radius of the Proposal (total of 2291 ha), is also not considered likely to be environmentally significant to flora and vegetation or fauna habitat values.

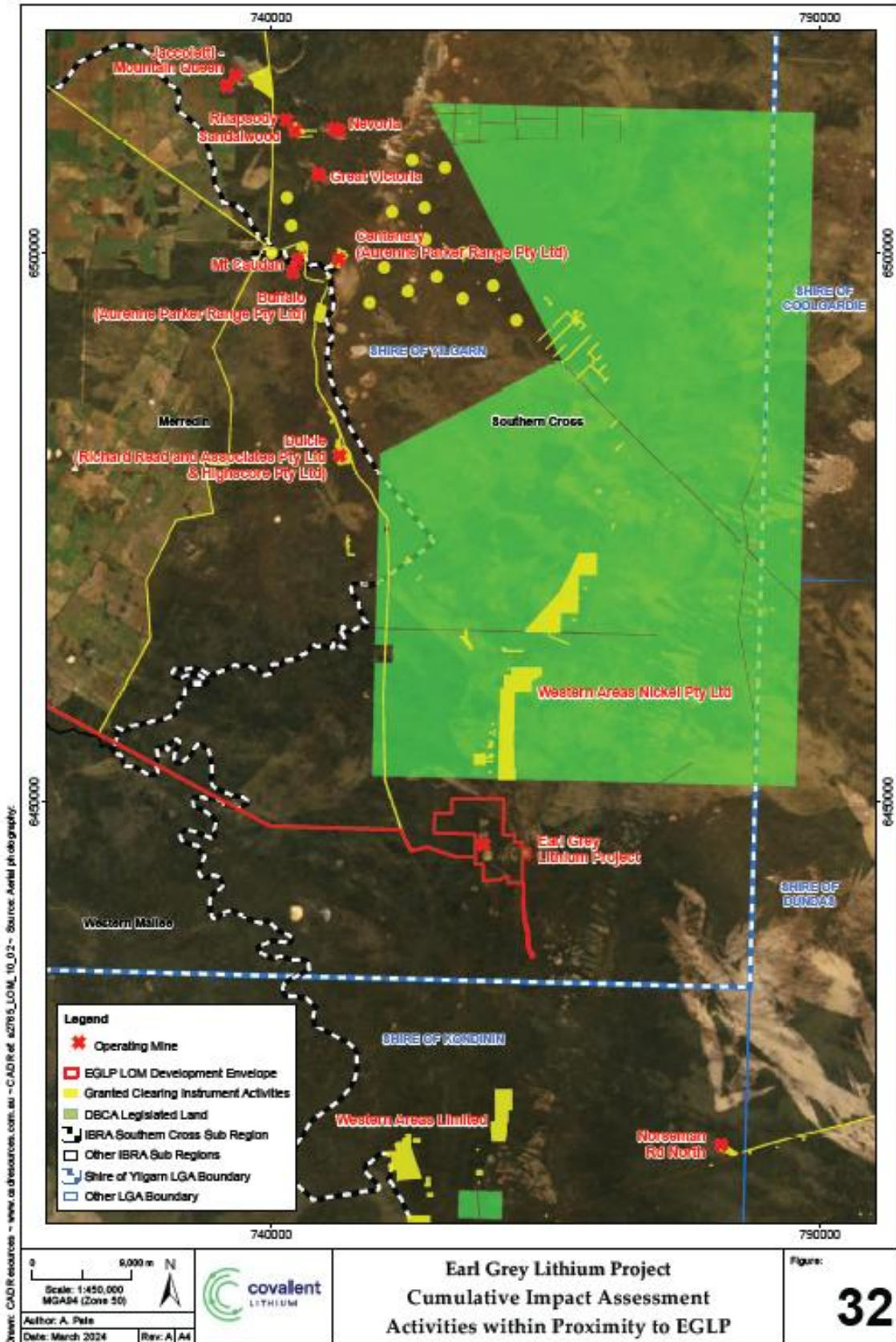


Figure 4-1: Cumulative impact assessment regional activities in scope

The assessment of the impact to flora and vegetation and terrestrial fauna values contained in Section 5 *Flora and Vegetation* and Section 6 *Terrestrial Fauna* have considered the cumulative impact of the Proposal in addition to the impact from the previously abandoned Mt Holland Mine Site. Within the Development Envelope of 3,996 ha, the previously abandoned Mt Holland Mine Site occupies an area of 574 ha including infrastructure such as mine pits, waste rock landforms, tailings storage facilities and access tracks (Figure 11). Of the total 2,408 ha Indicative Site Layout, 523 ha for the Proposal has been planned to occur within the existing disturbance for the previously abandoned Mt Holland Mine Site in order to minimise the extent of new native vegetation / fauna habitat clearing required. The cumulative impact of the Proposal (1,885 ha of new clearing) combined with the historical impact of the previously abandoned Mt Holland Mine Site (574 ha) will equate to a total of 2,459 ha.

Whilst the cumulative impact of the Proposal and the previously abandoned Mt Holland Mine Site together is not insignificant, the Proposal is positioned within a bioregion in which > 98 % of the regional vegetation associations remain, including > 10 % protected within Conservation Reserves (Table 11). Within a local 10 km radius of the Proposal, a total of > 80,000 ha (99.1 %) of native vegetation / fauna habitat remains intact (refer to Figure 14). Although other land disturbances including mining operations and public roads are noted, these land disturbances account for a small proportion (751 ha, 0.9 %) of this local area. The additional area noted in **Error! Reference source not found.** approved for other activities (405.73 ha) does not significantly increase the disturbance in the broader regional context (within 20 km or more). In this context, the Proposal is generally not anticipated to result in a significant cumulative impact in addition to other land uses.

The environmental impact of the Proposal to the identified environmental values can be appropriately managed in accordance with the established framework of environmental management plans and environmental offsets applicable to the Project under the EP Act and the EPBC Act.

5. Other Information

5.1 Skeleton Rocks bushfire impacts

In January 2025 a lightning strike started a regional bushfire (Plate 1) that burned approximately 35,000 ha of native vegetation, including 2,500 ha within the Development Envelope, as shown in Figure 5-1. This was a high intensity fire, which according to the Department of Fire and Emergency Services in advice to the Proponent, may take 10 to 15 years to regenerate.

All baseline flora and fauna surveys were completed prior to this fire.

This fire impacted three of five Malleefowl mounds within the development envelope (Figure 5-2), and six of the eight FEZ's, with the proposed LoM exclusion zone suffering 98% loss to the bushfire.

The proponent is currently liaising with DWER regarding the inability to meet monitoring commitments within currently approved flora and fauna management plans resulting from fire impacts.



Plate 1: Skeleton Rocks bushfire in proximity to mining infrastructure

The Proponent understands that the impact assessment will consider the known conservation significant flora taxa and fauna records prior to the fire.

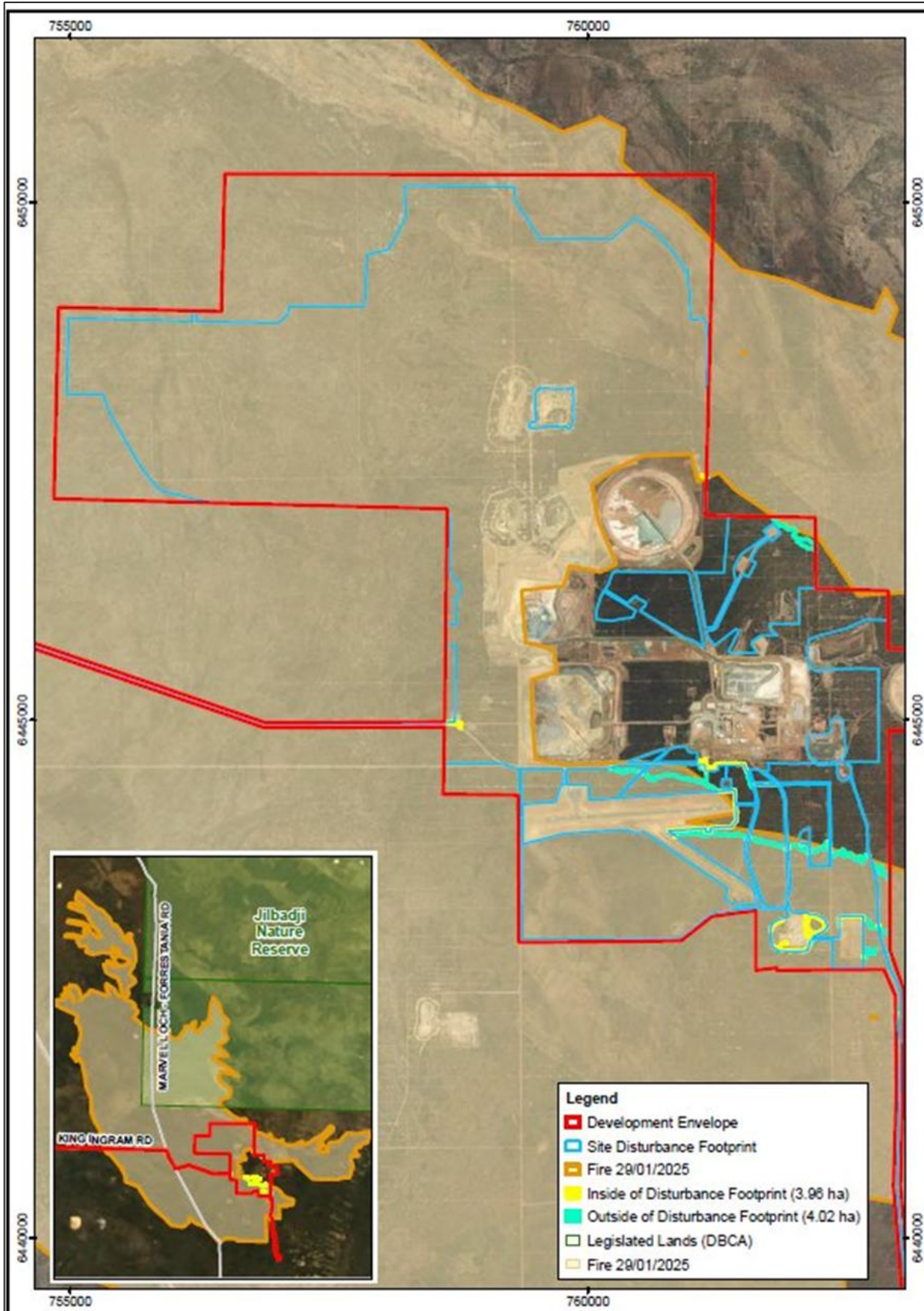


Figure 5-1: Skeleton Rocks Bushfire Disturbance

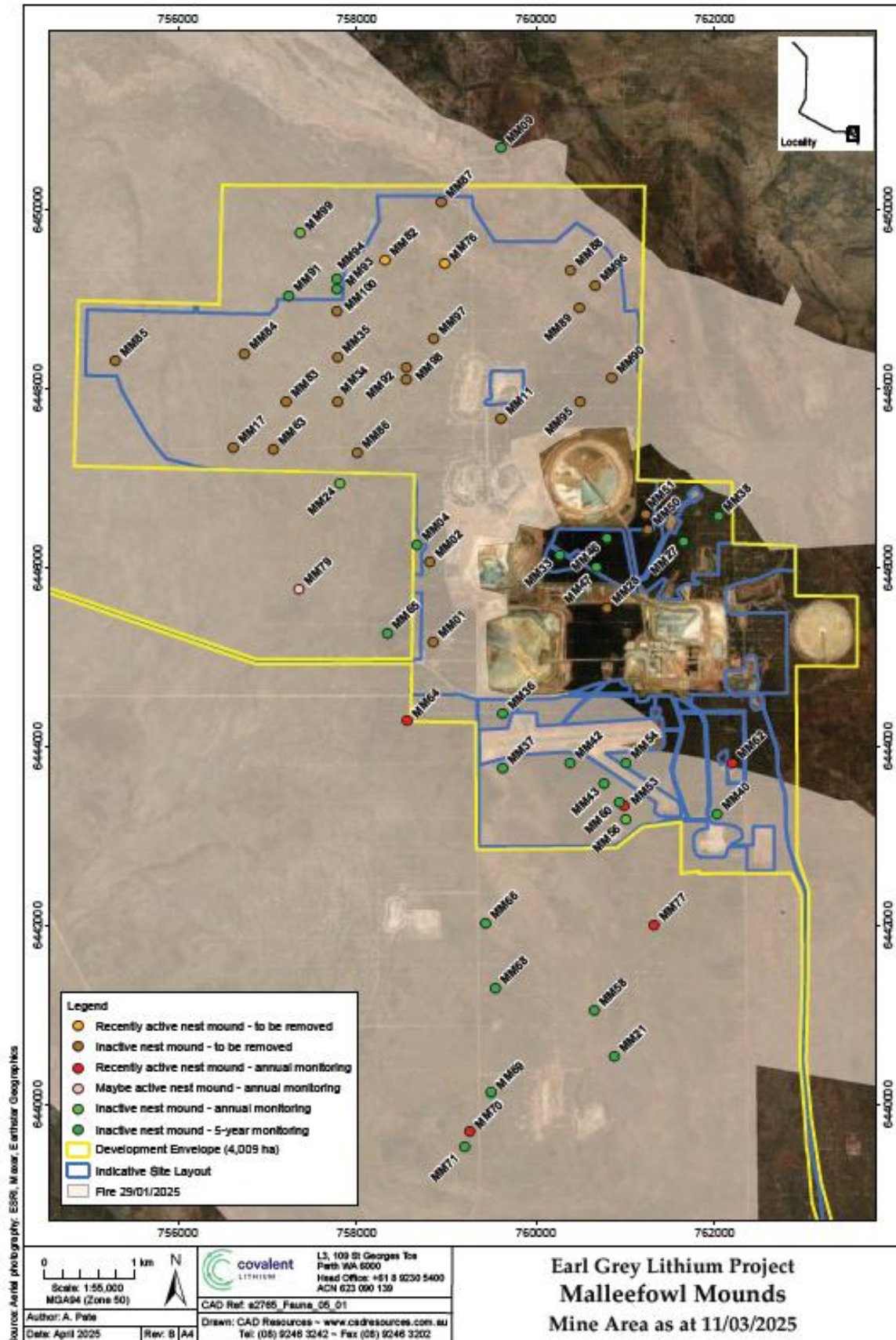


Figure 5-2: Malleefowl Mounds within burn scar

5.3 Aboriginal Cultural Heritage

Figure 5-3 is provided as an update overview of areas surveyed for Aboriginal Heritage, replacing Figure 31 of Section 8 of the ERD,

5.3.1 Updated Aboriginal Cultural Heritage mitigation measure

The following additional mitigation measure will be implemented:

- Covalent Lithium, as part of its standard ground clearance procedure, will engage Traditional Owner representative as on-ground monitors during clearing of native vegetation. In the event that matters of cultural heritage significance are identified, work will stop, and the area avoided until the matter can be investigated and appropriate actions determined in consultation with the Traditional Owners.

Figure 5-3: Aboriginal Heritage survey Overview (Figure 31 of ERD)

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