Covalent Lithium

Earl Grey Lithium Proposal

Flora and Vegetation Environmental Management Plan

REVISION HISTORY

Rev	Originator	Reviewer	Approval	Date	Covalent Approval	Date
1	L Whitley	K Moyle		6/04/20	A Pate	6/04/20
2	L Whitley	K Moyle		17/11/20	A Pate	17/11/20
3	L Whitley	K Moyle		10/12/20	A Pate	10/12/20
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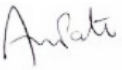
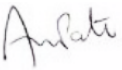
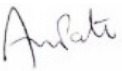
5	L Whitley	K Moyle		24/02/21	A Pate	24/02/21
6	A Pate	A Pate		22/04/22	A Pate	22/04/22
7	S Hawkins	A Pate B Longbottom		29/11/2022	A Pate	29/11/22
8 -V0	JBS&G	A Pate L McGrath		07/06/24	A Pate	24/09/24
8- V1	JBS&G	A Pate		30/10/25	A Pate	30/10/25

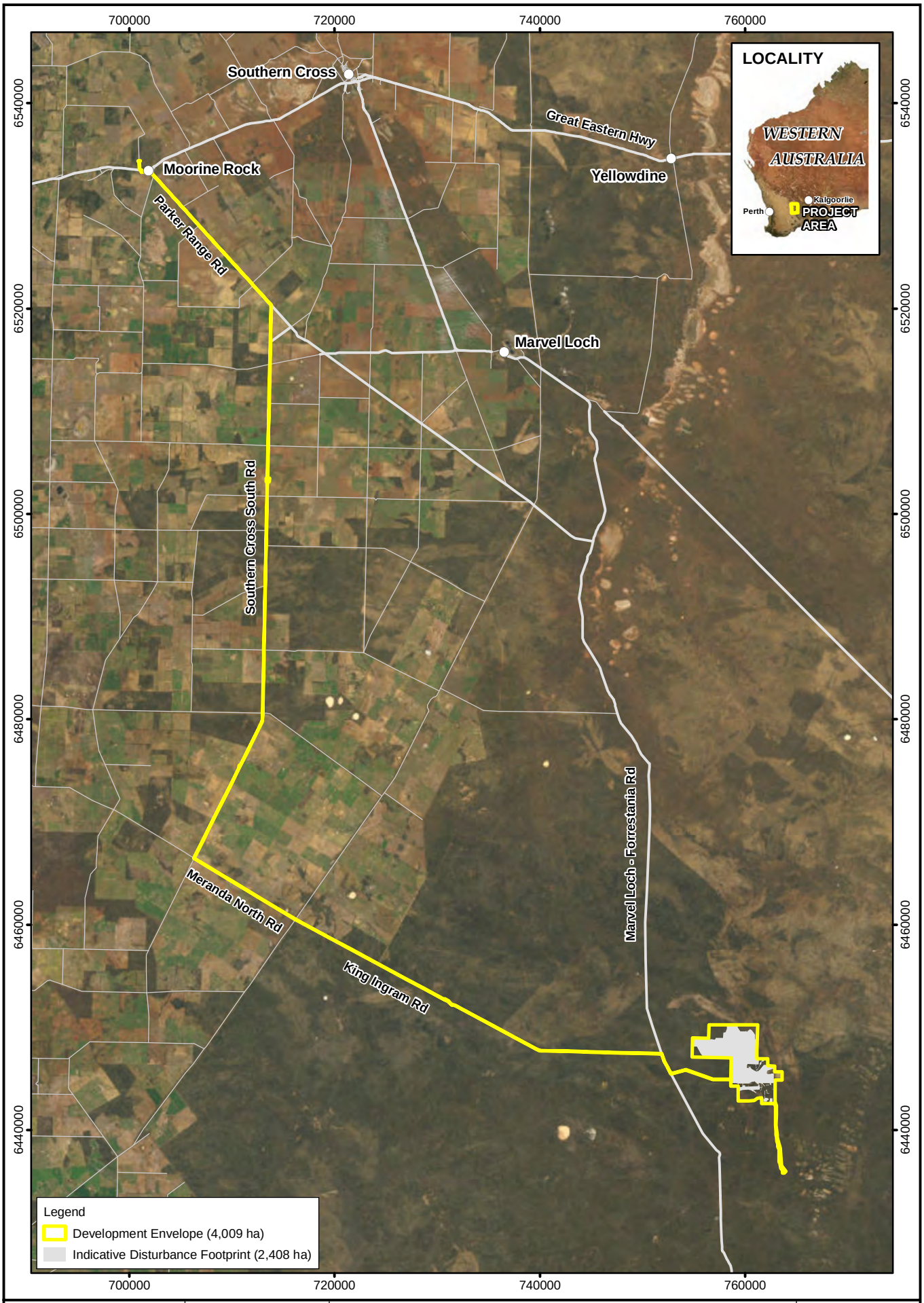
EXECUTIVE SUMMARY

This Flora and Vegetation Environmental Management Plan (FVEMP) is submitted to meet the requirements of Condition 2 of Ministerial Statement 1199 (MS 1199) for the Approved Project and anticipated conditions of approval for the Life of Mine Proposal (the Proposal) under the *Environmental Protection Act 1986* (EP Act) for the Earl Grey Lithium Project. Covalent Lithium (Covalent) is the Proponent for the Proposal. Table ES1 summarises the FVEMP and its purpose.

This FVEMP is designed to be adaptive and will be updated over the life of the Proposal. As monitoring programs are undertaken, quantifiable environmental criteria will be further defined. Covalent will update this FVEMP in consultation with relevant Government agencies, as such, this FVEMP remains a working document. This document will be amended to address any change of conditions, monitoring requirements and impacts due to the proposed Life of Mine expansion following assessment by the Environmental Protection Authority and issue of Ministerial Conditions.

Table ES1: Summary and Purpose of the Flora and Vegetation EMP

ITEM	DESCRIPTION
Proposal	Earl Grey Lithium Proposal
Proponent	Covalent Lithium
Operational Elements	The Proposal is to develop mining operations and mining infrastructure of a pegmatite-hosted lithium deposit, located at the abandoned Mt Holland Mine Site, within a proposed Development Envelope of 4,009 ha as identified by Figure ES0-1. The Proposal includes proposed new clearing of up to 1,885 ha of native vegetation for mining operations and mining infrastructure including a mine pit, waste rock landforms, tailings storage facility, processing plant, airstrip, accommodation village, water supply pipeline, solar plant, and associated infrastructure.
Timing Elements	Proposal life of up to 30 years
Key Environmental Factor	Flora and Vegetation
EPA Objective	*"To protect flora and vegetation so that biological diversity and ecological integrity are maintained."* (EPA 2021a)
Purpose of the Environmental Management Plan	The FVEMP provides a framework to ensure this objective is achieved by implementing management provisions to avoid direct impacts and mitigate potential indirect impacts. It also provides provisions for monitoring and reporting against trigger and threshold criteria which are used to demonstrate the outcome is being achieved.
Condition clauses	MS 1199 – Condition 2 Future conditions for the Proposal to be advised
Key Management Plan Objectives	The key environmental criteria for this FVEMP include: • No Proposal related direct impact to flora and vegetation within the exclusion zones resulting in an adverse impact to flora and vegetation. • No Proposal related indirect impact to vegetation within the exclusion zones resulting in an adverse impact to vegetation. Management objectives to minimise direct and indirect impacts to flora and vegetation include: • No unauthorised clearing of native vegetation • No unauthorised access within the Flora Exclusion Zones (FEZ) • Dust deposition from mining and related activities is minimised • Spread of weeds or dieback is minimised • Alteration of fire regimes or surface hydrology is minimised



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Earl Grey Lithium Project
Proposal
Regional Overview

Figure:

ES0-1

Author: A. Pate

Date: October 2025 | Rev: C | A4

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1. Context, Scope and Rationale

The Earl Grey Lithium Proposal (the Proposal) is located approximately 105 km south–southeast of Southern Cross, Western Australia in the Shire of Yilgarn (Figure 1-1). Covalent is a joint venture between Wesfarmers Limited (Wesfarmers) and Sociedad Química y Minera (SQM).

A large, economic pegmatite–hosted lithium deposit was discovered by Kidman Resources Limited in 2016. The deposit is situated at the previously abandoned Mt Holland Mine Site, which was operated between 1988 and 2001, and comprises open pits, an underground mine, a processing plant, waste rock dumps, tailings storage facilities (TSF) and associated infrastructure.

This Flora and Vegetation Management Plan (FVEMP) is intended to meet Condition 2 of MS 1199 and any conditions of approval for the Proposal.

1.1 The Proposal

The Proposal comprises open cut mining and processing of lithium ore. Within the Development Envelope (3,996 ha), the total Proposal footprint (Indicative Site Layout) is 2408 ha with the full extent of the Proposal to be developed progressively over a 40-year period. The location of the Development Envelope and Indicative Site Layout is shown in Figure 1-1.

The Proposal has been designed to maximise the use of existing disturbance areas where possible. The Proposal requires clearing of 1,885 ha of native vegetation and will additionally use existing cleared areas. The additional clearing is predominately required for the mine pit, waste landforms, tailings storage facility and ancillary infrastructure.

The processed lithium concentrate from the Proposal will be transported to Covalent's Kwinana Lithium Refinery, or to a port for export to overseas markets. The transport and refining of the lithium concentrate does not form part of the Proposal.

1.1.1 Environmental Approval History

The Proposal was referred for environmental assessment under Section 38 of the *Environmental Protection Act 1986* (EP Act) in 2017. The Environmental Protection Authority (EPA) determined the Proposal required an environmental assessment, with Flora and Vegetation identified as a key environmental factor for the Proposal. The EPA (2019) provided a report to the Minister for Environment on the Proposal, and following, the Minister approved the Proposal under Ministerial Statement 1118 approval including an implementation condition requirement for a FVEMP.

In 2020, Covalent requested a number of changes to the implementation conditions of MS 1118 in accordance with Section 46 of the EP Act, including changes to the approved impact values for flora taxa. The EPA (2021b) provided a report to the Minister for Environment on the proposed changes, and following, the Minister approved proposed changes to the implementation conditions through the Ministerial Statement 1167 approval including an amendment to the implementation condition requirement for the FVEMP.

In 2021, Covalent referred a 'significant amendment' to the Proposal, which included additional land clearing containing native flora and vegetation. The EPA (2022) provided a report to the Minister for Environment on the significant amendment, and following, the Minister approved the significant amendment through MS 1199, the conditions of which replaced and superseded all previous conditions and procedures of Statements 1118 and 1167. MS 1199 included a requirement for the update and implementation of the FVEMP.

The Proposal was also referred and assessed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act requires an assessment as to whether a proposed action is likely to have a significant effect on a Matter of National Environmental Significance (MNES), which for the Proposal included the listed 'Threatened' flora taxon Ironcaps Banksia (*Banksia dolichostyla*) (EPBC-V, BC-V). Proposal was approved under the EPBC Act in 2020 (EPBC 2017/7950). This FVEMP includes management and monitoring actions associated with *Banksia sphaerocarpa* var*. dolichostyla*, however, the preparation and implementation of this FVEMP is not a requirement under the EPBC Act approval.

In 2023 Covalent Lithium referred the Life of Mine (LoM) development as a new proposal, to amend the Approved Revised Proposal to incorporate the following changes to support the Life of Mine development:

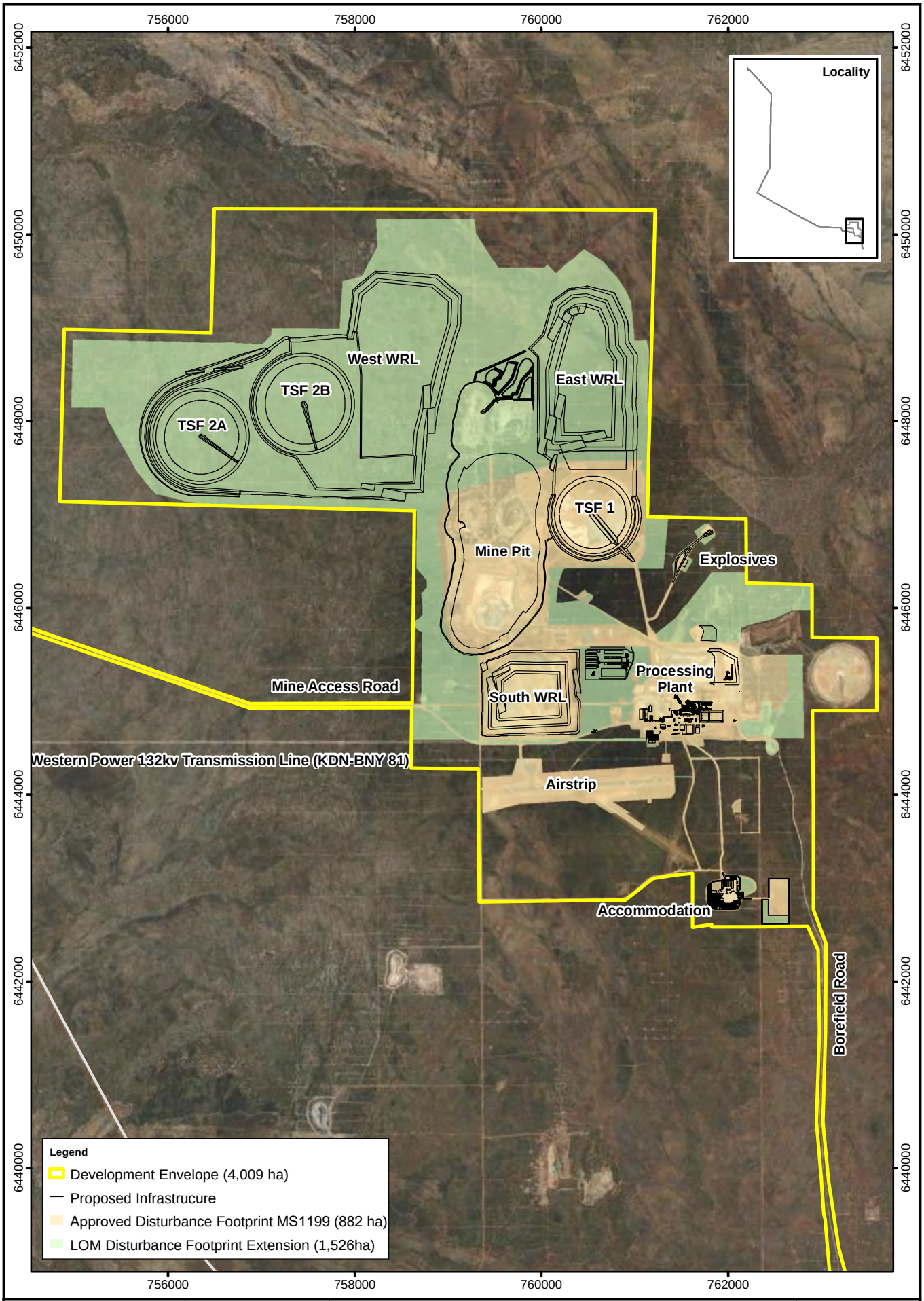
- change to the Development Envelope from 2,347 ha to 3,996 ha within which implementation of the Proposal may occur;
- increase the Indicative Site Layout from 848 ha to 2,408 ha;
- with an increase in the extent of native vegetation clearing from 442 ha to 1,885 ha

The Life of Mine development has also been referred to DCCEEW for assessment under the EPBC Act (2023/09711). The TFEMP will be updated as required to incorporate any additional conditions relevant to fauna management.

In October 2025, the EPA approved a change to proposal under s43A of the EP Act[1] to amend the proposal to reflect minor amendments during the assessment:

- increase the development envelope from 3,996 hectares (ha) to 4,009 ha to allow for the addition of two new booster stations on the existing underground water pipeline;
- increase the pit dewatering and groundwater abstraction volumes from 0.4 gigalitres (GL) per year to 1.5 GL per year;
- a reduction in the estimated annual average scope 1 greenhouse gas (GHG) emissions estimates from 69,000 tonnes of carbon dioxide equivalent (tCO2-e) to 63,450 tCO2-e;
- a reduction in the estimated annual average scope 2 GHG emissions from 53,000 tCO2-e to 34,800 tCO2-e; and
- a reduction in the estimated annual average scope 3 GHG emissions from 1,129,000 tCO2-e to 1,094,500 tCO2-e.

[1] Change to proposal approval: https://www.epa.wa.gov.au/sites/default/files/S43A/s.%2043A%20Notice%20-%20051025.pdf



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Date: July 2025 | Rev: B | A4

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Earl Grey Lithium Project
Life of Mine and Approved Area Disturbance Areas

Figure:

1-1

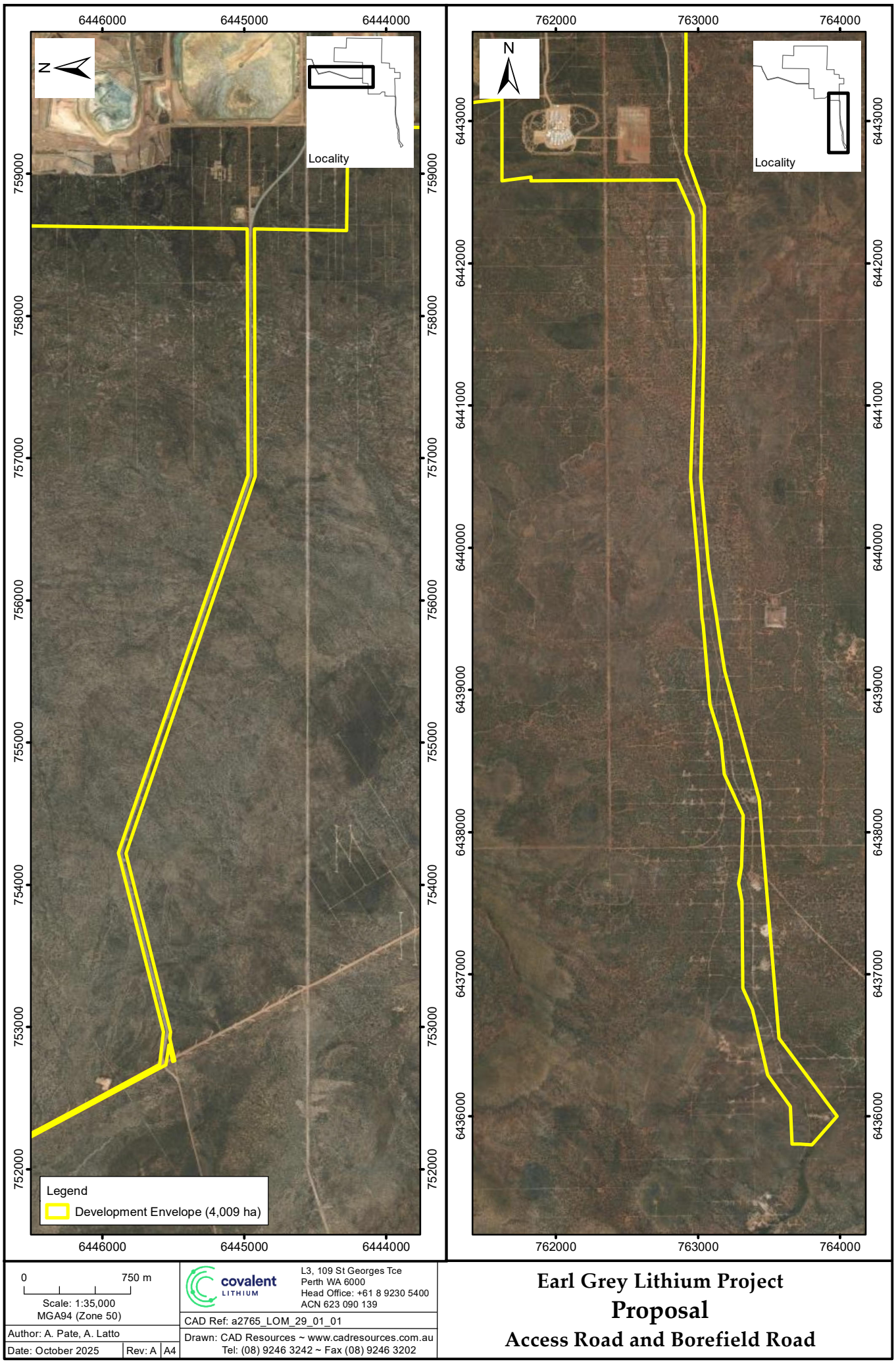
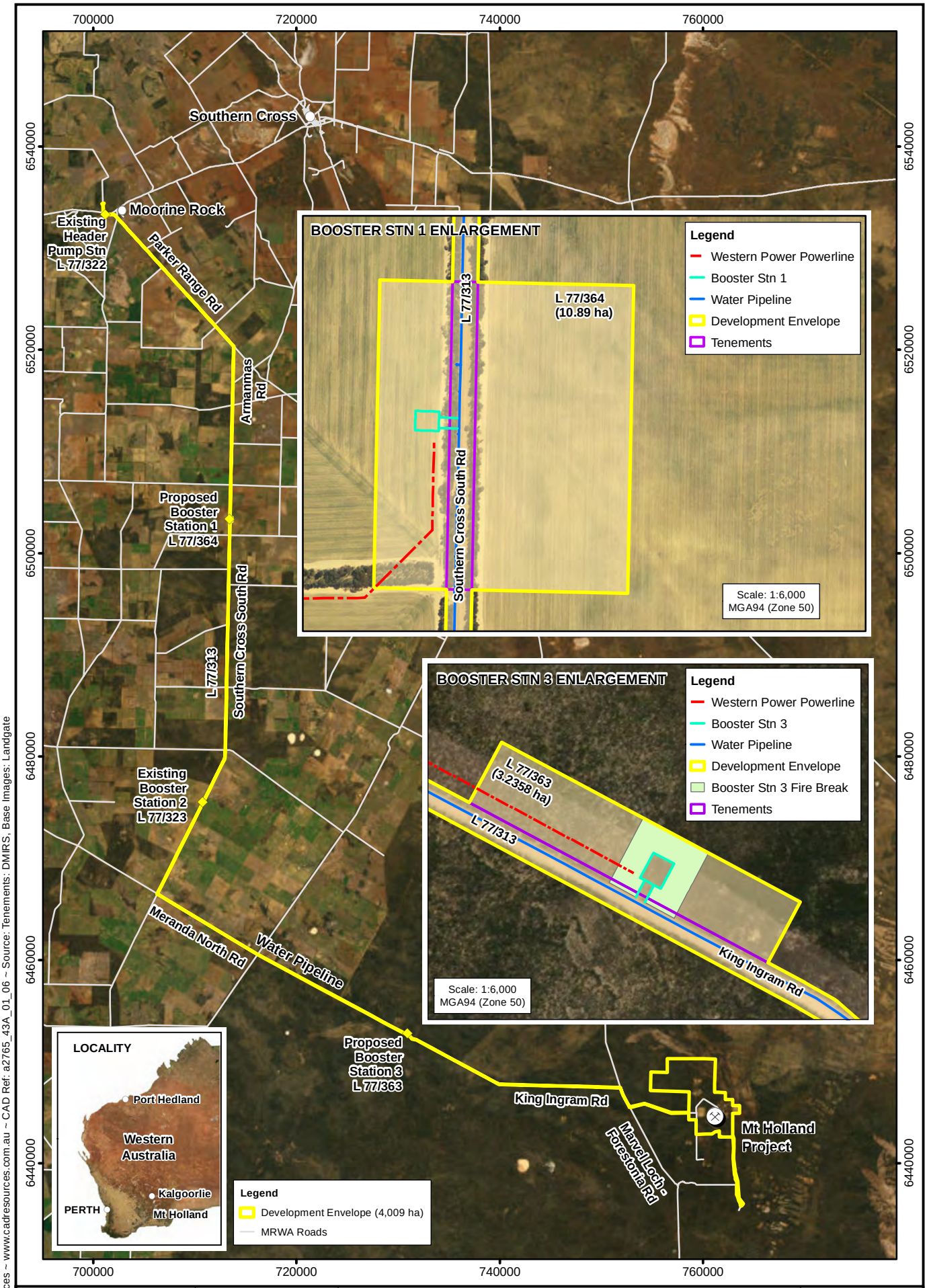


Figure 1-2: Development Envelope- Access Road and Borefield Road



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Date: October 2025 | Rev: E | A4

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Earl Grey Lithium Project
Revised Development Envelop - Booster Stations

Figure: **1-3**

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1.2 Key environmental factors

The key environmental factors relevant to the FVEMP and the proposal activities that would affect these factors and the potential impacts are described in Table 1-1.

Table 1-1: Key environmental factors, environmental values, and potential impact pathways

ENVIRONMENTAL FACTOR	PROPOSAL ACTIVITIES AFFECTING THE KEY FACTOR	VALUE WHICH MAY BE AFFECTED	POTENTIAL IMPACTS
Flora and Vegetation	Clearing of native vegetation	Quality of native vegetation and associated habitat for conservation significant flora	Direct loss of conservation significant flora from vegetation clearing Indirect impacts during construction and mining operations, from: - altered fire regimes - fugitive dust emissions - weed infestation - changes to surface hydrology

1.3 Condition Requirements

Table 1-1 outlines the current requirements of Condition 2 of MS 1199 and the corresponding section where they are addressed within this FVEMP.

Table 1-2: Condition Requirements

CONDITION	SECTION
2-1 The proponent shall implement the proposal to meet the following environmental outcomes: *(1) clearing of no more than 442 ha of native vegetation* *(2) no direct or indirect disturbance to flora and vegetation in the exclusion zones as shown on Figure 3* *(3) no more than 9,732 individuals of Microcorys elatoides and two (2) individuals of Banksia dolichostyla to be subject to direct disturbance inside the development envelope* *(4) The loss of no more than:* • *7% of the known population of Labichea rossii,* • *7% of the known population of Microcorys sp. Mt Holland broad-leaf,* • *5% of the known population of Acacia lachnocarpa* • *2% of the known population of any other priority 1 flora species.*	This Plan
2-2 The proponent shall implement the proposal to achieve the following environmental objectives: *(1) avoid, where practicable, and otherwise minimise direct disturbance to priority flora species outside the flora exclusion zones detailed on Figure 3* *(2) avoid, where practicable and otherwise minimise indirect impacts to flora and vegetation including but not limited to impacts from clearing, dust, weeds and fire.*	Section 1.4.1 Section 2.2 Table 2-3

CONDITION		SECTION
2-3	*Prior to clearing within the areas subject to the significant amendment as described in section 1 of the proponent's section 38 Referral Supporting Document (Revision 3, April 2022), the proponent must undertake pre-clearance vegetation and flora survey(s), in accordance with Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment, or any approved updates of these guidelines.*	Section 3 Appendix A
2-4	*In order to meet the outcomes of condition 2-1, and the objectives of condition 2-2, within six (6) months of the date of this Statement, the proponent shall update the Earl Grey Lithium Proposal Flora and Vegetation Environmental Management Plan (July 2022). This plan shall:*	This Plan
	(1) include details of the timing, methods, limitations, and results of the pre-clearance surveys required by condition 2-3 and demonstrate how the findings of the survey(s) have been considered, including provision of mitigation measures	Section 3 Appendix A
	(2) describe how impacts to threatened and priority flora species outside the flora exclusion zones will be avoided where possible, and/or minimised	Section 1.4 Table 2-2
	(3) include actions to ensure that dust, weeds, and fire are appropriately managed within the development envelope	Section 1.4 Table 2-3
	(4) specify trigger criteria that must provide an early warning that the threshold criteria identified in condition 2-4(5) may not be met	Table 2-1 Table 2-2
	(5) specify threshold criteria to demonstrate compliance with the environmental outcome specified in condition 2-1	Table 2-1, Table 2-2
	(6) specify monitoring to determine if trigger criteria and threshold criteria are exceeded	Section 2.4, Table 2-1, Table 2-2,
	(7) specify trigger level actions to be implemented in the event that trigger criteria have been exceeded	Table 2-1, Table 2-2,
	(8) specify threshold contingency actions to be implemented in the event that threshold criteria are exceeded	Table 2-1, Table 2-2,
	(9) provide contingency measures and adaptive management techniques to ensure the outcomes of conditions 2-1 and objectives of 2-2 are met, and include options for changes to operations and reductions in disturbance.	Table 2-4 Section 4
	(10) provide the format and timing for the reporting of monitoring results against trigger criteria and threshold criteria to demonstrate that the outcome of condition 2-1 and the objectives of condition 2-2 have been met over the reporting period in the Compliance Assessment Report required by condition 8-6.	Section 2.5
2-5	*The proponent must not commence clearing exceeding the extent of the original authorised proposal until the CEO has confirmed by notice in writing that the Earl Grey Lithium Proposal Flora and Vegetation Environmental Management Plan satisfies the requirements of condition 2-4.*	This Plan
2-6	*The proponent must implement the most recent version of Flora and Vegetation Environmental Management Plan confirmed for implementation by the CEO, with the objective of ensuring the outcomes of condition 2-1 and objectives of condition 2-2 are achieved/met, until the CEO has confirmed by notice in writing that the proponent has demonstrated that the environmental outcomes in condition 2-1 have been achieved and the objectives of 2-2 have been met.*	This Plan
2-7	*In the event that monitoring, or investigations indicates exceedance of threshold criteria specified in the confirmed Flora and Vegetation Environmental Management Plan, the proponent shall:*	
	(1) report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;	Section 2.5 Table 2-2 Table 2-3 Table 2-4

CONDITION		SECTION
	(2) *implement the threshold contingency actions specified in the Flora and Vegetation Environmental Management Plan within twenty-four (24) hours of the exceedance being reported as required by condition 2-7 (1) and continue implementation of those actions until the CEO has confirmed by notice in writing that it has been demonstrated that the threshold criteria are being met and the implementation of the threshold contingency actions is no longer required;*	Table 2-2 Table 2-3 Table 2-4
	(3) *investigate to determine the cause of the threshold criteria being exceeded;*	
	(4) *investigate to provide information for the CEO to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria being exceeded; and*	
	(5) *provide a report to the CEO within twenty-one (21) days of the exceedance being reported as required by condition 2-7(1). The report shall include:* (a) *details of threshold contingency actions implemented;* (b) *the effectiveness of the threshold contingency actions implemented, against the threshold criteria;* (c) *the findings of the investigations required by conditions 2-7(3) and 2-7(4);* (d) *measures to prevent the threshold criteria being exceeded in the future;* (e) *measures to prevent, control or abate the environmental harm which may have occurred; and* (f) *justification of the threshold remaining, or being adjusted based on better understanding, demonstrating that objectives will continue to be met.*	Section 2.5
2-8	*The proponent shall make the Flora and Vegetation Environmental Management Plan required by condition 2-4 publicly available.*	Section 5.4
2-9	*The proponent:*	
	(1) *may review and revise the confirmed Flora and Vegetation Environmental Management Plan and submit it to the CEO; and*	Section 4.2 Appendix C: Changes to EMP Records
	(2) shall *review and revise the confirmed Flora and Vegetation Environmental Management Plan and submit it to the CEO as and when directed by the CEO by a notice in writing.*	
2-10	*The proponent shall implement the latest revision of the Flora and Vegetation Environmental Management Plan, which the CEO has confirmed by notice in writing, satisfies the requirements of condition 2-4.*	This Plan

1.4 Rationale and Approach

Management measures to minimise impacts from Proposal activities are necessary to ensure no significant impact on flora and vegetation within the Development Envelope (including the Vegetation Exclusion Zones (FEZs)). The rationale and approach are described in the sections below.

1.4.1 Environmental Outcomes and Management Objectives

The FVEMP provides management measures to ensure the following environmental outcomes and management objectives are met in the implementation of the Proposal:

Outcomes

- No Proposal-related direct impact to flora and vegetation within a FEZ
- No Proposal-related indirect impact to flora and vegetation within a FEZ resulting in an adverse impact

Objectives

- No unauthorised clearing of native vegetation
- No unauthorised access within the FEZs
- Dust deposition from mining and related activities is minimised
- Spread of weeds or dieback is minimised
- Alteration of fire regimes is minimised
- Alteration of surface hydrology is minimised

The environmental management provisions for the outcomes and objectives are described in Table 2-2 and Table 2-3 respectively with the justification for the relevant triggers and thresholds and management actions and targets provided in Section 2.

1.4.2 Biological Surveys and Study Findings

The flora and vegetation values for Proposal Development Envelope and surrounds have been subject to multiple flora and vegetation surveys, with survey effort shown in Figure 1-4 and described in Appendix B.

The surveys were completed in accordance with the EPA (2016*) Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment*. This included targeted surveys for the 'Threatened' flora *Banksia dolichostyla* (EPBC-V, BC-V) protected under the State *Biodiversity Conservation Act 2016* (WA), and 'Priority' flora classified by the Department of Biodiversity, Conservation and Attractions (DBCA).

The surveys have been undertaken over multiple years and seasons by suitably qualified and experienced personnel in the survey and identification of flora taxa and vegetation units. The results of these surveys identify the area of the Proposal and surrounds contain a variety of flora and vegetation values comprising > 450 native vascular flora taxa occurring within > 30 vegetation units. The native flora taxa include 2 'Threatened' flora taxa, > 30 DBCA-classified 'priority' flora taxa and 1 DBCA-classified 'priority' ecological community; and provide a sound basis on which to assess the potential environmental effects of the Proposal to flora and vegetation values.

A brief description of all flora species recorded by the biological surveys is provided in Appendix A.

The Proposal disturbance footprint and indicative site layout has been designed to avoid and minimise impacts on flora and vegetation values.

Flora Protection Zones, otherwise referred to as Flora Exclusion Zones (FEZs), have been established based upon the results of the surveys, with mining operations excluded from these areas (Figure 1-15, Figure 1-16). The Threatened and Priority flora protected within the FEZs are detailed in Table 1-3. Whilst noting the full list of flora species recorded within the FEZs, the primary purpose of the FEZs is for the protection of the flora taxa *Banksia dolichostyla* (EPBC-V, BC-V) and *Microcorys elatoides* (DBCA-P1), and the protection of Vegetation Unit W17 (not of listed conservation significance, however, is restricted in area).

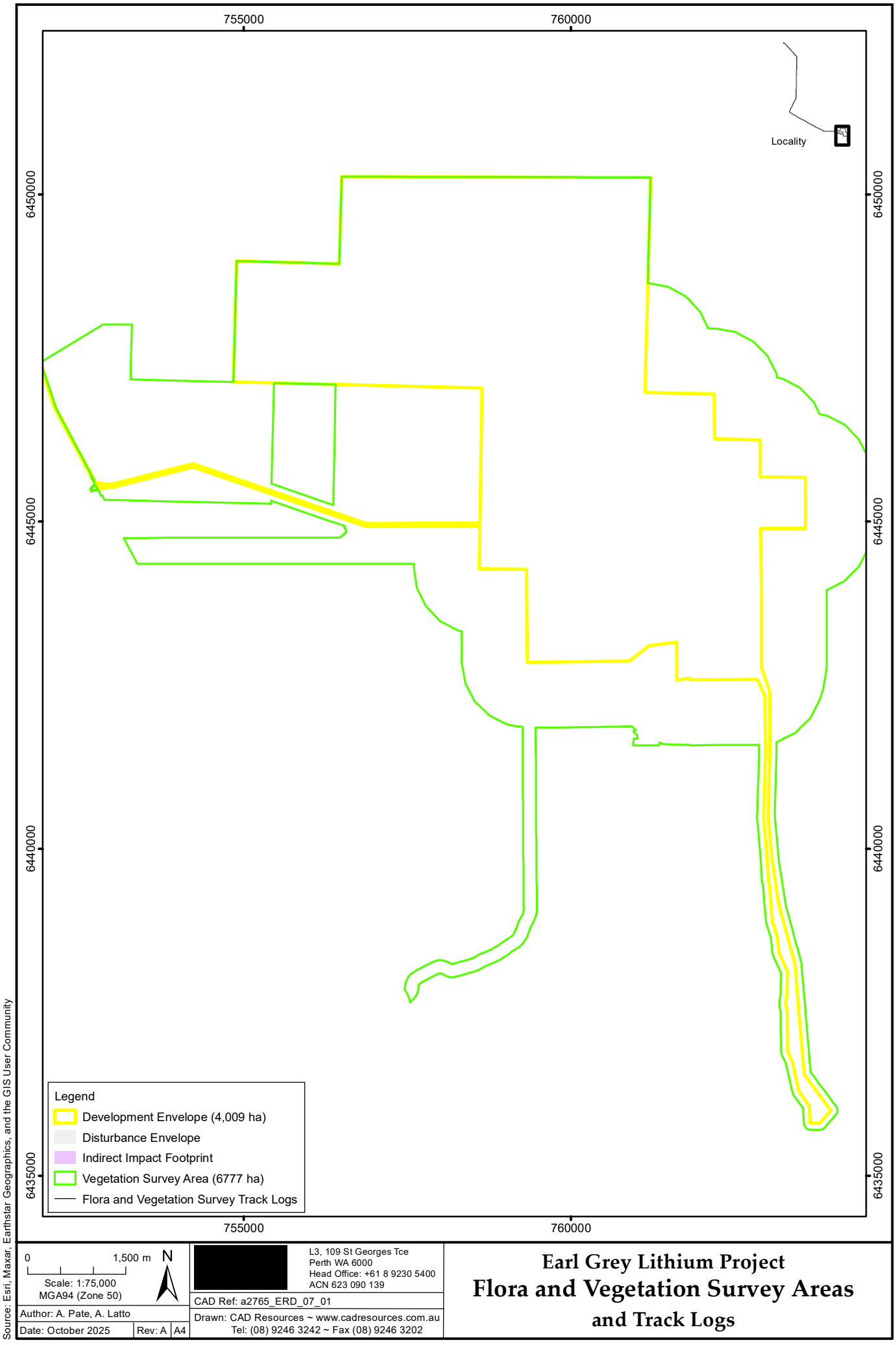


Figure 1-4: Flora and Vegetation Survey Effort

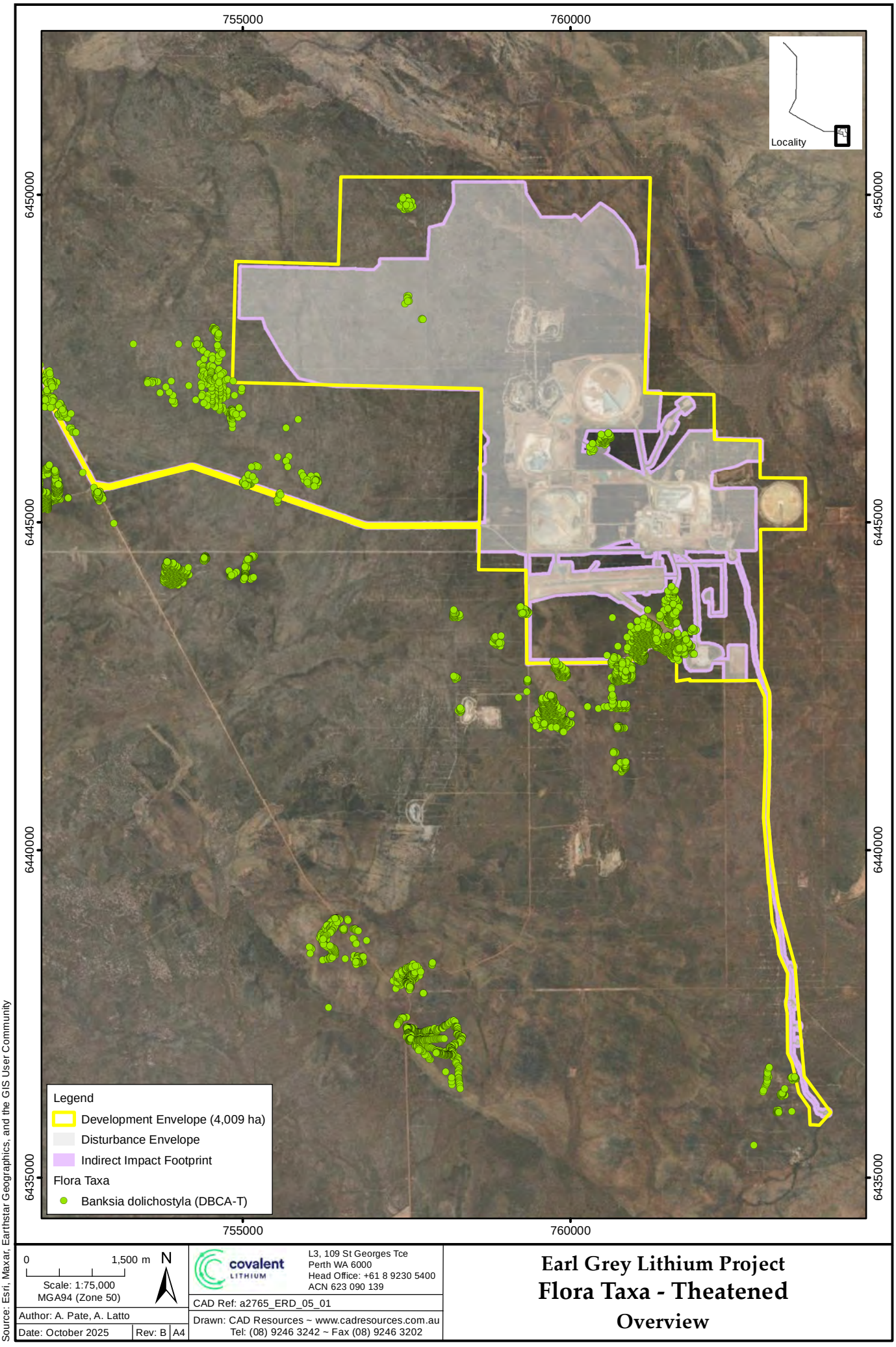


Figure 1-5: Flora Taxa – Threatened Flora

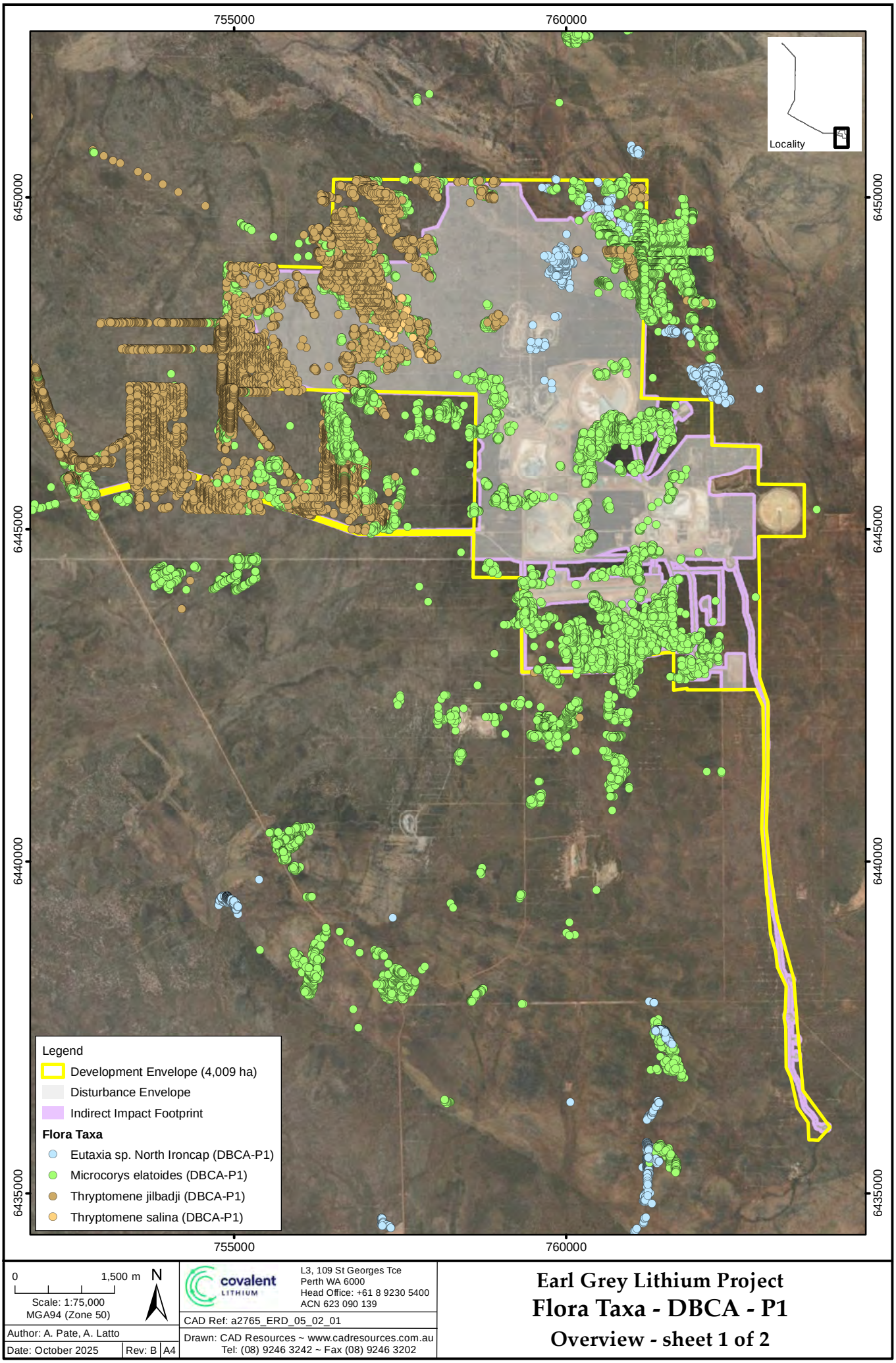
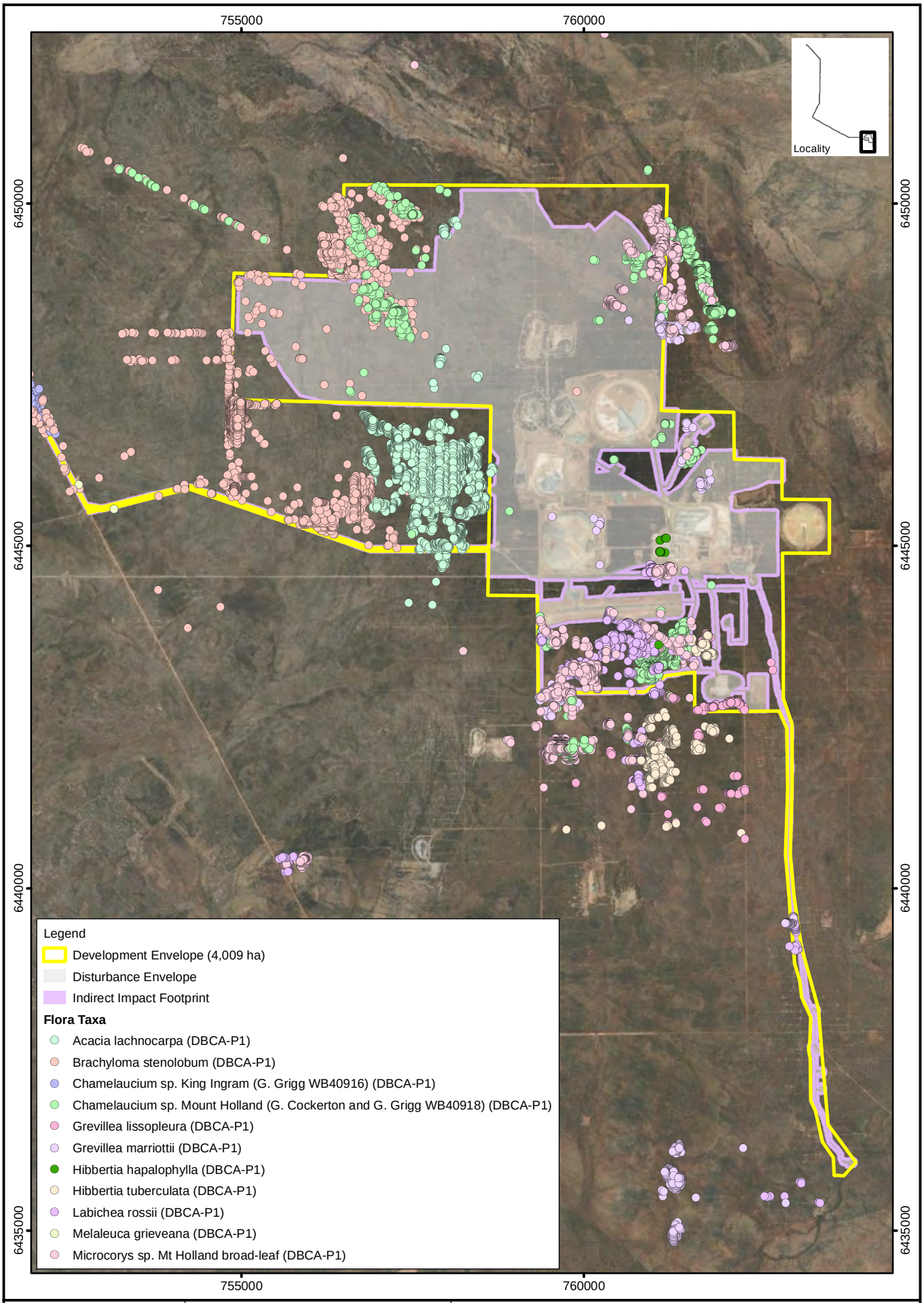


Figure 1-6: Flora Taxa – DBCA-P1 (1 of 2)



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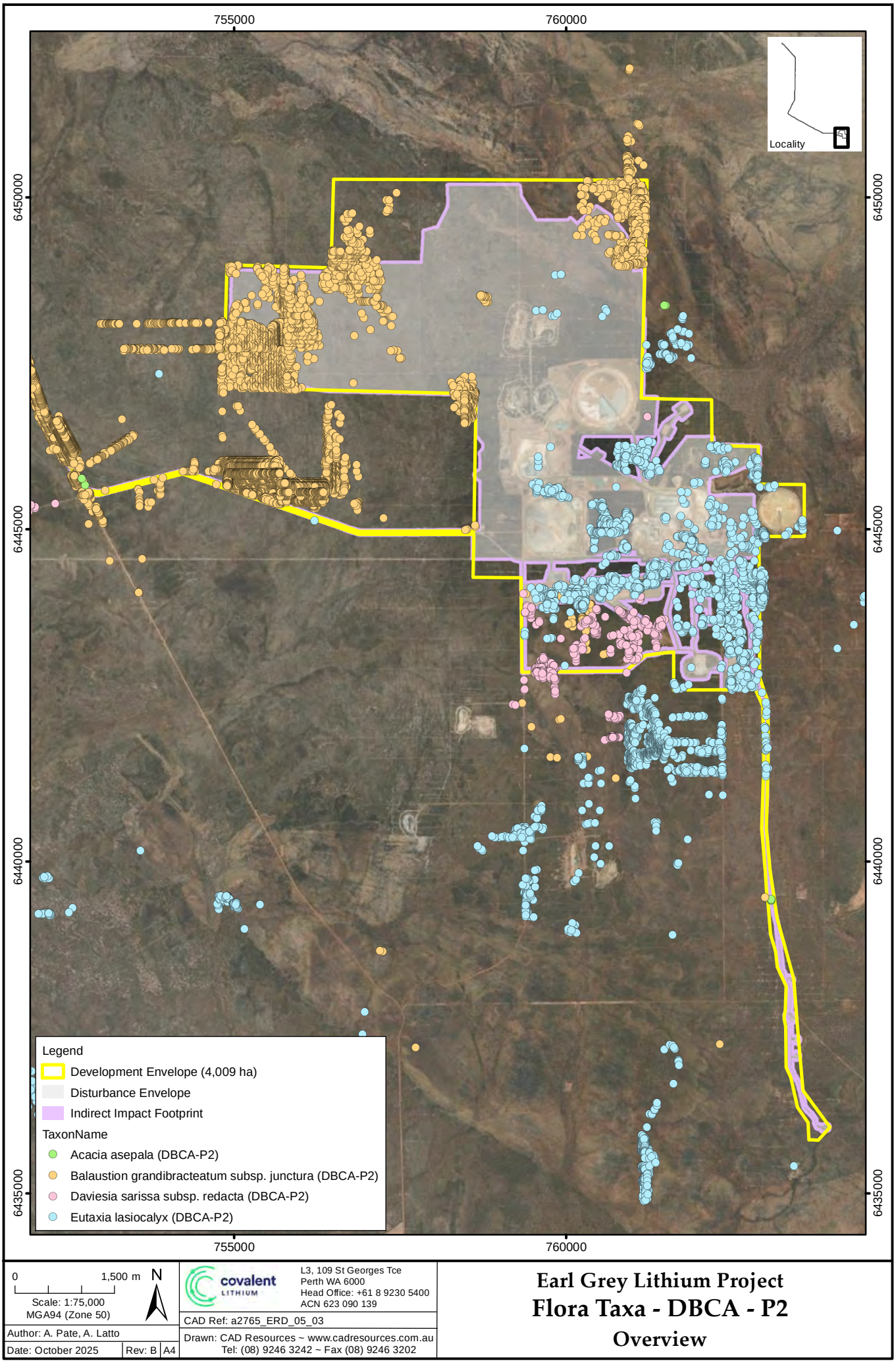
Earl Grey Lithium Project
Flora Taxa - DBCA - P1
Overview - sheet 2 of 2

Figure 1-7: Flora Taxa – DBCA P1 (2 of 2)



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

0 1,500 m

Scale: 1:75,000
MGA94 (Zone 50)

N

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Date: October 2025 | Rev: B | A4

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Tel: (08) 9246 3242 ~ Fax (08) 9246 3202

Earl Grey Lithium Project
Flora Taxa - DBCA - P2
Overview

Figure 1-8 Flora Taxa - DBCA - P2

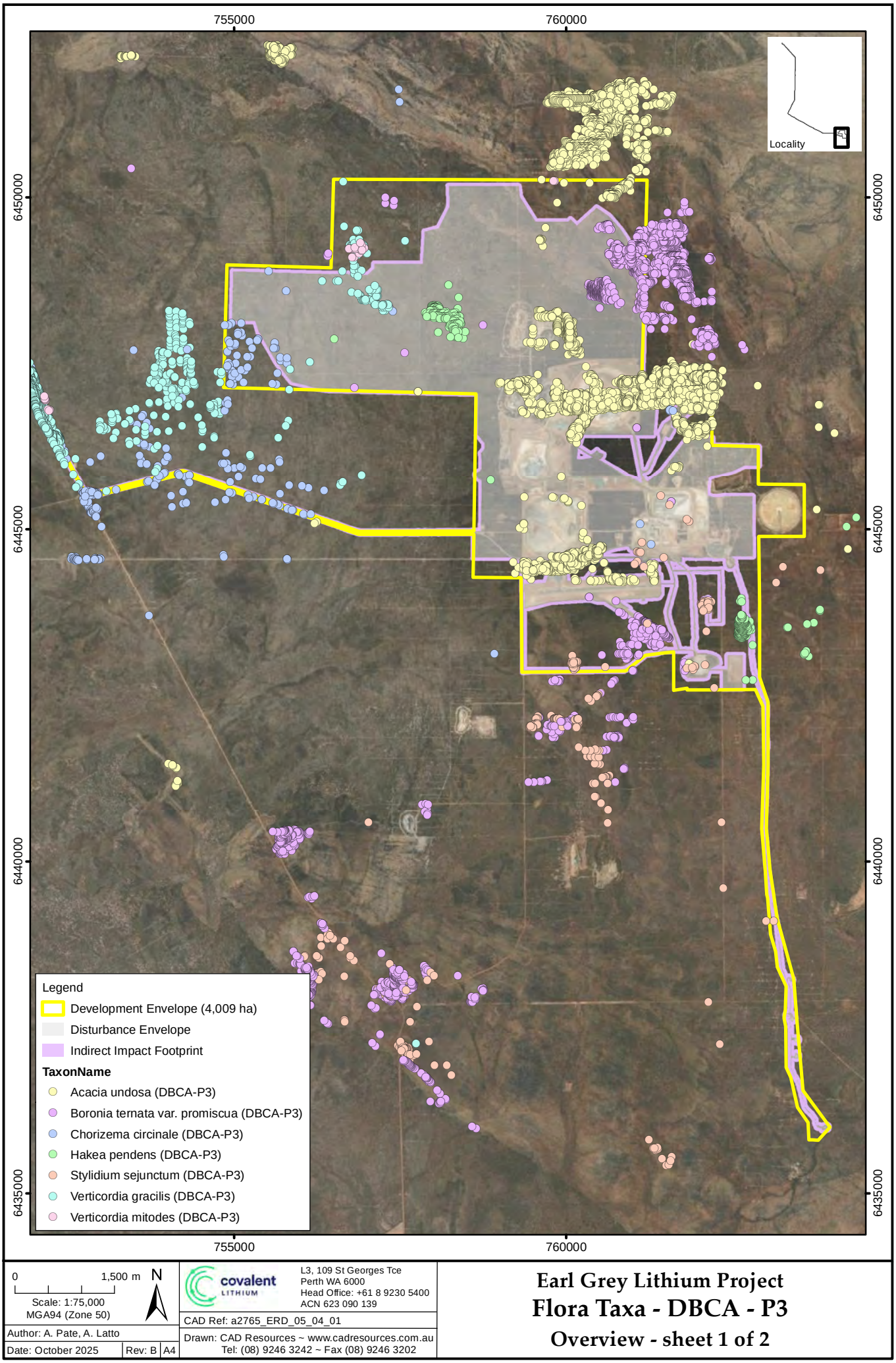

Figure 1-9 Flora Taxa - DBCA – P3

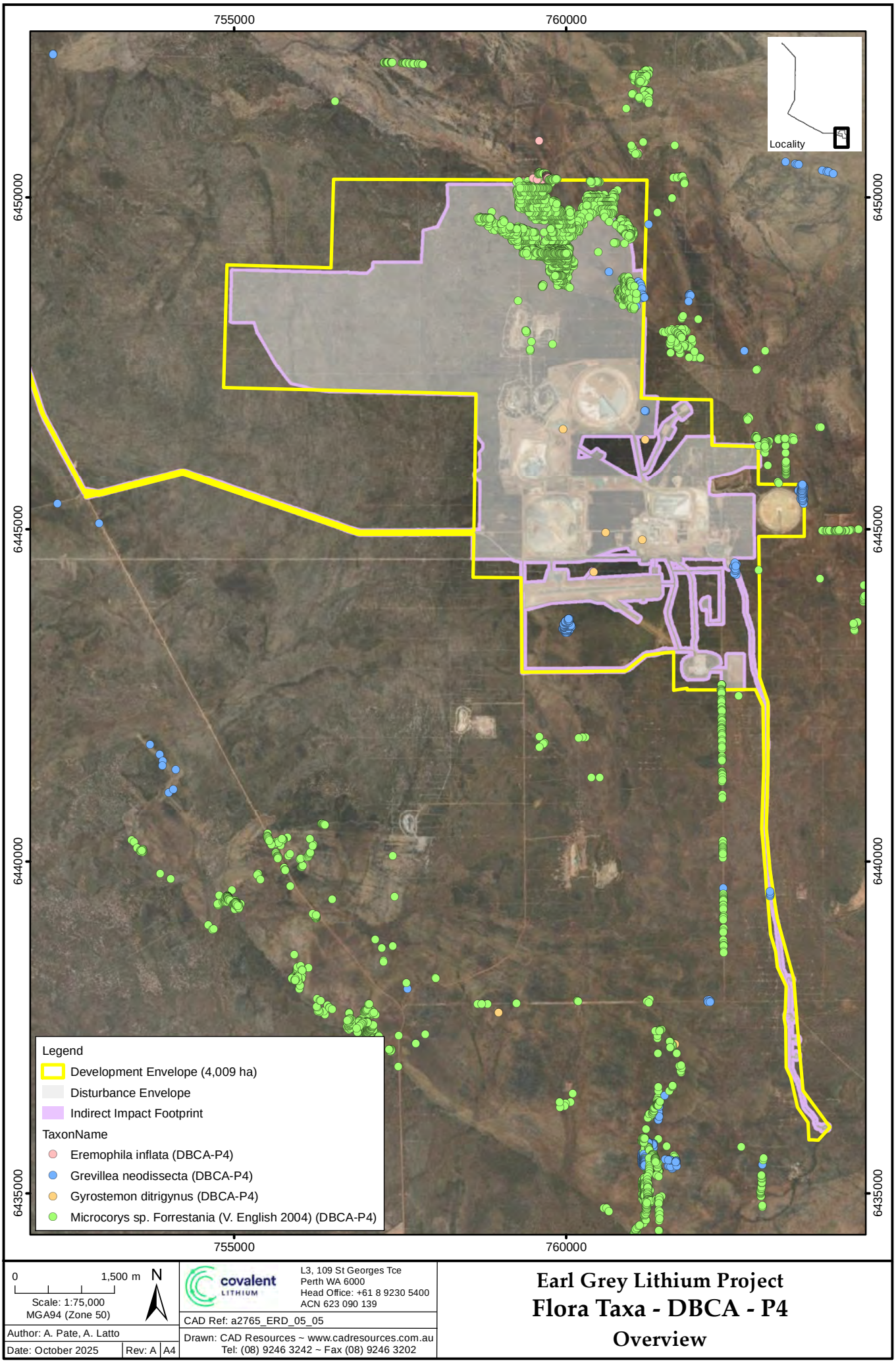

Figure 1-10 Flora Taxa - DBCA P3

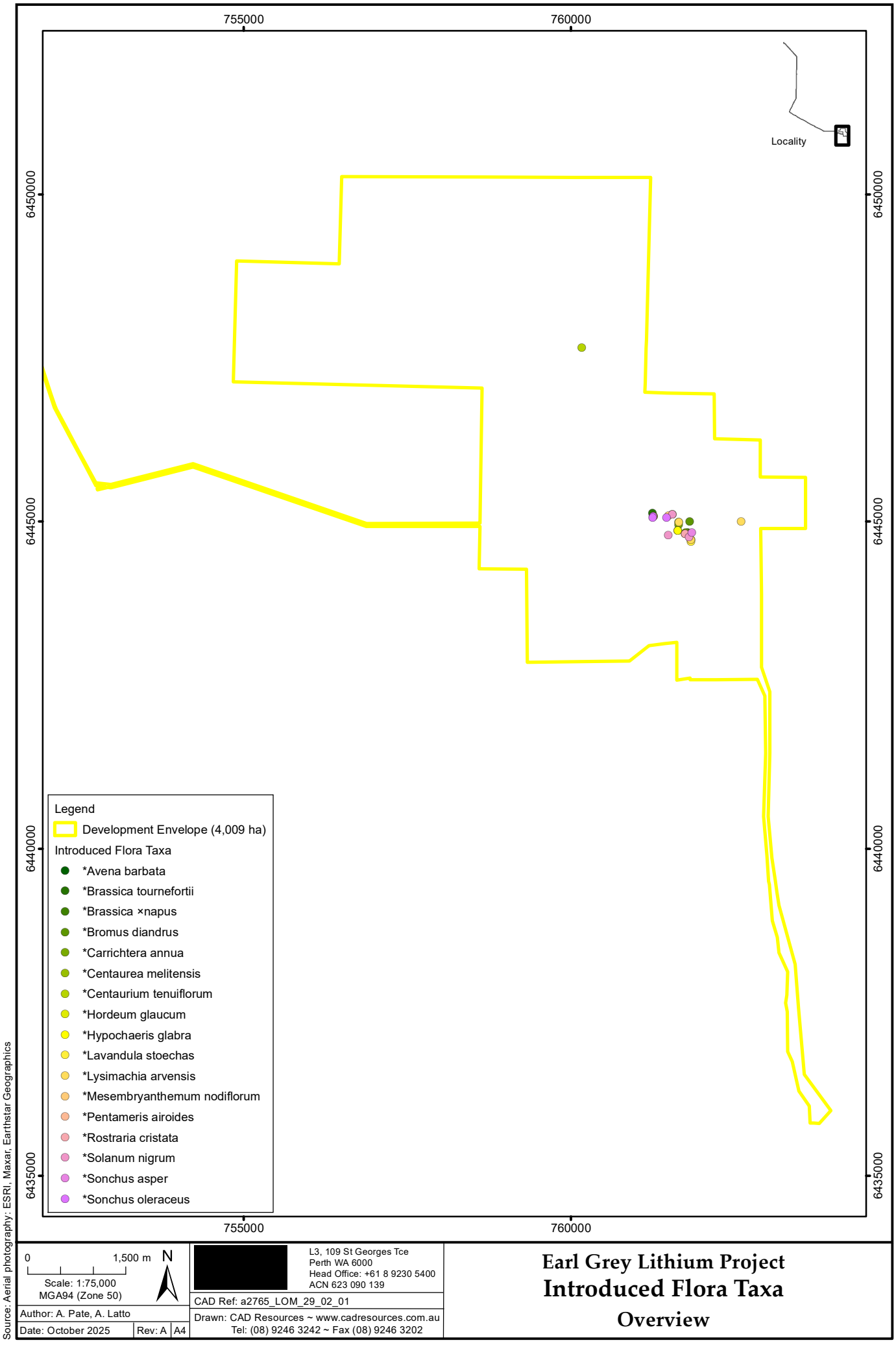

Figure 1-11 Flora Taxa - Introduced

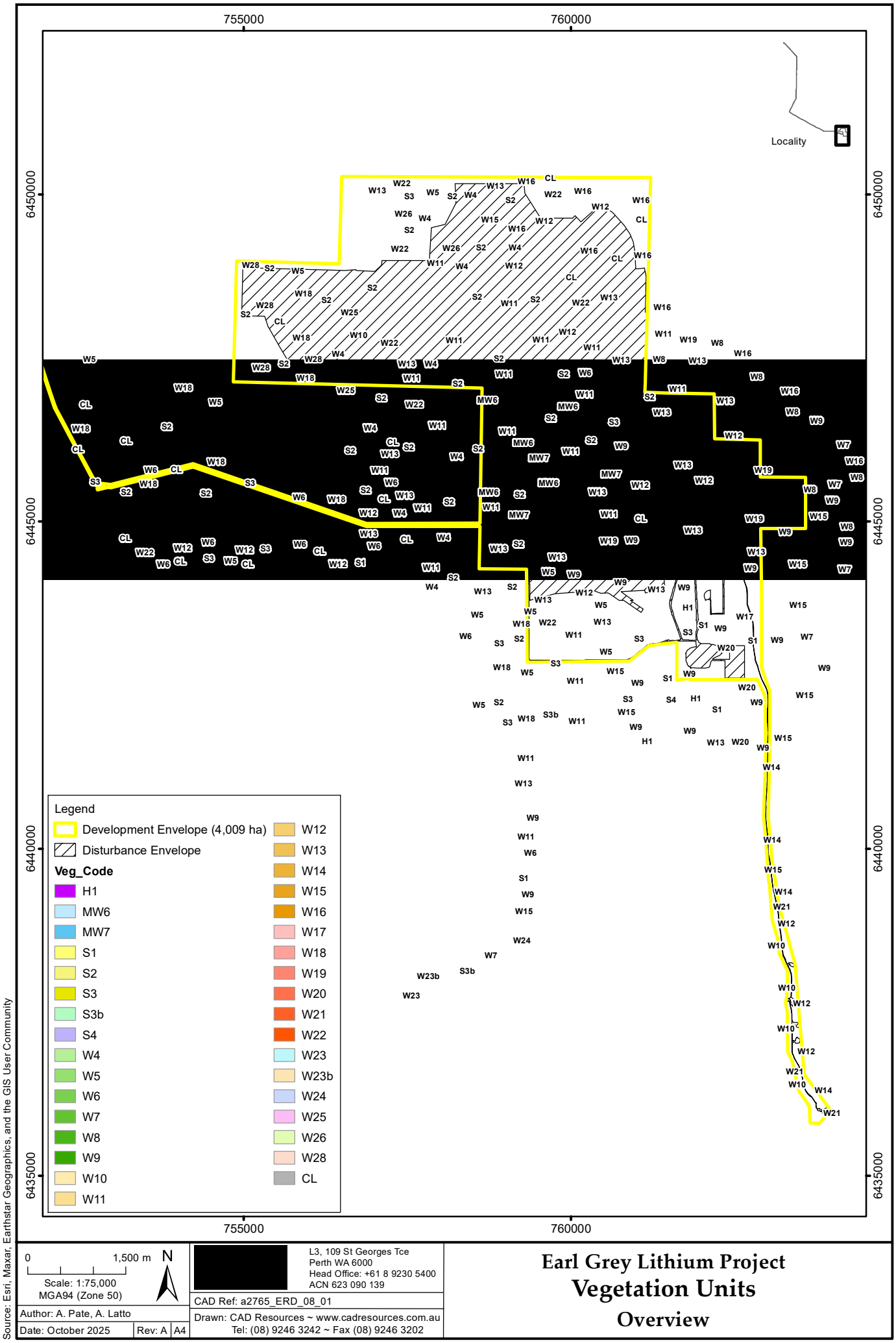

Figure 1-12 Vegetation Units

Figure 1-13 Vegetation Units (Legend)

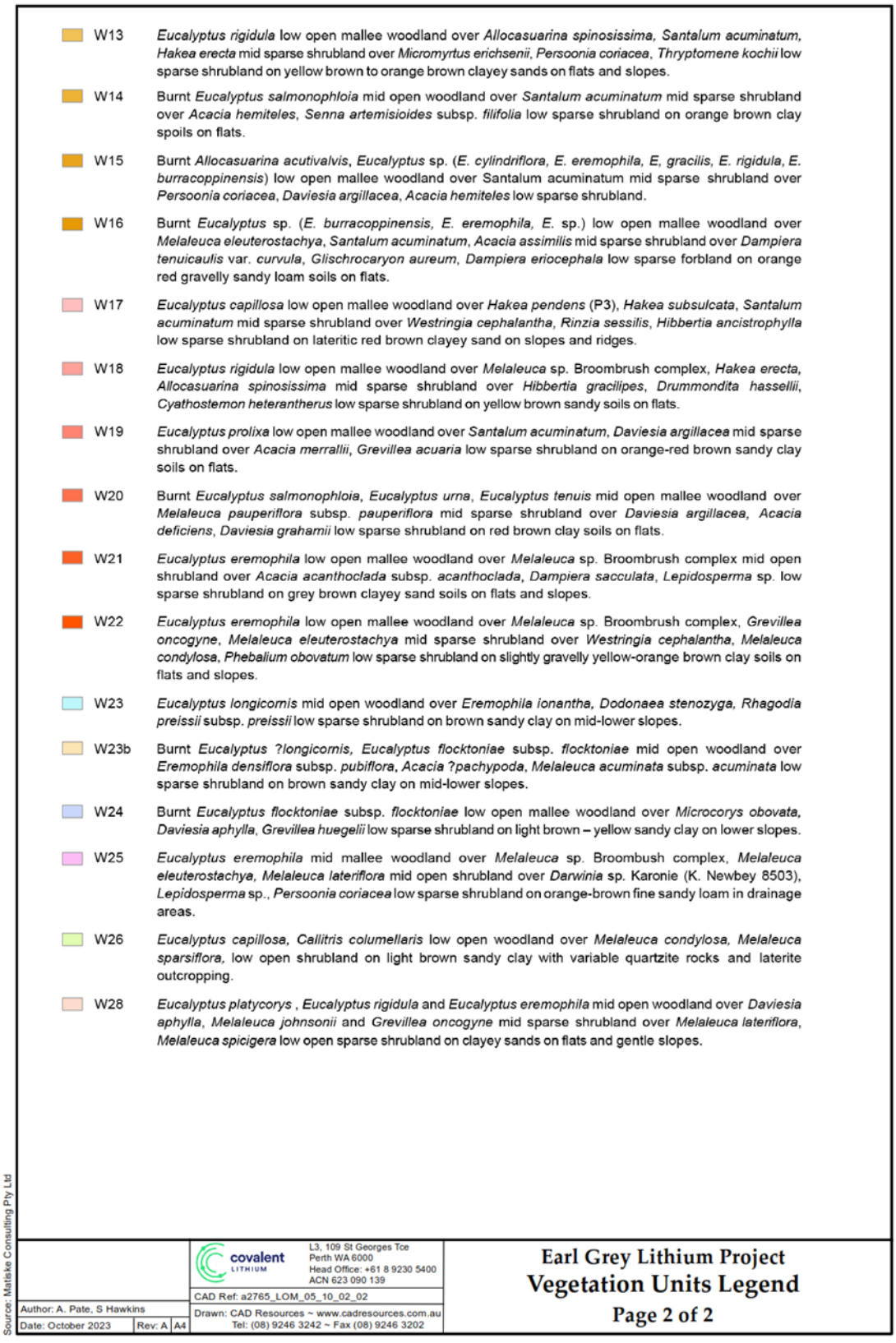

Figure 1-14 Vegetation Units (Legend)

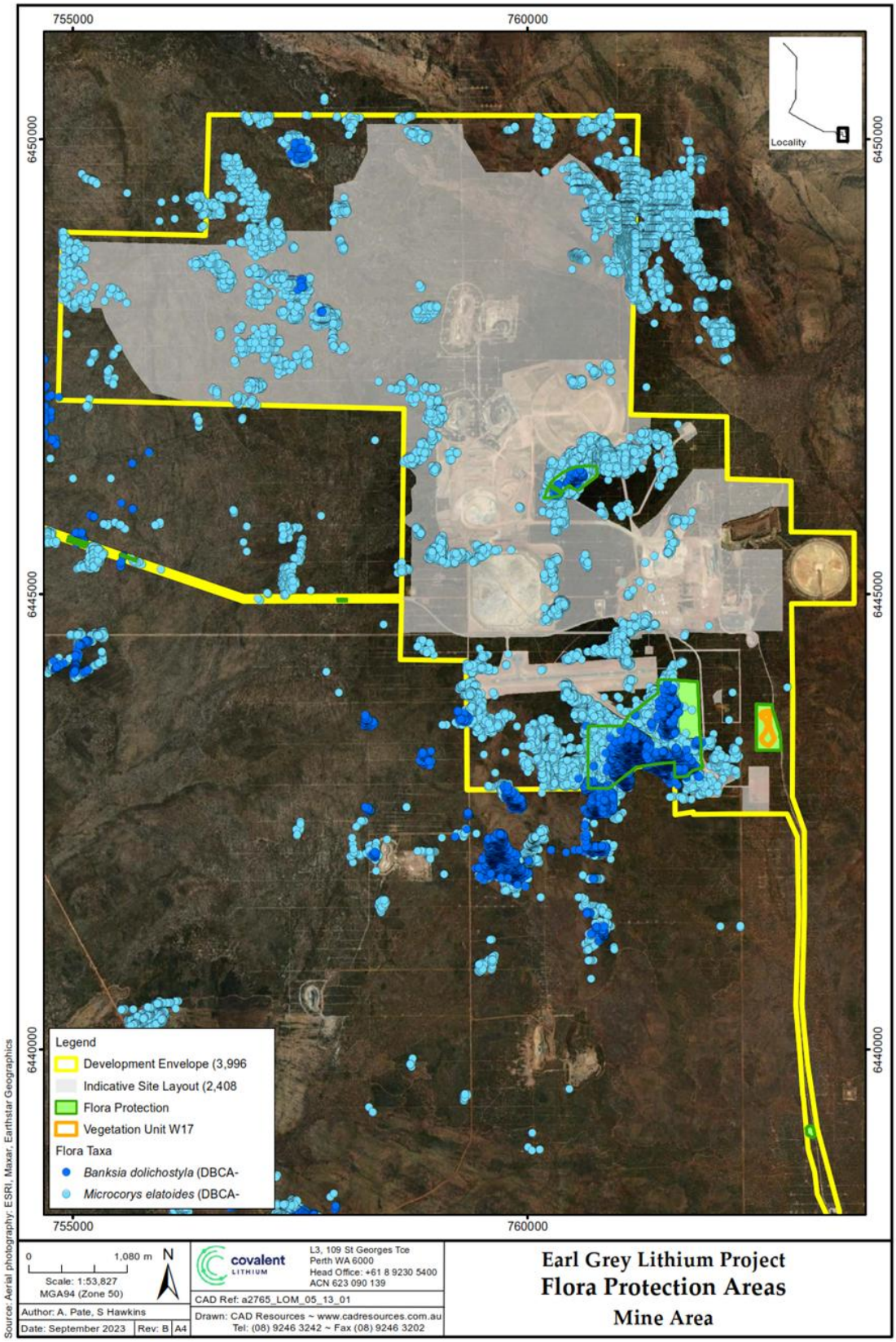

Figure 1-15: Original Flora Exclusion Zones (MS1199) pre LOM Proposal

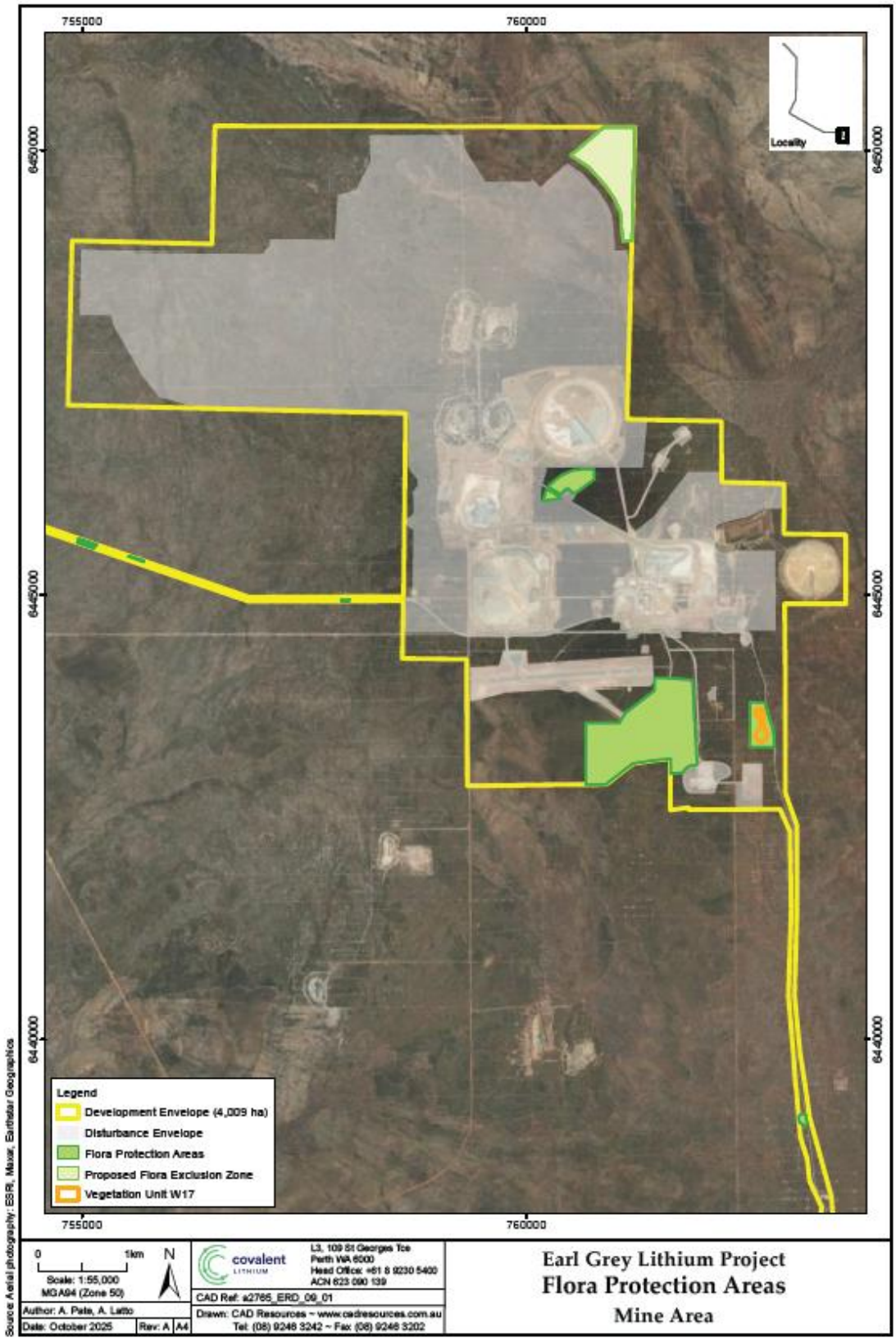

Figure 1-16: Revised Flora Exclusions Zones for Life of Mine

Table 1-3: Flora Species recorded within Flora Protection Zones

FLORA SPECIES	CONSERVATION STATUS	NO. INDIVIDUALS IN FEZ'S
Banksia dolichostyla	EPBC-V, BC-V	5,308
Acacia lachnocarpa	DBCA-P1	233
Brachyloma stenolobum	DBCA-P1	6
Chamelaucium sp. Mt Holland (G. Cockerton & G.Grigg 780)	DBCA-P1	2,919
Eutaxia North Ironcap (P. Armstrong PA 06/898)	DBCA-P1	220
Grevillea lissopleura	DBCA-P1	498
Grevillea marriottii	DBCA-P1	25
Hibbertia hapalophylla	DBCA-P1	1
Hibbertia tuberculata	DBCA-P1	1,082
Labichea rossii	DBCA-P1	640
Microcorys elatoides	DBCA-P1	19,659
Microcorys sp. Mt Holland broad-leaf	DBCA-P1	3,255
Thryptomene sp. Hyden	DBCA-P1	1,149
Daviesia sarissa ssp. *redacta*	DBCA-P2	187
Eutaxia lasiocalyx	DBCA-P2	236
Orianthera exilis	DBCA-P2	1
Acacia undosa	DBCA-P3	5,022
Boronia ternata var. *promiscua*	DBCA-P3	1,274
Chorizema circinale	DBCA-P3	1
Hakea pendens	DBCA-P3	1,124
Stylidium sejunctum	DBCA-P3	7
Verticordia stenopetala	DBCA-P3	16

(Values correct as at November 2022).

1.4.2.1 Introduced Flora (Weeds)

The biological surveys recorded 17 introduced flora taxa (weeds) within the Development Envelope, as identified by Figure 1-11. The majority of introduced flora are associated with the existing cleared / disturbed land areas of the abandoned Mt Holland Mine Site.

Introduced flora may compete with native flora taxa for resources (e.g. space, water, nutrients), alter the diversity and/or structure within native vegetation units, and degrade the quality of available fauna habitat.

The implementation of hygiene protocols during construction and operations will be necessary to prevent the introduction and spread of new introduced species into the FEZs.

1.4.2.2 Pathogens

Plant pathogens, particularly those of the *Phytophthora* genus, require hygiene protocols during construction and operations will be necessary to prevent the introduction and spread. Over 60 species of Phytophthora have been detected in WA (DBCA 2022), including both introduced and native *Phytophthora* species.

Phytophthora is a water mould which can spread through surface water (including run-off) and in the movement of soils by people, vehicles and animals. As identified by DBCA (2022), under optimal conditions (moist and warm) *Phytophthora* produces zoospores in large numbers which adhere to and infect plant roots producing mycelium. The Phytophthora mycelium draws nutrients from plant cells fuelling further growth and reproduction of the pathogen but killing the plant cells in the process (and killing the entire plant if extensively infected where water and nutrients to the crown are cut-off).

Phytophthora cinnamomi is the most commonly known *Phytophthora* species in WA, with potentially susceptible areas occurring where rainfall is ≥ 400 mm/y. As rainfall for the area of the Proposal is < 300 mm/y, *Phytophthora cinnamomi* is considered of low potential risk (unlikely) for the Proposal.

Phytophthora arenaria has been recovered exclusively (restricted) from natural Kwongan vegetation on the coastal sand plains of south-west WA, where its adaptation to this ecosystem suggests is native to WA (Rea *et al*. 2011 cited in Simamora *et al.* 2015). Noting the substantial separation distance and the soil/vegetation types for the coastal sand plains, *Phytophthora arenaria* is considered of low potential risk (unlikely) for the Proposal.

Phytophthora boodjera sp. nov. (closely related to *Phytophthora arenaria*) has only recently been found in WA in seedlings from plant production nurseries and from declining trees in disturbed urban landscapes in the Perth metropolitan area (Mt Claremont, Dalkeith, Kensington, Shenton Park, Floreat, Stirling), Darling Scarp (Gingin, York, Northam) the Wheatbelt (Kulin, Tincurrin, Toolibin Lake, Badgebup) and the south-coast (Ravensthorpe) (Simamora *et al.* 2015 Simamora *et al.* 2018). Noting the nearest identified recording of *Phytophthora boodjera* sp. nov. at Kulin is located > 150 km south-west of the Proposal (and with expected differences in soils, vegetation and rainfall), *Phytophthora boodjera* sp. nov. is considered of low potential risk (unlikely) for the Proposal.

Whilst noting plant pathogens, such as *Phytophthora*, are considered of low potential risk (unlikely) for the Proposal, standard hygiene protocols (clean on entry requirements) to be implemented during construction and operation of the Proposal, will minimise any residual risk of introduction or spread of such plant pathogens.

1.4.2.3 Fire

Prior to January 2025, no fire has significantly altered the native vegetation within the Development Envelope since exploration commenced in 2016.

Fires as a result of construction and operations will be mitigated as far as practicable with protocols implemented by the onsite emergency response team throughout the life of the Proposal.

1.4.2.4 Dust

Fugitive dust emissions from vegetation clearing, disturbed areas, mine pit excavation, crushing and road use have been identified as a potential indirect impact to vegetation within the Development Envelope.

Dust deposition gauges are considered the most appropriate means by which to measure dust fall on flora and vegetation within the Development Envelope. Dust deposition gauges will be installed and monitored in accordance with Australian Standard AS/NZS 3580.10.1:2003 methods for sampling and analysis of ambient air. Results will be considered in association with the results of flora and vegetation health and condition monitoring (outlined in Section 2.4.1 and Section 2.4.2) to manage dust emissions from mining activities and mitigate potential adverse impacts to flora and vegetation within the Development Envelope (with specific focus on protections within the FEZs).

1.4.3 Key Assumptions and Uncertainties

The key assumptions and uncertainties are:

Assumptions

- Biological surveys provide sufficient information to confirm the extent of conservation significant flora within the Development Envelope and FEZs.

- Targeted biological surveys for 'Threatened' flora as outlined in the *Biodiversity Conservation Act 2016* (WA) and DBCA-classified 'Priority' flora are considered adequate to characterise the populations within Development Envelope and FEZs.
- The biological surveys are of suitable quality to identify any Proposal related- direct or indirect impacts to flora and vegetation within the FEZs.

Uncertainties

- The extent to which natural climatic factors outside of Covalent's control will affect the spread of dust, weeds and fire within the Development Envelope (including into the FEZs).
- The extent to which dust generated from implementation of the Proposal will travel from the source (mining and processing operations) to receptor (flora and vegetation).
- The level of dust deposition (mass) that will have the potential to indirectly impact vegetation.
- The resilience of conservation significant flora species to dust deposition.
- The extent to which natural climatic factors outside of Covalent's control will impact on the health and extent of conservation significant flora within the Development Envelope.

1.4.4 Rationale for Choice of Provisions

The mitigation hierarchy is based on the objective of avoiding direct impacts and minimising indirect impacts within the Development Envelope (Table 1-1), with a primary focus on protecting the flora and vegetation values within the FEZs (which area excluded from mining operations).

The key mechanism by which direct impacts may occur to the FEZs is unauthorised clearing. Management measures mentioned by Section 1.3.3.2 will avoid vegetation clearing by limiting access to the area. The key outcome will be to ensure there is no vegetation clearing within the FEZs (Threshold Criteria) and should there be failures of the management measures (Section 2) without causing a direct impact on the FEZs, this will serve as an early warning trigger (Trigger Criteria) (e.g. clearing within the Development Envelope, but outside of the FEZs without an internally approved clearing permit or unauthorised access to a FEZs).

The assessment process outlined by Section 1.1.1 identified dust emissions, weeds and fire as potential sources of indirect effects on the flora and vegetation of the FEZs, and as a result the Proposal approval includes conditions for their management. It is not known at what level dust and weeds may impact the vegetation communities of the FEZs and for this reason Trigger Criteria and Threshold Criteria have not been prescribed for these aspects, with management objectives and targets provided instead (Section 2.2). Monitoring of dust and weeds as outlined by Section 2.4 will be undertaken in conjunction with flora and vegetation health and condition monitoring to understand if any indirect effects to vegetation of the FEZs are Proposal related-.

Plant health and condition monitoring will be undertaken on both a qualitative and quantitative basis. Trigger Criteria and Threshold Criteria have been developed based on the outcomes of this monitoring (Section 2.1). Qualitative monitoring will include a scoring system for a visual assessment of plant health. Quantitative monitoring will be conducted using a plant pigment efficiency analyser (PEA) which measures chlorophyll inflorescence and photosynthetic function or alternative method in consultation with DBCA and DWER. Monitoring quadrats with at least five representative species will be placed both within the FEZs and control sites to allow for a statistical comparison. A potential adverse impact may be apparent in the event of a statistically significant difference in the monitoring results between the FEZ and a control site (non-impact area). This approach has been demonstrated and accepted at other mine sites within the mid-west region for this purpose. Monitoring for plant health is outlined further by Section 2.4.

Periodic review of the management approach will be undertaken based on monitoring results and incident data. Adaptive management measures will be implemented with a view to achieving continuous improvement in managing flora and vegetation values within the FEZs.

1.4.4.1 Focus on Avoidance

Covalent's internal vegetation clearing procedure and permit will be utilised to control clearing within the Development Envelope.

Direct impacts (unauthorised clearing) within the FEZs will be avoided to meet the environmental outcomes of Condition 2-1(2) of MS 1199 and any future approval conditions. Furthermore, the FEZs will be surveyed and delineated by an appropriate means (for example flagging tape, fencing or signage) to prevent unauthorised access. Access will be limited to foot access only or vehicle access only to existing cleared tracks and controlled by a procedure and permitting process. This will aim to ensure the area is only accessed for monitoring or rehabilitation activities to meet the requirement of this FVEMP. All personnel will be made aware of the requirement to avoid the FEZs through Covalent's site induction process.

1.4.4.2 Minimising Potential Impacts

The potential for factors that may lead to potential adverse direct and indirect impacts within the broader Development Envelope also needs to be addressed, in particular for DBCA-classified 'Priority' flora taxa in order to meet the environmental outcome of Condition 2-1(1), Condition 2-1(3), Condition 2-1(4), Condition 2-2(1), Condition 2-2(2) and Condition 2-4(2) of MS 1199 and any future approval conditions.

Direct impacts within the Development Envelope have been minimised through modifications to the Indicative Site Layout which seek to avoid or minimise the clearing of DBCA-classified 'Priority' flora taxa. Modifications to the Indicative Site Layout will seek to balance the operational requirements with the potential opportunities to modify the layout to achieve a reduction in vegetation clearing and/or flora impacts. To achieve this, Covalent's mine planning and environment personnel together consider the operational area requirements overlain with the recorded flora and vegetation values in order to confirm/alter the proposed clearing areas. The location of the determined clearing areas are recorded on Covalent's databases (i.e. geographical information systems (GIS) and spreadsheets) including records of the DBCA-classified 'Priority' flora taxa to be cleared.

Potential indirect impacts such as dust, fire and weeds will be minimised to the maximum extent practicable using standard mining operational management practices as required within the Construction and Operations Environmental Management Plan to suppress dust and minimise invasive plant species and impacts from altered surface hydrology as described in Section 2.2.

2. Management Plan Provisions

This FVEMP outlines both outcomes-based and management-based provisions.

Outcome-based provisions are performance-based and may be used where the part of the environment is capable of objective measurement and reporting. Therefore, outcome-based provisions have been established to specify Trigger Criteria and Threshold Criteria on direct impacts and to ensure the Proposal achieves acceptable environmental outcomes.

Management-based provisions relate to management actions and may be used where the part of the environment is not capable of objective measurement and reporting. Therefore, management-based provisions have been established to specify management actions and targets, particularly for indirect impacts that are non-quantifiable. In addition, management-based provisions will assist with onsite management in achieving the outcome-based environmental criteria. Early response triggers for management-based provisions are detailed in Table 2-4.

2.1 Outcome-Based Provisions

Environmental criteria, triggers and thresholds have been established for direct impacts, with the justification provided in Table 2-1, and the environmental management plan details provided in Table 2-2.

Table 2-1: Environmental Criteria Justification

ENVIRONMENTAL CRITERIA (OUTCOME)	TRIGGER AND THRESHOLD	JUSTIFICATION
No Proposal-related direct impact to flora and vegetation within a FEZ resulting in an adverse impact to flora and vegetation.	**Trigger Criteria:** • Vegetation clearing without an authorised internal permit within the Development Envelope, but outside of the FEZs • Authorised clearing has occurred within 5 m of a FEZ • Unauthorised access by personnel to a FEZ	The means by which a direct Proposal related- impact may occur to a FEZ is vegetation clearing. If clearing occurs which has not received an approved internal clearing permit within the Development Envelope, but outside of the FEZ, it is considered a non-compliance or failure of the procedure which is in place to prevent vegetation clearing of the FEZs. Similarly, if personnel access a FEZ without authorisation, it also represents a failure in the procedure and permit to control access to the area.
	Threshold Criteria: • Proposal related- direct vegetation disturbance of any kind or extent within a FEZ resulting in the mortality of flora and vegetation.	The objective of the key environmental outcome is for no Proposal related- direct impacts to flora and vegetation within the FEZ. Threshold criteria of no Proposal related- disturbance within FEZ has been chosen as it could lead to mortality of *Banksia dolichostyla* and other priority listed flora within these areas. Exceeding the threshold criteria will lead to investigation, reporting and corrective actions of the incident.
No Proposal-related indirect impact to flora and vegetation within a FEZ resulting in an adverse impact	**Trigger Criteria:** • Statistically significant reduction in mean condition ratings (more than 20% difference for qualitative or quantitative) of vegetation health within a FEZ in comparison to control sites, or a mean Fv/FM <0.6 (index of chlorophyll inflorescence)	Vegetation health monitoring will be undertaken and if a decline in health is identified, the response actions will allow investigation to determine if the causes are attributed to the Proposal, and if necessary, allow for further management measures to meet the environmental outcome. The triggers for species health decline will be compared with control monitoring to allow consideration for climatic variation such as rainfall and factors outside of Covalent's control.
	Threshold Criteria: • Flora and vegetation within a FEZ experiences a statistically significant higher mortality rate than that of control sites (where that mortality is not attributed to direct or Proposal impacts). • Conservation significant species within a FEZ experiences a statistically significant higher foliage cover loss rate than that of control sites (where that foliage cover loss is not attributed to direct or Proposal impacts).	The objective of the key environmental outcome Is for no Proposal related- indirect adverse impacts to flora and vegetation within the FEZs, where adverse is defined as an impact likely to change the conservation status or significantly change the local population numbers of a species. It is widely known that all plants experience a natural rate of mortality. By comparing the rate of mortality of the FEZs, it may be deduced if the FEZs is experiencing natural rates of mortality. If the rate of mortality appears higher than control sites, it should be investigated, reported and corrective actions implemented if it is attributable to proposal related indirect effects. However, It should be noted that the extent of mortality will determine if the key environmental outcome is not being achieved as it may not mean the impact can be defined as 'adverse'. By reporting a difference Covalent is adopting a precautionary approach. Through monitoring any significant foliage cover loss of conservation significant species, any potential degradation of individual health can be identified, investigated and potentially rectified prior to mortality.

[1] Impact to Threatened flora as outlined in the *Biodiversity Conservation Act* 2016 is defined as 'taking all or part of an individual'. Damage to all or any part of a Threatened flora individual requires a Section 40 authorisation.

Table 2-2: Outcome-based Provisions

ENVIRONMENTAL OBJECTIVE[1]	ENVIRONMENTAL CRITERIA	RESPONSE ACTIONS	MONITORING	REPORTING
No Proposal related- direct impact to flora and vegetation within a FEZ	**Trigger Criteria:** • Vegetation clearing without an authorised internal permit within the Development Envelope, but outside of the FEZs **Trigger Criteria:** • Unauthorised access by personnel to a FEZ	**Trigger Response:** • Report internally as an incident in accordance with internal procedures. • Review management strategies and implement changes to prevent future occurrences. Management measures may include: ○ Undertake incident investigation ○ Review proximity of potential disturbance within/to FEZ. Should disturbance occur to threatened or Priority flora as a result of unauthorised access, report to the Department of Water and Environmental Regulation (DWER) within 7 days of identification ○ Review and upgrade FEZ signage/delineation where appropriate ○ Audit and review of training and staff inductions (i.e. Increase in staff training and awareness to include information on FEZs, legislative requirements, appropriate clearing procedures) ○ Ground disturbance permit training competency training ○ Review impact of unauthorised clearing and report any non-compliance to DWER CEO within 7 days of identification ○ Undertake rehabilitation of unauthorised clearing (i.e. disturbance from vehicle tracks, vegetation clearing) by appropriately qualified personnel as required, in accordance with rehabilitation procedure.	• Survey records of all clearing undertaken during operation of the Proposal.	• Annual reporting. • Clearing Register • Internal clearing permits. • Survey data • Incident reports.
	Threshold Criteria: • Proposal related direct vegetation disturbance of any kind or extent within a FEZ resulting in the mortality of flora and vegetation. For example, vegetation clearing initiated by Covalent's mining activities.	**Threshold Response:** • Cease clearing activities • Immediately report internally • Undertake investigation to determine source of and extent of disturbance and if the disturbance is likely to result in the key environmental outcome not being achieved (i.e. potential environmental harm or alteration of the environment). • If disturbance is attributed to Proposal activities, undertake a review of layout to determine if impact can be minimised, development actions to prevent a recurrence and communicate findings to relevant personnel • A suitably qualified flora specialist to undertake an assessment of impact • Notification to DWER CEO within 7 days (Condition 2-7(1) of MS 1199) and any future conditions of approval. • Notification to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) and DBCA within 7 days • If necessary (deemed to be proposal related), consider measures to prevent an incident occurring and/or remediation strategies to address the impact. Report submitted to DWER with remediation actions proposed. Management measures may include the following: ○ Audit and review of training and staff inductions (ie. Increase in staff training and awareness to include information on FEZ's, legislative requirements, appropriate clearing procedures, 5 m trigger response criteria for authorised clearing approaching a FEZ) ○ Undertake rehabilitation of unauthorised access as required in accordance with internal rehabilitation procedures. • Engagement with key stakeholders including DBCA, and relevant specialists where required to determine key actions. Provide a report of the incident to DWER CEO as detailed by Condition 2-7(5) of MS 1199 within 21 days (refer to Condition 2-7(5)(a)-(f) MS1199 and any future conditions of approval, for report detail requirements). Implementation of the threshold response actions will commence within 24 hours of the exceedance being notified to DWER CEO, with implementation of the threshold response actions to continue (as appropriate) until the DWER CEO has confirmed that it is demonstrated the threshold criteria are being met and the threshold response actions are no longer required.		

ENVIRONMENTAL OBJECTIVE[1]	ENVIRONMENTAL CRITERIA	RESPONSE ACTIONS	MONITORING	REPORTING

No Proposal related- indirect impact to flora and vegetation within a FEZ resulting in an adverse impact	**Trigger Criteria:**
	• Statistically significant reduction in mean condition ratings (more than 20% difference for qualitative or quantitative) of vegetation health within a FEZ in comparison to control sites, or a mean Fv/FM <0.6 (index of chlorophyll inflorescence)
		Trigger Response:
		• Report internally as an incident in accordance with site procedures.
		• Review all monitoring data (including control sites) in relation to management measures (Table 2.3) and any other available data such as weather and climate to determine if the decrease is due to proposal related impacts.
		• Review dust, weather and weed monitoring to compare FEZ and control sites. Determine whether the changes observed in the impact sites are comparable to the observations in the control sites.
		• Investigate potential causes for the observed decline in vegetation health which may include but are not limited to:
		  ○ seasonal conditions (e.g., rainfall and temperatures)
		  ○ effectiveness of weed control
		  ○ spatial variation (near-impact areas) versus sites located further from impact
		• Develop strategies based on the outcomes of the investigation to prevent a recurrence and if necessary or possible reverse the decline in health of the FEZ flora and vegetation. Management measures may include the following:
		• Change in frequency of vegetation health monitoring
		Increase in staff training and awareness on factors which have implications to vegetation health for example dust, changes to hydrology
			• Quarterly observations of plant health on commencement of Proposal for the first 24 months. Following the development of a strong dataset over this period, the monitoring methodology, frequency and monitoring sites has been reviewed and is now biannual.	• Annual reporting
				• Biannual vegetation monitoring.

	Threshold Criteria: • Flora and vegetation within a FEZ experiences a statistically significant higher mortality rate than that of control sites (where that mortality is not attributed to direct or Proposal impacts). • Conservation significant species within a FEZ experiences a statistically significant higher foliage cover loss rate than that of control sites (where that foliage cover loss is not attributed to direct or Proposal impacts).	**Threshold Response:** • Report internally as an incident • Investigate cause and extent of mortality and if it is likely to result in the key environmental outcome not being achieved (i.e. potential environmental harm or alteration of the environment) • If necessary (deemed to be proposal related) consider measures to prevent a re-occurrence of the incident and/or remediation strategies to address the impact • Notification to DWER CEO within 7 days (Condition 2-7(1) of MS 1199 and any future conditions of approval.) • Notification to DCCEEW and DBCA within 7 days • Engagement with key stakeholders including DBCA, and relevant specialists where required to determine key actions. • Provide a report of the incident to DWER CEO as detailed by Condition 2-7(5) of MS 1199 within 21 days (refer to Condition 2-7(5)(a)-(f) MS 1199 and any future conditions of approval, for report detail requirements). Implementation of the threshold response actions will commence within 24 hours of the exceedance being notified to DWER CEO, with implementation of the threshold response actions to continue (as appropriate) until the DWER CEO has confirmed that it is demonstrated the threshold criteria are being met and the threshold response actions are no longer required.		

2.2 Management-Based Provisions

Table 2-3 describes the management actions and targets to be undertaken assist in meeting the trigger and thresholds proposed in the outcome-based provisions and will be reviewed as part of the adaptive management process and revised as required.

Early response triggers have been established for management targets and are provided in Section 2.2.1.

Table 2-3: Management-based Provisions

MANAGEMENT OBJECTIVE	MANAGEMENT ACTION	MANAGEMENT TARGETS	MONITORING	REPORTING
No unauthorised clearing of native vegetation No unauthorised access within the FEZs	Avoidance • Implementation of an internal clearing permit procedure • Implementation of an internal procedure limiting access to FEZs by foot only or only by car where there is an existing track. • FEZs to be delineated with flagging tape, physical barrier, signage or similar to alert all personnel of their location • Inductions of all site personnel to include information on the location of FEZs, management targets, measures and expectations	• No unauthorised clearing within the Development Envelope or FEZs. • No unauthorised access to a FEZ.	• Clearing register. • Survey records of all clearing undertaken during operation of the Proposal.	• Annual reporting. • Clearing Register. • Internal clearing permits. • Survey data.
Dust deposition from mining and related activities is minimised	Covalent will minimise dust deposition on vegetation through: • Dust suppression on cleared areas • Maximise efficiency of loads when transporting ore or concentrate (including haul trucks and conveyers) • Use dust covers on machinery and dust suppressants on exposed areas where possible • Minimise open area footprint and rehabilitate or cover (using vegetation, rock, water and/or dust suppressant) exposed areas as soon as practicable • Design the mine layout to minimise dust emissions to FEZs where practicable • Access roads will be sealed with an emulsion or suitable alternative, as shown in Figure 2-1.	• Dust deposition (present as total insoluble matter) at any gauge in excess of 10 g/m^2/month.	• Dust deposition rates will be measured monthly using dust deposition gauges for the first 24 months from implementation of the Proposal, at the locations identified by Figure 2-2. The dataset gained will be reviewed to inform the dust monitoring regime for subsequent revisions of the FVEMP.	• Annual reporting. • Dust deposition monitoring. • Vegetation health monitoring. • Incident report of significant dust plumes.
Spread of weeds or dieback is minimised	Covalent will minimise the risk of introduction of invasive species and spread of dieback through: • Implementation of a vehicle hygiene procedure, dieback management procedure (if required from sampling results) and weed control • Development Envelope and FEZs will be surveyed for weeds periodically, so that any infestations of invasive species that establish can be eradicated before the plants can flower and set seed • *Phytophthora* (dieback) controls including signage and clean-down points (if required from sampling results), vehicle hygiene shall be implemented.	• Minimise new weeds introduced to site. • Prevent spread of weeds to FEZs. • Prevent spread of dieback onsite.	• Annual weed monitoring across Development Envelope. • Quarterly observations of plant health on commencement of Proposal for first 24 months. Following the development of a strong dataset over this period, the monitoring methodology, frequency and monitoring sites will be reviewed with a view to a reduction to a biannual monitoring program. • Quarterly health monitoring at vegetation quadrats within FEZs and control sites to include observations for weeds and if the presence of weeds is having a potential indirect impact.	• Annual reporting. • Vehicle hygiene certificates and auditing. • Invasive species control reports. • Aerial photos. • Incident reports.
Alteration of fire regimes is minimised	Covalent will contribute to fire management at the mine site and in the region through the following measures: • Internal procedures to prevent fires and manage the occurrence of fires due to operational activities (emergency response team, automated fire extinguishers on equipment, personnel trained to use fire-fighting equipment). • Implement fire management procedures (e.g. maintenance of fire breaks, Hot Work Permit system, firefighting training, Emergency Response Plan) • Firefighting equipment will be located on site and in vehicles • Lightning protection equipment will be installed as part of Proposal design where necessary • Coordination with DBCA and Department of Fire and Emergency Services (DFES) to undertake prescribed burns.	• Prevent fires attributed to mining and associated Proposal activities.	• Incident reports of fire. • Quarterly observations of plant health on commencement of Proposal for first 24 months. Following the development of a baseline dataset over this period, the monitoring frequency will be reviewed with a view to a reduction to a biannual monitoring program.	• Aerial photos. • Incident reports.
Alteration of surface hydrology is minimised	Covalent will ensure the appropriate design of infrastructure including: • Drainage measures designed and constructed to minimise changes to natural surface water flow, including diversion drains, rock cladding and contouring as required. • Rehabilitation and closure to follow contours of natural landforms	• Prevent changes to surface water hydrology attributed to mining and associated Proposal activities.	• Quarterly observations of plant health on commencement of Proposal for first 24 months. Following the development of a baseline dataset over this period, the monitoring frequency will be reviewed with a view to a reduction to a biannual monitoring program. • Health monitoring at vegetation quadrats within FEZs and control sites.	• Aerial photos. • Incident reports. • Annual reporting.

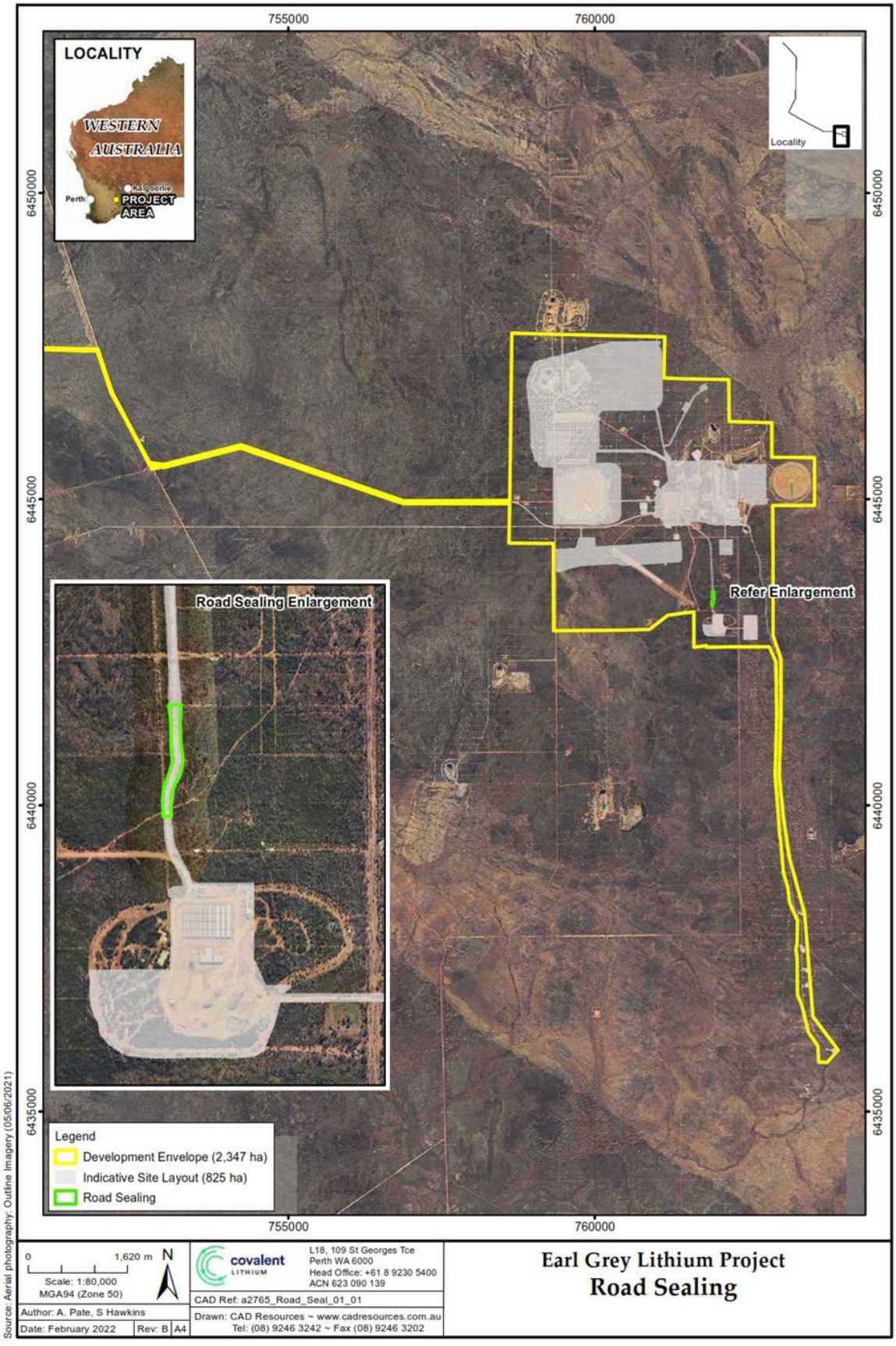

Figure 2-1 Dust Mitigation Measures

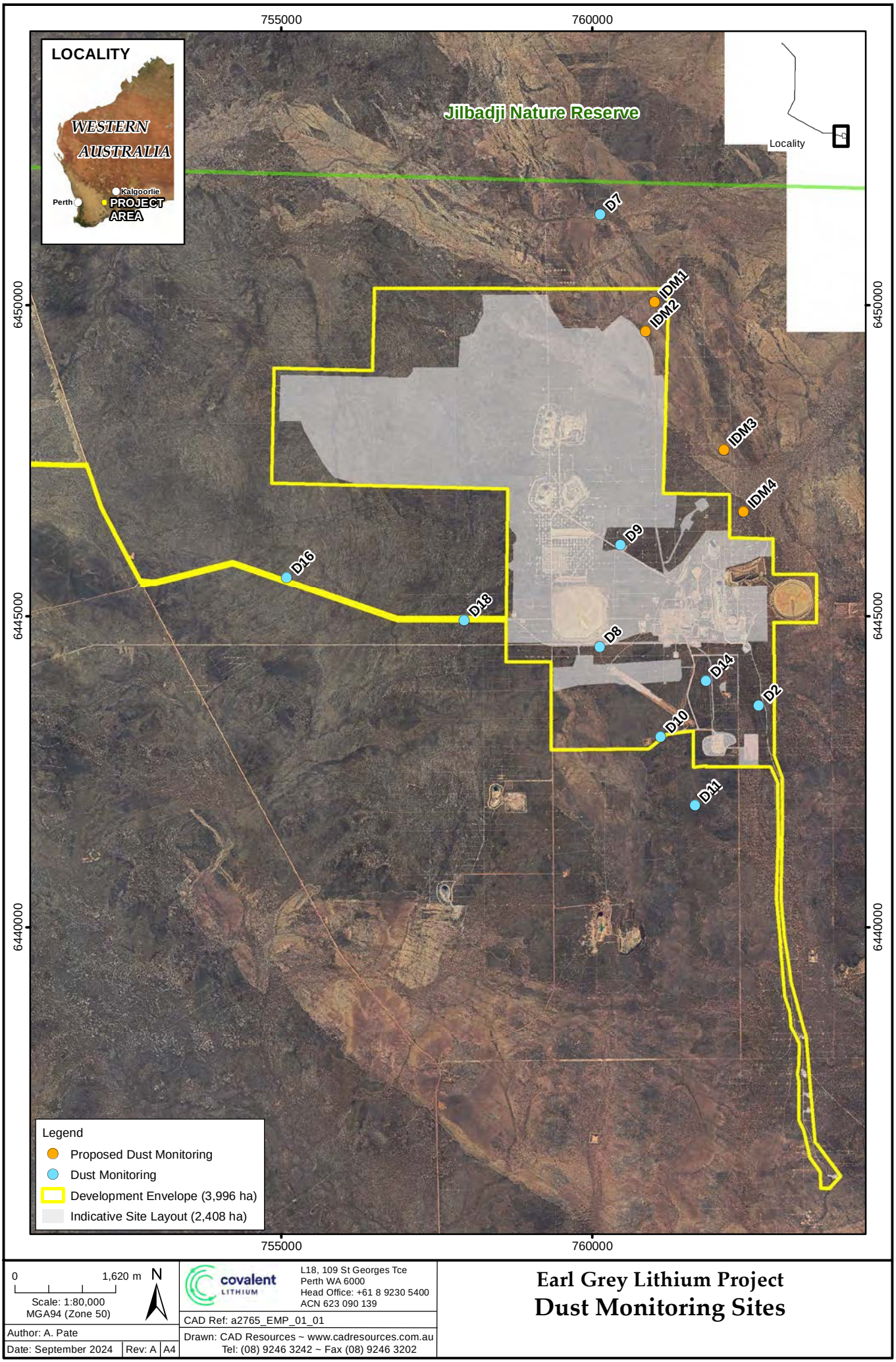

Figure 2-2 Dust Monitoring Locations

2.2.1 Early Response Triggers

Early response triggers have been established for the management-based provisions in Table 2-3, as shown in Table 2-4.

Table 2-4: Early Response Triggers and Actions

MANAGEMENT TARGETS	EARLY RESPONSE TRIGGER	EARLY RESPONSE ACTION	EARLY RESPONSE TRIGGER JUSTIFICATION
Minimisation of dust emissions	• Dust deposition results at a single FEZ site > 5 g/m^2/month of total insoluble matter, but < 10 g/m^2 /month of total insoluble matter for two consecutive months.	• Report internally that early response trigger has been met in accordance with internal procedures. • Review dust monitoring program. and investigate cause. Determine whether the dust deposition results reported at the impact site are comparable with control monitoring sites. If cause is attributable to proposal related activities, early trigger response actions may include the following: ○ Review dust mitigation measures ○ Investigate and determine an improvement strategy ○ If after the consecutive monitoring events, a threshold exceedance has not been identified, resume standard monitoring. If additional consecutive triggers are met, continue to implement improvement action.	Whilst total insoluble matter of 10 g/m^2 a month is the adopted management target for dust deposition, adopting an early response trigger limit will identify trends of increasing dust emissions. Also, managing dust deposition to total insoluble matter of 5 g/m^2 /month or less will reduce the risk of dust deposition leading to a decline in plant health or function.
Minimise new weeds introduced to site	• One new weed species recorded during annual monitoring but with "limited" to "negligible" coverage.	• Report internally that early response trigger has been met in accordance with internal procedures. • Review weed control programme and amend as required. • Staff training and awareness to include information on weed species and preventative measures such as vehicle/ weed hygiene procedures. • Review weed monitoring program. Trigger response actions may include the following: ○ Review monitoring frequency, adjust accordingly. ○ Adjust timing of monitoring if appropriate, so that infestations of invasive species that establish can be eradicated before the plants can flower and set seed. ○ Review suitability of weed monitoring locations, adjust accordingly. ○ Determine whether the changes observed are comparable with control monitoring sites.	The potential for indirect effect on the health of vegetation within the FEZs due to weed impacts is currently unknown as impacts to populations have not been quantified. As population monitoring data is gathered, trending will indicate any threats (including weeds) and acceptable population changes. In the interim, the early response trigger has been established to identify trends with relation to weeds that could result in a potential indirect impact to flora and vegetation of the FEZ and provide an indication if the management actions detailed in Table 2-3 require review.
Prevent fires attributed to mining and associated activities	• A Proposal-related fire occurrence within the Development Envelope that impacts on native vegetation.	• Report internally that early response trigger has been met in accordance with internal procedures. • Internal audit of fire management plan • Review fire mitigation strategies to limit spread of fire. • Staff training and awareness to include information on the prevention and management of fires. • Investigate the cause of the exceedance to determine if it is attributable to proposal related activities.	The management actions are considered sufficient to prevent fire impacts to the FEZs. However, in the event a fire occurs within the Development Envelope that impacts on native vegetation, this is an indicator that further refinement of the management actions is required.
Impact to 'Threatened' and 'DBCA-P1' flora within specified impact limits	• Pre-clearance surveys data indicates impact approaching the specified impact limit.	• Apply the Mitigation Measures detailed in Section 3.4 • Undertake consultation with CEO DWER and DBCA regarding outcome of mitigation measures. • Proposal activities which exceed the impact limit will not proceed.	The mitigation measures will be applied to decrease population impacts.

2.3 Implementation

Covalent is committed to conducting its activities for the Proposal in an ecologically responsible manner. The implementation of the FVEMP will be undertaken in conjunction with Covalent systems, processes, procedures and work instructions relating to the management, monitoring and reporting components of this FVEMP.

The key personnel involved in implementation of this FVEMP and their roles and responsibilities are listed in Table 2-5.

For any proposed activities related to seeding, germinating or planting of *Banksia dolichostyla*, Covalent will undertake consultation with DBCA (Species and Communities Program). The preparation and approval of a Translocation Proposal as required in Part 7 of the *Biodiversity Conservation Regulations 2018* (WA) will be completed. Impact to Threatened flora as outlined in the *Biodiversity Conservation Act 2016* (WA) is defined as 'taking all or part of an individual'. Damage to all or any part of a threatened flora individual requires a Section 40 authorisation.

Table 2-5: Roles and Responsibilities

ROLE	RESPONSIBILITY
Covalent Lithium	• Covalent have the overall responsibility for the implementation of this FVEMP if any roles are delegated to a contractor or consultant, Covalent has the responsibility to audit compliance and ensure any contingency actions are implemented.
Environment Manager	• Overall accountability for auditing and compliance assessment with this FVEMP during operation to ensure it is maintained and meets objectives and targets • Provide technical support to all Proposal personnel to ensure this FVEMP is implemented correctly and complied with • Implement and maintain this FVEMP, review its effectiveness and review the implementation as required • Obtain relevant approvals for disturbance as required • Ensure all personnel involved in the Proposal are inducted and will adhere to FVEMP requirements • Undertaking ongoing monitoring and documenting monitoring results • Liaise with stakeholders and technical advisors for advice and resolution of management aspects/objectives as required • Appoint appropriate consultants to undertake specific activities set out in the FVEMP if required • Review and close out any contingency actions • Report as required to regulating authorities • May delegate all or part responsibility to an appropriately qualified person
Construction Manager / Registered Manager	• Overall accountability for auditing and compliance assessment with this FVEMP during construction to ensure it is maintained and meets objectives and targets • Overall accountability to ensure this FVEMP is implemented, reported and maintained on-site • Ensure personnel attend inductions, have sufficient resources and training to meet the requirements of this FVEMP • Support Covalent's flora management initiative and culture • Comply with all legal requirements and the requirements of this FVEMP
All personnel	• Must receive induction prior to commencement of work on site • Comply with all legal requirements and the requirements of this FVEMP • Attend environmental inductions and any other training required • Participate in toolbox meetings and encourage personnel to suggest improvements.

2.3.1 Environmental Induction

Covalent will require all workers, both during construction and operation of the mine, to attend a worker awareness training/environmental induction covering:

- Conservation significance of the flora and vegetation within the FEZs.
- Compliance and legislative requirements of the FEZs.
- Management measures and expectations of all personnel to ensure the environmental outcomes are achieved.

2.3.2 Incidents and Corrective Actions

Environmental incidents are defined as breaches or non-adherences to objectives and procedures applied to the Proposal and prescribed in this FVEMP. Environmental incidents are to be reported to the Covalent Environmental Manager by the person responsible for the incident or the first person at the site of an incident.

The Covalent Environmental Manager will assess the type and severity of the incident in accordance with internal procedures. Relevant personnel shall be notified and consulted whether the incident requires notification to regulatory agencies.

2.4 Monitoring

The monitoring program involves monitoring of plant condition, dust deposition and weed monitoring in order to:

- Determine if there are any changes occurring to flora and vegetation condition and health in the FEZs.
- Assess whether any changes in flora and vegetation are due to the Proposal or external/natural factors.
- Provide a methodology for ongoing monitoring to enable time-based comparisons.

This will be achieved as the program has been designed to be:

- Extensive – sites within representative vegetation communities both within the FEZs and non-impact control sites.
- Balanced – replicate sites within potential impact areas, and areas outside of the Proposal's influence to enable statistical analyses (for example but not limited to, ANOVA, MANOVA).
- Repeatedly measurable, reliable and adaptable; allowing monitoring to be intensified or decreased as required based on measurements made.

Furthermore, monitoring by the way of pre-clearance surveys has also been undertaken to meet Condition 2-3 and Condition 2-4(1) of MS 1199 and any future conditions of approval. The timing, methods, limitations and reporting of those surveys is detailed by Section 1.3.1 and Section 3.

2.4.1 Plant Condition Monitoring

Plant condition monitoring to provide a qualitative assessment of the vegetation condition will be undertaken at permanent representative sites within the FEZs and control sites away from any proposal related indirect effects. Each monitoring site will consist of a quadrat 10 m by 40 m arranged linearly with four sub-quadrats of 10 m × 10 m, thereby providing an area equivalent to 20 m × 20 m and conforming to the recommended quadrat size for the bioregion (EPA 2016a).

The locations of monitoring quadrats have been reviewed based on recommendations provided by DBCA and locations were revised to monitor the following sub-set of conservation significant flora individuals in the monitoring program:

- *Banksia dolichostyla* (Threatened)
- *Acacia lachnocarpa* (DBCA-P1)
- *Chamelaucium* sp. Parker Range (DBCA-P1)

- *Grevillea lissopleura* (DBCA-P1)
- *Grevillea marriottii* (DBCA-P1)
- *Hibbertia tuberculata* (DBCA-P1)
- *Microcorys elatoides* (DBCA-P1)
- *Microcorys* sp. Mt Holland broad-leaf (DBCA-P1)
- *Rinzia medifila* (DBCA-P1)
- *Daviesia sarissa* ssp. *redacta* (DBCA-P2)
- *Acacia undosa* (DBCA-P3)
- *Hakea pendens* (DBCA-P3)
- *Stylidium sejunctum* (DBCA-P3)

The GPS coordinates of quadrats is provided in Table 2-6 and shown by Figure 2-2.

Table 2-6: Monitoring Quadrats

SITE#	TYPE – PAIR	VEGETATION COMMUNITY	DUST GAUGE (Y/N)	EASTING	NORTHING	LOCALITY	SITING JUSTIFICATION
1	Control – A	W7	N	763363	6443557	Rocky hill located 600 m east of borefield access track.	*Hakea pendens* (P3) community.
2	Impact – A	S1	Y	762678	6443570	70 m west of borefield access track.	*Hakea pendens* (P3) community (W17 vegetation) in FEZ.
3	Control – B	H1	N	761675	61,885044	located 600 m south of accommodation village.	H1 vegetation unit – most restricted unit in Development Envelope.
4	Impact – B	W9	N	761794	6443696	95 m west of planned access road to accommodation village.	H1 vegetation unit in FEZ.
6	Impact – C	CL	N	761111	6444662	100 m north-west of power substation, and 70 m south of current planned disturbance.	*Microcorys* sp. Mt Holland broad-leaf
7	Control – D	Unknown	Y	760130	6451461	3.7 km north of current EGLP DE, and 530 m south of Jilbadji Nature Reserve.	W13 vegetation containing *Acacia undosa* (P3).
8	Impact – D	W13	Y	760120	6444511	20 m south of planned access road between existing TSF and airstrip. 295 m east on planned entry road to airstrip.	W13 vegetation containing *Acacia undosa* (P3).
9	Impact– E	S3	Y	760476	6446242	15 m from edge of old borrow pit north of old Earl Grey haul road.	*Banksia dolichostyla* (T) community (S3 vegetation) in FEZ. Proximate to TSF, mine pit and operations area (generally).
10	Control – E	S3	Y	761102	6443126	55 m north of main access road south of Mt Holland airstrip.	*Banksia dolichostyla* (T) community (S3 vegetation). Area suitable as control as road access will be closed off and nearest area of disturbance is 800 m to the north (new airstrip) or east (accommodation village).
11	Control – F	W9	Y	761652	6441960	860 m south of accommodation village.	W9 vegetation community.
12	Impact – G	W13	N	761457	6443963	20 m east of planned new airstrip.	W13 vegetation within FEZ
13	Control – H	W5	N	758853	6443230	500 m west of Blue Vein Road	*Banksia dolichostyla* (T) community (S3 vegetation)
14	Impact – F	W9	Y	761826	6443962	12 m from planned access road to accommodation village.	W9 vegetation in FEZ.
15	Control – G	W5	N	760469	61,885964	80 m north of main access road south of Mt Holland airstrip.	Area suitable as control as road access will be closed off and nearest area of disturbance is 950 m to the north (new airstrip), 1.3 km east (accommodation village) and 1.1 km west (Blue Vein Road).
16	Impact – H	W6	Y	755088	6445627	10 m north of main access road from the Forrestania Rd.	*Banksia dolichostyla* (T) community (S3 vegetation) in FEZ. Adjacent to high traffic area.
17	Control – I	Unknown	N	758514	6454004	1.9km to the north of the southern boundary of the Jilbadji Nature Reserve, and 1.7 km west of main north-south track through the Reserve.	Only other known *Acacia lachnocarpa* (P1) community.
18	Impact – I	W4	Y	757942	6444937	10 m south of main access road from the Forrestania Rd.	In W4 vegetation, on opposite side of road from FEZ. South side of road chose due to better *Acacia lachnocarpa* (P1) distribution.
19	Control – J	W11	N	760666	61,885241	190 m east of Blue Vein Road and 10 m north of existing road south of Mt Holland airstrip.	Burnt W11 vegetation community with numerous conservation significant species.
20	Impact – J	W11	N	759552	61,885928	1.2 km east of Blue Vein Road and 630 m south of access road south of Mt Holland airstrip.	Burnt W11 vegetation community with numerous conservation significant species.

Within each sub-quadrat, the following will be recorded:

- All plant species, both native and introduced, present (this will allow for diversity calculations to be made and compared temporally). A specimen of all plant species recorded is to be collected for verification.
- The average height of each species present.
- The percentage foliage cover (dead / alive) of each species.

In addition, a minimum of five (dominant/keystone) species have been tagged, and the following information recorded for each specimen:

- Plant condition score, based on the scales in Table 2-6 and Table 2-7.
- Photographic record (taken from the north side of the quadrat to maintain temporal consistency).
- Reproductive status (vegetative, flowering, fruiting).
- Plant height and width.

A minimum of 20 plants will be individually tagged and scored within each quadrat. Conservation significant flora species have been tagged and where possible, the same species have been tagged in each of the sub-quadrats to provide for sample replication.

The visual assessment of a range of parameters to assist in determining plant condition score, is based on a stem classification system which has been used by Mattiske Consulting Pty Ltd on numerous Proposals, together with a modification of the method of Souter *et al*. (2010), to provide for visual assessments of a range of other characters. The range of visual characters used to assess plants has been designed to reduce inter-operator error when making assessments in the field.

Plant condition will be primarily measured by determining the extent and density of the foliage on the plant, or the crown cover of a tree (Table 2-7). In addition, a range of attributes will be scored to standardise the visual assessment process. Some of the attributes are positive, in terms of plant condition – signs of reproduction or new foliage growth. Some of the attributes are negative, in terms of plant health – increasing levels of leaf discolouration and death, insect damage. The attributes to be scored are:

- Leaf die-off
- New tip growth
- Reproductive state
- Epicormic growth
- Insect damage

These attributes will be assessed using the scale set out in Table 2-6.

The condition of the vegetation in each quadrat will also be assessed, based on the vegetation condition scale of Trudgen (1988), for assessment of disturbance within the Eremaean and Northern Botanical Provinces. The disturbance scale is set out in Table 2-8.

Baseline plant condition monitoring consisted of two baseline monitoring events conducted prior to commencement of construction and operations in spring and summer. On commencement of the Proposal, plant condition monitoring will be undertaken quarterly for the first 24 months during construction and operations to build a strong baseline dataset. The data gained over this period will has been reviewed and frequency changed to a biannual monitoring program. Should triggers be exceeded at any point, monitoring intensity shall be reviewed, and potentially returned to quarterly.

The mean condition monitoring scores will be compared across species and sites and appropriate statistical analysis undertaken to determine if there is a statistically significant difference between FEZs and control sites.

Table 2-7: Attributes Scale

SCORE	DESCRIPTION
0	Absent – effect is not present
1	Scarce – effect is not obvious in a cursory examination but is present.
2	Common – effect is clearly visible
3	Abundant – effect dominates the appearance of the shrub / tree

Table 2-8: Plant Condition Scoring

CONDITION	FACTORS
Healthy (score = 4)	• > 90% of foliage present • canopy is intact • if a tree, then no epicormic growth present • none or little indication of leaf discolouration or loss • none to minor evidence of insect damage, no fungal or other pathogen attack
Slightly stressed (score = 3)	• 75% - 90% of foliage present • some minor canopy loss • if a tree, then no epicormic growth • minor evidence of leaf discolouration; potentially some dead leaves on branch tips • minor evidence of insect damage, fungal or other pathogen attack
Stressed (score = 2)	• 50% - 75% of foliage present • moderate canopy loss • if a tree, then none to some epicormic growth evident • evidence of leaf discolouration; evident damage to leaves significant • evidence of insect, fungal or other pathogen attack obvious
Very stressed (score = 1)	• < 50% of foliage present • major canopy loss • if a tree, then epicormic growth likely • leaf discolouration significant; evident damage to leaves significant • evidence of insect, fungal or other pathogen attack obvious
Dead (score = 0)	• plant dead • foliage may present but is brown and desiccated. If a tree then the bark is still attached (DR – dead recent) • foliage is absent, fine twigs still present. If a tree bark may be present (DM – dead moderate) • foliage and file twigs absent. If a tree the bark is also absent (DO- dead old)

Table 2-9: Vegetation Condition Scale (adapted from Trudgen 1988)

VEGETATION CONDITION	DESCRIPTION
Excellent (Ex)	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very Good (VG)	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good (G)	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor (P)	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded (D)	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded (CD)	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

2.4.2 Plant Health Monitoring

The use of a plant Pigment Efficiency Analyser (PEA) is an increasingly accepted method of determining plant health and function within the mining, forestry and agricultural industries. The PEA records a score of between 0.0 to 1.0 for Fv/Fm (index of chlorophyll inflorescence) with most plant taxa being considered healthy within a range of 0.7 to 0.8 (Kalaji *et al.* 2014). When plants are experiencing stress, the ratio may decline and potentially represent a reduction in physiological function or healthy function of the plant. To date, it has generally been accepted that a Fv/Fm score of <0.6 in most regions is an indicator a plant is stressed.

Within or adjacent to each of the monitoring quadrats detailed by Section 2.4.1, 25 plants (five from each keystone species) will be selected for testing with a PEA. Given control sites will be monitored, the requirement for monitoring prior to commencement of construction and operations is not considered necessary. As per Section 2.4.1, monitoring will initially be undertaken quarterly following implementation of the proposal for the first 24 months to generate a robust dataset. For each monitoring event, the mean of each species Fv/Fm ratio will be compared between FEZs and control sites and appropriate statistical analysis used to determine if a significant difference is apparent. After the first 24 months the dataset will be reviewed and used to inform future monitoring requirements. Current monitoring frequency is now biannual (every 6 months).

2.4.3 Dust Monitoring

Dust deposition gauges are considered the most appropriate means by which to measure dust fall on flora and vegetation within the Development Envelope. Dust deposition gauges have been installed at control and impact sites (Figure 2-2), which are monitored monthly in accordance with Australian Standard AS/NZS 3580.10.1:2003 methods for sampling and analysis of ambient air. Results are considered in association with the results of flora and vegetation health and condition monitoring (outlined in Section 2.4.1 and Section 2.4.2) to manage dust emissions from mining activities and mitigate potential adverse impacts to flora and vegetation within the Development Envelope (with specific focus on protections within the FEZs).

Studies investigating the effect of mining-generated dust on flora and vegetation have identified differing results and interpretations (for example, refer to Matsuki *et al.* 2016; Williams and Yates 2017; Yates & Williams 2005). Factors identified as potentially influencing dust impacts include location (distance), aspect, rainfall and temperature.

Other mining operations have adopted a management target of total insoluble matter of 10 g/m^2/month in the absence of evidence to suggest at what dust loads certain species may become stressed and experience a reduction in health. The management target of 10 g/m^2 has been adopted for this FVEMP, however, this will be reviewed based on monitoring of the health and condition of the keystone species and may be reduced or increased after the initial 24 months of monitoring. As detailed in Table 2-4 an early response trigger of 5 g/m^2 has also been adopted.

2.4.4 Census of Conservation Significant Flora

In order to increase understanding as to the degree of the potential for long-term impacts of the Proposal on conservation significant flora, a census of the highest ranked conservation significant flora will be undertaken in 10 years if a Proposal related- decline is identified within FEZ monitoring locations. This census will be designed in consultation with an appropriate flora specialist and consistent with monitoring undertaken within this FVEMP.

2.4.5 Weed and Dieback Monitoring

Weed and dieback monitoring will be undertaken in conjunction with plant condition monitoring, as outlined in Section 2.4.1 at both FEZs and control sites. This will allow for quarterly monitoring for the first 24 months, with the frequency or monitoring to be reviewed following this period and changed to biannual monitoring.

Furthermore, annual monitoring across the Development Envelope will be undertaken for the occurrence of new weeds, the spread of existing weeds and evidence of dieback.

A baseline dieback assessment undertaken by Glevan Consulting (2021) of plants and soils within the Development Envelope has identified the parasitic water moulds (dieback) *Phytophthora boodjera*, *Phytophthora arenaria* and *Phytophthora nicotianae* at multiple locations, with the effects resulting in *"sporadic and scattered deaths"*. As outlined by Glevan Consulting (2021), *Phytophthora* arenaria and *Phytophthora boodjera* are thought to be native to WA and appear to be widespread across the drier regions. *Phytophthora nicotianae* is known to be introduced to Australia and also widespread, however is not regarded as an important ecological pathogen for native flora taxa.

Weed and dieback management actions are specified within the site Environmental Management Plan (COV-0000-EN-PLN-0001) and includes hygiene management controls such as vehicle hygiene ('clean on entry' and 'clean on exit' requirements) and the inspection and monitoring of weed and dieback infested areas.

2.4.6 Rehabilitation and Closure

Monitoring of flora and vegetation as outlined in (Sections 2.4.1 and 2.4.2) will be continued during rehabilitation and closure to confirm that rehabilitation and closure activities and outcomes are not contributing to any increased impact to conservation significant flora. Monitoring of conservation significant flora and vegetation within FEZs will continue for a suitable time period after mining has ceased and whilst rehabilitation and closure actions are ongoing.

2.4.7 Mitigation and Remediation Actions

Mitigation measures where monitoring or observations have identified impact(s) on values are detailed in Table 4.1. In the unlikely event the environmental outcome of Condition 2-2(1) and/or and Condition 2-2(2) of MS 1199 and any future conditions of approval are not met, further actions will be undertaken to mitigate this loss. This will include consultation with the CEOs of DWER and DBCA, respectively to determine an appropriate strategy.

2.5 Reporting

A summary of all monitoring results against Trigger Criteria and Threshold Criteria will be provided within the annual Compliance Assessment Report. The summary will detail if any Trigger Criteria or Threshold Criteria have been exceeded and the actions taken to prevent a recurrence and/or remediation strategies. Raw monitoring data against management measures such as dust deposition, weeds, fire and climate (such as annual rainfall and temperature) will also be provided for comparison to flora and vegetation health and condition monitoring.

Reporting of exceedances of Threshold Criteria will be undertaken to meet Condition 2-7 of MS 1199 and any future conditions of approval and includes:

- report on the exceedance in writing to the CEO of DWER within seven (7) days of the exceedance being identified;
- An investigation to determine the cause of the threshold criteria being exceeded;
- An investigation to provide information to the CEO of DWER to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria being exceeded; and
- A report to the CEO of DWER within twenty-one (21) days of the exceedance being reported as required by Condition 2-7(5) of MS 1199 and any future conditions of approval. The report shall include:
    - Details of threshold contingency actions implemented;
    - The effectiveness of the threshold contingency actions implemented, against the threshold criteria;
    - The findings of the investigations required by Condition 2-7(3) and Condition 2-7(4) of MS 1199 and any future conditions of approval;
    - Measures to prevent the threshold criteria being exceeded in the future;
    - Measures to prevent, control or abate the environmental harm which may have occurred; and
    - Justification of the threshold remaining, or being adjusted based on better understanding, demonstrating that objectives will continue to be met.

3. Pre-Clearance Surveys

Pre-clearance surveys have been conducted across the Development Area within the area of the Indicative Site Layout. As a result of surveys, additional DBCA classified 'Priority' flora species were identified and mitigation measures proposed.

Prior to any ground disturbance, pre-clearance surveys will be undertaken as per the methodology detailed in Section 3.1. Any future pre-clearance survey reports will be communicated to CEO DWER and include updated population impacts.

3.1 Methodology, Timing and Limitations

3.1.1 Methodology

Pre-clearance biological surveys have been coordinated by botanists Mattiske Consulting (Mattiske) on behalf of Covalent. Mattiske utilised tablets to display all relevant information, including:

- Proposed layout of mine footprint identified for vegetation clearing within the Development Envelope,
- 10 m spaced transect lines (in a north-south and east-west orientation) across the entire area requiring vegetation clearing, and
- Previously recorded locations of conservation significant flora within the Development Envelope (prevent double counting of previous records).
- Each of the 10 m spaced transect lines were walked and the GPS coordinate of each species of conservation significant species was recorded. Specimens of all known conservation significant taxa and any plant not readily identifiable in the field as non-conservation significant taxa were collected for verification and identification.

3.1.2 Timing

Pre-clearance biological surveys were completed by Mattiske between March 2019 and August 2020 (Mattiske 2019d, 2021c).

3.1.3 Limitations

Two minor constraints were associated with the pre-clearance surveys:

- Due to the large size of the Development Envelope and the intensity of survey coverage, the surveys within the Development Envelope were undertaken over the course of 50 field visits, spread over 4 years.

  Whilst noting the above, based on the review of timing of the flowering periods for the range of potential conservation significant flora, the timing of the surveys has ensured the range of conservation significant flora present would have been detected. The use of a consistent team of botanists to undertake the surveys, some of which have worked in the area for up to four of years, also increases the level of confidence in detecting and recording the conservation significant taxa. Additionally, other botanical consultants engaged by Covalent to undertake botanical survey work have undertaken surveys during the spring period to maximise the opportunity to detect any conservation significant flora.

  It is acknowledged that some of the conservation significant taxa would prove to be difficult to detect outside their flowering period, either because of their insignificant physical size, or because the absence of flowers would make distinguishing non-conservation significant species from conservation significant species from the same genus in the field difficult. This was overcome by targeting areas based on soil type and topography more likely to support the more cryptic species during their principal flowering period, and by ensuring the range of soil and topography types were searched during the principle flowering periods and sampling any representatives of suspected taxa which may prove more difficult to identify conclusively in the field. By undertaking the survey in this manner, the risks associated with not locating conservation significant taxa outside their flowering period was minimised.

- Timing, weather and season as the surveys were undertaken over the autumn, winter and spring months, whereas the EPA guidance recommends surveys in the area to be undertaken

after the main rainfall period (winter). However, the majority of species were identifiable when sterile. For species that are potentially more problematic for identification, as discussed above, the timing of surveys occurred during respective flowering periods.

3.2 Pre-Clearance Survey Results

As a result of the pre-clearance surveys and preceding regional surveys, multiple conservation significant flora were recorded (Figure 1-5 to Figure 1-9) with flora species coinciding with the Indicative Site Layout listed in Appendix A.

3.2.1 Review of conservation status of *Microcorys elatoides*

As part of the revised flora impact assessment for the Proposal (JBS&G 2025), a review of the conservation status of Microcorys elatoides (P1) was undertaken following survey effort. Following extensive surveys, the total number of known individuals since referral has increased by >120,000, to a total of 364,577 individuals. Of this number of *Microcorys elatoides* plants known to date:

- 61,409 (16.84%) plants are known within Jilbadji Nature Reserve; and
- 204,258 (56.03%) plants are known within Unallocated Crown Land outside the EGLP tenements.

Under MS 1199, 7,962 individuals (now representing 2.18% of the overall known population) plants were approved to be taken within the mine footprint and was considered as significant residual impact requiring offset.

Currently 33,256 individuals (representing 9.12% of the overall known population) lie within the Proposal Disturbance Footprint. Cumulatively, the direct impact of the Approved Project and the Proposal is 44,296 which represents 12.15% of all recorded individuals.

Western Botanical (2025a) analysed the data collected by Covalent Lithium on the abundance and distribution of *Microcorys elatoides*, and using the DBCA criteria for conservation listing of Priority Species, have demonstrated that *Microcorys elatoides* clearly falls within the DBCA's Priority 2 category. Further, given the geographical distribution of *M. elatoides* within a 20 km radius of the EGLP in northerly, western and south-western directions; the distribution of populations and sub-populations within this region and the relatively large Extent of Occurrence and Area of Occupancy; and considering the proposed impacts to the species by either (i) the EGLP LoM Proposal or (ii) the overall cumulative impacts to the species by the EGLP, *Microcorys elatoides* could be considered a Priority 4 species (Rare, adequately surveyed and that are considered not currently threatened).

Based on the data generated by Covalent Lithium over the period 2019-2025, *Microcorys elatoides* does not meet the Criteria for IUCN listing for either IUCN Category Critically Endangered (CR), Endangered (EN) or Vulnerable (VU).

Western Botanical botanists have provided their report to DBCA recommending that DBCA consider a revision of the conservation listing of *Microcorys elatoides*; such that it be classified at a 'Priority 2' listing. In this context, given the additional data on known records of *Microcorys elatoides*, and with a focus on impacts to Threatened and Priority 1 flora taxa, the impacts of the Approved Project and the Proposal individually or cumulatively are no longer considered likely to be a significant residual impact.

3.3 Flora Impact Limits

The initial EPA (2019) assessment noted the impact of the Proposal to the majority of conservation significant flora were anticipated to be below a 10 % total regional impact level, with the exception of *Microcorys elatoides* (DBCA-P1) and *Acacia undosa* (DBCA-P3). *Banksia dolichostyla* (EPBC-T, BC-T), *Microcorys elatoides* (DBCA-P1) and *Acacia lachnocarpa* (DBCA-P1) were the focus of the EPA (2019) assessment. Based on the EPA (2019) assessment, a 10% impact 'target' to conservation significant species was considered acceptable, with the exception of *Banksia dolichostyla* (EPBC-T, BC-T) and *Microcorys elatoides* (DBCA-P1) for which specific impact limits were specified within the environmental conditions.

The subsequent EPA (2022) assessment adopted a more conservative approach with substantially lower flora impact 'limits' specified for all DBCA-P1 flora (in addition to the previous limits specified for *Banksia dolichostyla* and *Microcorys elatoides*), based upon the biological survey data and Covalent's amended Indicative Site Layout (refer Condition 2, MS 1199).

As a result of the increased footprint for the Life of Mine, the anticipated limits associated with the proposal are:

- ≤ 12 individuals of *Banksia dolichostyla* (EPBC-V, BC-V) [increased from 2 individuals];
- Direct loss no more than 10 % of identified Priority 1 flora within the Development Envelope (excluding *Microcorys elatoides*); and
- Direct loss of no more than 12.5% of *Microcorys elatoides*, likely to be revised to DBCA Priority 2 flora based on increased regional records.

To ensure the impact limits are met, mitigation measures are proposed, as detailed in Section 3.4. Covalent will not undertake any Proposal activities which may exceed the above impact limits.

3.4 Mitigation Measures

In the event that pre-clearance surveys identify additional species or individuals, resulting in an increase in population impacts, the resulting mitigation measures follow the below hierarchy:

- Avoidance – Adjust the Indicative Site Layout to avoid direct impacts and minimise indirect impacts to ensure impact targets are not exceeded.
- Surveys – Undertake further surveys within local and regional areas to reduce the potential impact to an acceptable level based on the percentage impact limits.
- Minimise – Minimise indirect impacts to species through implementation of FVEMP.
- Research – Commit to research programs with the aim of developing revegetation practices which will result in the re-establishment of the individuals to areas cleared of vegetation.
- Offsets – Apply the significant residual impacts model (Government of WA 2014) to determine the requirement for offsets.

Further detail on the mitigation hierarchy is detailed in Table 3-1.

As per Mitigation Measure 2 (Table 3-1), Covalent has undertaken further biological surveys since initial approval of the Proposal (refer Table 1-2) in order to increase the recorded number of individuals of flora species impacted by the Proposal. As a result of these surveys, the residual impact to majority of flora are < 10%. The residual impact to each flora species is detailed in Appendix A.

Table 3-1: Mitigation Hierarchy for Conservation Significant Flora

NO	MITIGATION MEASURE	ACTION	TIMEFRAME
1	Adjust Indicative Site Layout to ensure population impact limits are not exceeded	Investigate alternate layouts whereby the Proposal may still be feasible, but reduces direct and potential indirect impacts.	As required.
		A review of the Indicative Site Layout shall be undertaken to ensure population impact limits (Section 3.3) are not exceeded. If the Indicative Site Layout is amended, revised population impacts will be calculated to ensure impact limits remain met.	Prior to clearing
		Implementation of an internal clearing permit procedure which includes demarcation of clearing area to ensure accurate clearing boundaries	Prior to clearing
2	Undertake further surveys within local and regional areas to reduce the direct impact to an acceptable level against impact limits	Identify areas locally and regionally which may provide habitat for the species	As required.
		Undertake further surveys in accordance with relevant technical guidance (EPA 2016a) and within the appropriate season.	Within 12 months of identifying further survey areas

NO	MITIGATION MEASURE	ACTION	TIMEFRAME
		Develop and present survey report (including impact assessment against management targets) to CEO DWER and DBCA	Within two months of completing surveys
		CEO DWER and DBCA review and accept report	Within three months of receiving final survey report
3	Minimise indirect impacts through implementation of FVEMP	Implement FVEMP management measures, including monitoring requirements	Ongoing
4	Develop research programs for species revegetation	In consultation with research institutions, investigate programs to research and develop a greater scientific understanding of species for the purpose of revegetation. Develop proposal and scope for the research program. Potential topics may include: • Habitat modelling and necessary biotic and abiotic factors for establishment and long-term survival • Seed ecology including germination cues • Seedling establishment via the collection and growth of cuttings • Revegetation trials	Within three months of Mitigation Measures 1 to 3 proving to be unfeasible
		Submit research proposal to DBCA for review and acceptance.	Within 1 month of receiving research proposal.
		Implement research proposal and produce report on the outcomes.	Complete within 24 months of receiving DBCA acceptance.
		Submit report to CEO DWER and DBCA on research outcomes for acceptance.	Review and accept within three months of receiving report.
		Implement research program outcomes.	Within one month of accepting the report.
5	Apply the Residual Significant Impact Model (RSIM)	Apply the RSIM as per the WA Environmental Offset Guidelines (Government of WA 2014)	Within three months of Mitigation Measures 1 to 3 proving to be unfeasible
		Liaise with CEO DWER and DBCA on the outcomes of the RISM and further actions required.	Within one month of applying the model.

4. Adaptive Management and EMP Revision

Covalent recognises the dynamic nature of ecosystems and supports adaptive management under this FVEMP. Adaptive management involves:

- Implementing mitigation measures.
- Monitoring and evaluation against management targets (including early response triggers) and environmental criteria (including limits, triggers and thresholds).
- Systematically adapting management and mitigation measures and monitoring to meet the environmental objectives.

Any changes to the Proposal will instigate a review and consideration of management actions. Assumptions and uncertainties will be evaluated against collected monitoring data on a recurrent basis in a process of continual improvement and establishing early response indicators/criteria. Any review and consideration of management actions or additions to this plan made in relation to adaptive management will be submitted to DWER for review. Examples of adaptive management throughout operations include:

- Introduction of a different / alternative monitoring initiative to better understand monitoring of the FEZs.
- The outcome of additional preclearance surveys which significantly change conservation significant flora species population impacts.
- Identification of more effective trigger criteria or early response triggers in light of more comprehensive monitoring information.
- Updated modelling and revision of trigger criteria or early response triggers in a system responding differently to that predicted in original modelling, for example:
    - The < 0.6 index of chlorophyll florescence (CF) is applied for plant health monitoring to indicate any significant decline(s) in plant health and condition as outlined in Table 2-1. The relative CF measure is both species specific and environmentally specific. The applicability and appropriateness of this trigger will be reviewed once baseline data has been collected over two seasons. Should triggers be exceeded at any point, monitoring intensity shall be reviewed, and potentially increased if required and remain increased until such time as the trigger is no longer exceeded.
    - The management target of 10 g/m^2 has been adopted for dust deposition gauges for insoluble dust for this FVEMP without evidence to indicated at what dust loads certain flora species may become stressed and experience a reduction in health. However, this will be reviewed based on monitoring of the health and condition of the keystone species and may be reduced or increased in subsequent revisions of the FVEMP.
- Changes to management actions and targets in response to monitoring data.
- Changes in technology.

4.1 Benchmarking and Best-Practice

For some environmental factors, environmental outcomes may include compliance with state, national or international standards, guidance or legislation. Covalent will conduct periodic benchmarking against best practice options. Adaptive management in this context may include initiatives to implement improvements in technology and emission control technologies to meet best-practice in the relevant industry, Covalent-driven improvements in operations, and keeping current with improvements in monitoring methods and standards for implementation.

4.2 EMP Revision

Covalent will amend this FVEMP as required to include any adaptive management updates based on information gathered from monitoring results. These amendments will involve regulatory consultation and be submitted to CEO DWER for review. If Covalent has gathered sufficient information through research and long-term monitoring to propose revisions to management targets, this FVEMP may be amended and resubmitted to the CEO DWER for approval in accordance with Condition 2-9(1) of MS 1199 and any future conditions of approval.

Furthermore, in accordance with Condition 2-9(2) of MS 1199 and any future conditions of approval, Covalent will update this FVEMP as and when directed by notice in writing by CEO DWER.

Changes to the FVEMP will be submitted to DWER for approval accompanied by a completed table of changes as per the template provided in Appendix C.

5. Stakeholder Consultation

5.1 Key Stakeholders

Covalent have undertaken extensive consultation with key stakeholders, including:

- State Government
- Commonwealth Government
- Local Government
- Non–government organisations and interest groups.

A list of Covalent's key stakeholders are identified by Table 5-1.

Table 5-1: Key Stakeholders

STAKEHOLDER GROUP	STAKEHOLDER	KEY INTERESTS
State Government	Environmental Protection Authority (EPA)	• Administration of the *Environmental Protection Act 1986* Part IV Environmental Impact Assessment.
	Department of Water and Environmental Regulation (DWER)	• Administration of the *Environmental Protection Act 1986*. • Regulation of the *Environmental Protection Act 1986* Part IV Statement approval conditions.
	Department of Mines, Industry Regulation and Safety (DMIRS)	• Administration of the *Mining Act 1978* (Mining Act) • Tenement conditions • Mining Proposals and Programs of Work • Mining Rehabilitation Fund (MRF) • Closure and rehabilitation • Safety.
	Department of Biodiversity, Conservation and Attractions (DBCA)	• Administration of the *Biodiversity Conservation Act 2016* • Flora, fauna and habitat conservation.
	Department of Planning, Lands and Heritage (DPLH)	• Native title and indigenous requirements • Heritage sites.
	Department of Fire and Emergency Services (DFES)	• Emergency services • Fire breaks • Fire reduction.
	Main Roads WA (MRWA)	• Use of public roads.
	Department of Jobs, Tourism, Science and Innovation (JTSI)	• Assistance to large/complex Proposals through inter-Governmental assistance to support State economic development and investment.
Commonwealth Government	Department of Climate Change, Energy, the Environment and water (DCCEEW)	• Administration of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) • Referral and assessment of environmental impact assessments of MNES.
Local Government	Shire of Yilgarn and Shire of Kondinin	• Use of public roads and infrastructure.

STAKEHOLDER GROUP	STAKEHOLDER	KEY INTERESTS
Non–government organisations and interest groups	Conservation Council of WA Wilderness Society	• Protection of conservation significant species • Potential interest in baseline flora survey data.
Traditional Owners - Marlinyu Ghoorlie	Conservation of Aboriginal heritage values.	• Traditional Owners - Marlinyu Ghoorlie

5.2 Stakeholder Engagement Process

Stakeholder engagement with State Government and Local Government commenced in late 2016. Covalent has since developed and implemented a Stakeholder Consultation Strategy for ongoing social engagement and community investment.

Covalent's Stakeholder Consultation Strategy adopts the principles from the Ministerial Council on Mineral and Petroleum Resources (MCMPR 2005) document *Principles for Engagement with Communities and Stakeholders*. This includes:

- open and effective communication:
  - two–way communication
  - clear, accurate and relevant information
  - timeliness
- transparency, requiring a process for communication and feedback.
- collaboration, working cooperatively to seek mutually beneficial outcomes.
- inclusiveness, with the aim of recognising, understanding and involving stakeholders early and throughout the process.
- integrity, with engagement undertaken in a manner that fosters mutual respect and trust.

5.3 Stakeholder Consultation

The outcomes of consultation are recorded in a Stakeholder Consultation Register. Consultation to date has been comprised predominately of meetings and correspondence with a number of State and Commonwealth Government agencies, Local Government, Traditional Owners and non-government organisations and interest groups.

Covalent is committed to ongoing stakeholder identification, communication, engagement and consultation through the planning and approval phase, and through to construction, operational and closure phases of the Proposal.

5.4 Public Availability of EMP

Covalent will make this EMP publicly available to ensure stakeholders are informed of the management and monitoring actions to protect, avoid and minimise the environmental effects of the Proposal to flora and vegetation values.

Generally, Covalent will make this EMP publicly available for viewing through publication on its corporate website (www.CovalentLithium.com). Where public availability through Covalent's corporate website is not possible, Covalent will make available a hardcopy of this EMP within 7 days of receiving a written request for a copy (consistent with the requirements of EPA 2012).

6. Terms and Abbreviations

Table 6-1: Terms and Abbreviations

TERM /ABBREVIATION	DEFINITION
Adverse	Impacts likely to change the conservation status or significantly change the local population numbers of a species.
BC Act	*Biodiversity Conservation Act 2016*
CAR	Compliance Assessment Report
CEO	Chief Executive Officer
DBCA	Department of Biodiversity, Conservation, and Attractions
DCCEEW	Department of Climate Change, Energy and the Environment
DFES	Department of Fire and Emergency Services
Direct Impact	Impact through direct loss of conservation significant flora and vegetation from vegetation clearing
DMIRS	Department of Mines, Industry Regulation and Safety
DWER	Department of Water and Environmental Regulation
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESD	Environmental Scoping Document
FVEMP	Flora and Vegetation Management Plan
Indirect Impact	Effects which are considered to potentially reduce the health of flora and vegetation including: • dust, during construction and mining operations • weed infestation during construction and mining operations • Change in fire regimes Individuals within a 50 m buffer of the proposed mine layout, whereby potential indirect impacts may be predominantly more apparent to flora and vegetation. This is based on the DWER Clearing Regulation Fact Sheet 24: Environmentally Sensitive Areas (August 2014), whereby a declared environmentally sensitive area is considered the area covered by vegetation within 50 m of rare flora, to the extent to which the vegetation is continuous with the vegetation in which the rare flora is located.
Introduced Flora / Weeds	Flora species that are non-native to the bioregion
IUCN	International Union of Conservation of Nature
MCMPR	Ministerial Council on Mineral and Petroleum Resources
MNES	Matter of National Environmental Significance
NMRT	National Malleefowl Recovery Team
Plant Condition	Qualitative measure of the condition of single plants based on leaf colour, new growth, foliage cover and general plant vigour.
Plant Health	Quantitative measure of plant physiological function
Rate of Mortality	Individual plant mortalities over a time period
SQM	Sociedad Química y Minera
TSF	Tailings Storage Facility
FEZ	Vegetation Exclusion Zone

7. References

360 Environmental Pty Ltd (2020) *Targeted Flora Survey Mt Holland Lithium Proposal.* Report prepared by Walker S of 360 Environmental Pty Ltd for Covalent Lithium Pty Ltd. November 2020.

Blueprint Environmental Strategies Pty Ltd (2017) *Targeted Surveys for Threatened Flora Species Banksia dolichostyla*. Report prepared by Blueprint Environmental Strategies Pty Ltd for Kidman Resources Ltd. May 2017.

Covalent Lithium (2022) *Earl Grey Lithium Proposal Revised Proposal: Environmental Review Document*. Report prepared by Hawkins S of Globe Environments Australia Pty Ltd for Strategen-JBS&G (JBS&G Australia Pty Ltd) on behalf of Covalent Lithium. Revision 3. April 2022.

Department of Biodiversity, Conservation and Attractions (2022) *Phytophthora Dieback.* Department of Biodiversity, Conservation and Attractions Webpage accessed September 2022 at: https://www.dbca.wa.gov.au/parks-and-wildlife-service/threat-management/plant-diseases/phytophthora-dieback.

Department of Climate Change, Energy, the Environment and Water (2020) *Approval – Earl Grey Lithium Proposal*. Approval for the Earl Grey Lithium Proposal granted to Covalent Lithium Pty Ltd in accordance with s130(1) and s133(1) of the Environment Protection and Biodiversity Conservation Act 1999 (C'th). EPBC Decision 2017/7950. February 2020. As amended in accordance with s143 of the Environment Protection and Biodiversity Conservation Act 1999 (C'th) in March 2022.

Environmental Protection Authority (2012) *Post Assessment Guideline for Making Information Publicly Available*. Post Assessment Guideline 4. August 2012.

Environmental Protection Authority (2016a) *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment*.

Environmental Protection Authority (2016b) *Environmental Factor Guideline: Flora*.

Environmental Protection Authority (2019) *Earl Grey Lithium Proposal*. Report 1651. October 2019.

Environmental Protection Authority (2021a) *Statement of Environmental Principles, Factors, Objectives and Aims of EIA*. Version 4.0. October 2021.

Environmental Protection Authority (2021b) *Earl Grey Lithium Proposal – Inquiry under Section 46 of the Environmental Protection Act 1986 to amend Ministerial Statement 1118*. Report 1697. January 2021.

Environmental Protection Authority (2022) *Earl Grey Lithium Proposal (Revised Proposal)*. Report 1730. October 2022.

Environmental Protection Authority (2024) *How to prepare Environmental Protection Act 1986 Part IV environmental management plans.* March 2024

GHD Pty Ltd (2020) *Flora Survey Mt Holland*. Report prepared by Flemington S of GHD Pty Ltd for Covalent Lithium Pty Ltd. March 2020.

Glevan Consulting (2021) *Earl Grey Proposal Phytophthora Dieback Ocvcurrence Assessment.* Report prepared by Brown E of Glevan Consulting for Covalent Lithium. Version 0.73.

Government of Western Australia (2014) *WA Environmental Offsets Guidelines*. August 2014.

JBS&G Australia Pty Ltd (2019) *Earl Grey Lithium Mine Regional Flora Survey*. Report prepared by Oversby W and Chesney R of Strategen-JBS&G (JBS&G Australia Pty Ltd) for Covalent Lithium Ltd. July 2019.

JBS&G Australia Pty Ltd (2019) *Earl Grey Lithium Project Life of Mine Proposal Revised Impact Assessment – Conservation Significant Flora*, October 2025

Kalaji H M, Schansker G, Ladle R J, Goltsev V, Bosa K, Allakhverdiev S I, Brestic M, Bussotti F, Calatayud A, Da browski P, Elsheery N I, Ferroni L, Guidi L, Hogewoning DS W, Jajoo A, Misra A N, Nebauer S G, Pancaldi S, Penella C, Poli D, Pollastrini M, Romanowska-Duda Z B, Rutkowska B, Seroˆdio J, Suresh K, Szulc W, Tambussi E, Yanniccari M and Zivcak M (2014) Frequently asked questions about in vivo chlorophyll fluorescence: practical issues. In: *Photosynthesis Research*. Volume 122. Pages 121-158. August 2014.

Matsuki M, Gardner M R, Smith A, Howard R K and Gove A (2016) Impacts of Dust on Plant Health, Survivorship and Plant Communities in Semiarid Environments. In: *Austral Ecology*. February 2016.

Mattiske Consulting Pty Ltd (2017) *Flora and Vegetation Assessment* of the *Earl Grey, Irish Breakfast and Prince of Wales Prospects*. Report prepared by Angus D and Murdock N of Mattiske Consulting Pty Ltd for Kidman Resources Ltd. Final (Version 4). April 2017.

Mattiske Consulting Pty Ltd (2018a) *Flora and Vegetation Assessment Earl Grey Lithium Proposal*. Report prepared by Angus D of Mattiske Consulting Pty Ltd for Kidman Resources Ltd. Version 3. March 2018.

Mattiske Consulting Pty Ltd (2018b) *Memorandum: Earl Grey Lithium Proposal Statistical Comparison of Vegetation Within Earl Grey Lithium Proposal with Ironcap Hills Vegetation Complex*. Memorandum prepared by Angus D of Mattiske Consulting Pty Ltd for Kidman Resources Ltd. October 2018.

Mattiske Consulting Pty Ltd (2019a) *Earl Grey Lithium Proposal Banksia dolichostyla (T) Target Survey.* Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 7. January 2019.

Mattiske Consulting Pty Ltd (2019b) *Earl Grey Lithium Proposal Conservation Significant Flora Targeted Survey.* Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 7. January 2019.

Mattiske Consulting Pty Ltd (2019c) *Threatened and Priority Flora Assessment Tenement M77/215 Proposed Tracks and Drill Hole Locations.* Report prepared by Riviera F and Sims Z of Mattiske Consulting Pty Ltd for Kidman Resources Ltd. Final (Version 3). April 2019.

Mattiske Consulting Pty Ltd (2019d) *Threatened and Priority Flora Assessment Earl Grey Lithium Proposal Pre-Clearance Surveys.* Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Final. December 2019.

Mattiske Consulting Pty Ltd (2020a) *Flora and Vegetation Assessment Earl Grey Lithium Proposal Water Pipeline Corridor.* Report prepared by Sims Z and Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 6. May 2020.

Mattiske Consulting Pty Ltd (2020b) *Flora and Vegetation Assessment Earl Grey Lithium Proposal Modified Great Eastern Highway Pipeline Alignment and Booster Station Access Areas: Water Pipeline Alignment Supplementary Report*. Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 2. September 2020.

Mattiske Consulting Pty Ltd (2020c) *Earl Grey Lithium Proposal Introduced Flora (Weed) Survey*. Report prepared by Pereira A and Sims Z of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 3. October 2020.

Mattiske Consulting Pty Ltd (2020d) *Memorandum: Earl Grey Lithium Proposal Field Survey 21st – 26th* October 2020. Vegetation health monitoring transects and threatened ecological community assessment. Memorandum prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. October 2020.

Mattiske Consulting Pty Ltd (2020e) *Memorandum: Earl Grey Lithium Proposal Field Survey 25th October 2020*. Threatened ecological community assessment. Memorandum prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. November 2020.

Mattiske Consulting Pty Ltd (2021a) *Earl Grey Lithium Proposal Vegetation Condition Monitoring Transect Establishment.* Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Final. January 2021.

Mattiske Consulting Pty Ltd (2021b) *Memorandum: Earl Grey Lithium Proposal Field Survey 14th – 21st March 2021.* Vegetation health monitoring transects. Memorandum prepared by Sims Z of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. March 2021.

Mattiske Consulting Pty Ltd (2021c) *Threatened and Priority Flora Assessment Earl Grey Lithium Proposal Pre-Clearance Surveys.* Report prepared by Angus D and Sims Z of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 2. April 2021.

Mattiske Consulting Pty Ltd (2021d) *Earl Grey Lithium Proposal Vegetation Condition Monitoring.* Report prepared by Sims Z of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 2. June 2021.

Mattiske Consulting Pty Ltd (2022) *Earl Grey Lithium Proposal Vegetation Condition Monitoring Autumn 2022*. Report prepared by Pereira A of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 2. July 2022.

Mattiske Consulting Pty Ltd (2023a) *Earl Grey Lithium Proposal Vegetation Condition Monitoring Spring 2022*. Report prepared by Pereira A of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 2. January 2023.

Ministerial Council on Mineral and Petroleum Resources (MCMPR) (2005) *Principles for Engagement with Communities and Stakeholders*.

Native Vegetation Solutions (2014) *Targeted Banksia dolichostyla Survey*. Report prepared by Native Vegetation Solutions for Kidman Resources Ltd.

Native Vegetation Solutions (2016) *Level 1 Flora and Vegetation Survey Proposed Blue Vein Mine Mt Holland Proposal Tenement M77/1065*. Report prepared by Native Vegetation Solutions for Kidman Resources Ltd.

Native Vegetation Solutions (2017) *Targeted Search of Threatened Flora for Kidman Resources Limited – Mount Holland Gold Proposal*. Report prepared by Reid E of Native Vegetation Solutions for Blueprint Environmental Strategies on behalf of Kidman Resources Ltd. October 2017.

Yates C. & Williams M. (2005) Patterns of plant mortality and changes in condition in the Tetratheca paynterae subsp. paynterae population at Windarling W3 between 2003 and 2005. Department of Conservation and Land Management, 17 pp.

Simamora A V, Stukely M J C, Hardy G E StJ and Burgess T I (2015) Phytophthora boodjera sp. nov., a damping-off pathogen in production nurseries and from urban and natural landscapes, with an update on the status of P. alticola. In: *IMA Fungus*. International Mycological Association. Volume 6, Number 2. October 2015.

Simamora A V, Paap T, Howard K, Stukely M J C, Hardy G E StJ and Burgess T I (2018) Phytophthora Contamination in a Nursery and its Potential Dispersal into the Natural Environment. In: *Plant Disease*. Volume 102, Number 1. January 2018.

Souter N J, Cunningham S, Little S, Wallace T, McCarthy B and Henderson M (2010) Evaluation of a visual assessment method for tree condition of eucalypt floodplain forests. In: *Ecological Management and Restoration*. Volume 11. No. 3. Pages 210-214.

Trudgen M E (1988) *A Report on the Flora and Vegetation of the Port Kennedy Area*. Report prepared for Bowman Bishaw and Associates, West Perth.

WAn Minister for Environment (2019) *Earl Grey Lithium Proposal.* Statement 1118. Approval for the Earl Grey Lithium Proposal granted to Covalent Lithium Pty Ltd in accordance with s45(5) of the Environmental Protection Act 1986 (WA). May 2021.

WAn Minister for Environment (2021) *Earl Grey Lithium Proposal.* Approval for changes to the implementation conditions for Earl Grey Lithium Proposal granted to Covalent Lithium Pty Ltd in accordance with s46 of the Environmental Protection Act 1986 (WA). Statement 1167. May 2021.

WAn Minister for Environment (2022) *Earl Grey Lithium Proposal (Significant Amendment)*. Statement 1199. Approval for the Earl Grey Lithium Proposal Significant Amendment (Revised Proposal) granted to Covalent Lithium Pty Ltd in accordance with s45(5) and s40AA of the Environmental Protection Act 1986 (WA). November 2022.

Williams M and Yates C (2017) Dust does impact plant survivorship in semi-arid environments: Comment on Matsuki et al. (2016). In: *Austral Ecology.* December 2017.

Yates C and Williams M (2005) *Patterns of plant mortality and changes in condition in the Tetratheca paynterae subsp. paynterae population at Windarling W3 between 2003 and 2005*. November 2005.

8. Appendices

Appendix A: Flora species impacted by the Proposal

Taxon	Total Known Records at time of referral for LOM	Total known records as at 17/10/2025 **(Regional and Local)**	Total approved and /or actual impacts to date	Predicted Direct Impacts LOM	% LOM Impacts of total known records	% LOM impacts of total known regional records	Cumulative Impact (total impact to date + predicted LOM impacts)	% Cumulative Impact to total known records
Threatened								
Banksia dolichostyla (Previously recorded as *Banksia sphaerocarpa* var. *dolichostyla*)	26000	28,102	2	10	0.04%	0.04%	12	0.04%
Priority 1								
Acacia lachnocarpa (Previously recorded as *Acacia* sp. Mt Holland)	30000	68,468	502	494	0.72%	0.74%	996	1.45%
Brachyloma stenolobum	6000	13,128	12	448	3.41%	4.35%	460	3.50%
Chamelaucium sp. Mount Holland (G. Cockerton & G. Grigg WB40918)	N/A	38,508	659	2,037	5.29%	6.50%	2,696	7.00%
Eutaxia sp. North Ironcap (P. Armstrong PA 06/898)	11500	52,777	21	2,263	4.29%	4.52%	2,284	4.33%
Grevillea marriottii	21000	21,713	35	257	1.18%	1.25%	292	1.34%
Labichea rossii	9000	10,775	463	40	0.37%	1.34%	503	4.67%
Microcorys elatoides (Previously recorded as *Microcorys* sp. *Mt Holland*)	244000	364,577	11,040	33,256	9.12%	12.29%	44,296	12.15%
Microcorys sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927)	42000	42,952	642	955	2.22%	2.99%	1,597	3.72%
Thryptomene jilbadji	N/A	881,944	14,072	66,556	7.55%	10.24%	80,628	9.14%
Thryptomene salina	7500	50,268	0	1,681	3.34%	3.51%	1,681	3.34%
Priority 2								
Balaustion grandibracteatum subsp. Junctura (Previously recorded as *Baeckea* sp. *Forrestania*)	72000	304,539	5,481	18,179	5.97%	6.99%	23,660	7.77%
Daviesia sarissa subsp. redacta	1700	2,014	24	129	6.41%	15.97%	153	7.60%
Eutaxia lasiocalyx	185000	186,530	8,861	3,633	1.95%	2.34%	12,494	6.70%
Priority 3								
Acacia undosa	164500	164,945	12,707	3,566	2.16%	2.64%	16,273	9.87%
Boronia ternata var. promiscua	49000	63,761	372	3,562	5.59%	6.23%	3,934	6.17%
Chorizema circinale	2500	3,487	899	14	0.40%	0.60%	913	26.18%
Hakea pendens	10000	10,801	223	811	7.51%	9.40%	1,034	9.57%
Teucrium diabolicum (Previously recorded as *Teucrium* sp. Dwarf	68000	77,603	489	19	0.02%	0.03%	508	0.65%
Verticordia gracilis	33000	35,606	5,657	482	1.35%	1.66%	6,139	17.24%
Verticordia stenopetala	48000	49,637	4,983	1,302	2.62%	3.15%	6,285	12.66%
Priority 4								
Eremophila inflata	1500	1,645	0	10	0.61%	0.73%	10	0.61%
Grevillea neodissecta	11000	11,830	166	274	2.32%	2.89%	440	3.72%
Gyrostemon ditrigynus	54500	88,336	9	10	0.01%	0.01%	19	0.02%
Microcorys sp. Forrestania (V. English 2004)	215000	387,874	5	51,595	13.30%	17.00%	51,600	13.30%

Appendix B: Survey Effort Reference

GHD Pty Ltd (2020) *Flora Survey Mt Holland.* Report prepared by Flemington S of GHD Pty Ltd for Covalent Pty Ltd. March 2020.

JBS&G Australia Pty Ltd (2019a) Covalent Earl Grey Lithium Project Regional Flora Survey. Prepared by Oversby W and Chesney R of JBS&G Australia Pty Ltd (formerly as Strategen-JBS&G) for Covalent Lithium. Report 56666-123293. Project 56666-123293. Revision A. July 2019.

JBS&G Australia Pty Ltd (2019b) *Covalent Earl Grey Lithium Project Regional Flora Survey.* Prepared by Webb J, Oversby W and Chesney R of JBS&G Australia Pty Ltd (formerly as Strategen-JBS&G) for Covalent Lithium. Project 57237-124,660. Revision A. October 2019.

Mattiske Consulting Pty Ltd (2017) *Flora and Vegetation of the Earl Grey, Irish Breakfast and Prince of Wales Prospects*. Unpublished report to Kidman Resources Limited.

Mattiske Consulting Pty Ltd (2018) *Flora and Vegetation Assessment Earl Grey Lithium Project*. Unpublished report to Kidman Resources Limited.

Mattiske Consulting Pty Ltd (2019a) *Earl Grey Lithium Project Conservation Significant Flora Targeted Survey*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2019b) *Earl Grey Lithium Project, Banksia sphaerocarpa var. dolichostyla – Targeted Survey*. Unpublished report to Kidman Resources Limited.

Mattiske Consulting Pty Ltd (2019c) *Threatened and Priority Flora Assessment Tenement M77/215 Proposed Tracks and Drill Hole Locations*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2019d) *Threatened and Priority Flora Assessment Tenement M77/478 Proposed Tracks and Drill Hole Locations*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2019e) *Threatened and Priority Flora Assessment Tenement M77/542 Proposed Tracks and Drill Hole Locations*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2019f) *Threatened and Priority Flora Assessment Tenement M77/1067 Proposed Tracks and Drill Hole Locations*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2019g) *Threatened and Priority Flora Assessment Tenement M77/1065 Proposed Tracks and Drill Hole Locations*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2019h) *Threatened and Priority Flora Assessment Tenement M77/1068 Proposed Tracks and Drill Hole Locations*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2019i) *Threatened and Priority Flora Assessment Pre-clearance Surveys*. Unpublished report to Covalent Lithium.

Mattiske Consulting Pty Ltd (2020a) *Flora and Vegetation Assessment Earl Grey Lithium Project Water Pipeline Corridor*. Report prepared by Mattiske Consulting for Covalent Lithium. May 2020.

Mattiske Consulting Pty Ltd (2020b) *Memorandum: Earl Grey Lithium Project Field Survey 21st – 26th October 2020*. Memorandum prepared by Mattiske Consulting for Covalent Lithium. October 2020.

Mattiske Consulting Pty Ltd (2021a) *Earl Grey Lithium Project Vegetation Condition Monitoring Transect Establishment*. Report prepared by Mattiske Consulting for Covalent Lithium. January 2021.

Mattiske Consulting Pty Ltd (2021b) *Memorandum: Earl Grey Lithium Project Field Survey 14th – 21st March 2021*. Memorandum prepared by Mattiske Consulting for Covalent Lithium. March 2021

Mattiske Consulting Pty Ltd (2021c) *Threatened and Priority Flora Assessment Earl Grey Lithium Project Pre-Clearance Surveys*. Report prepared by Mattiske Consulting for Covalent Lithium. April 2021.

Mattiske Consulting Pty Ltd (2023a) *Threatened and Priority Flora Assessment Earl Grey Lithium Project Life of Mine Expansion Area Pre-Clearance Surveys*. Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 4. October 2023.

Mattiske Consulting Pty Ltd (2023b) *Flora and Vegetation Assessment Earl Grey Lithium Project Life of Mine*. Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 4 October 2023.

Mattiske Consulting Pty Ltd (2023c) *Vegetation Assessment Earl Grey Lithium Project Life of Mine* Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Lithium Pty Ltd. Version 4. October 2023.

Mattiske Consulting Pty Ltd (2023d) Vegetation Assessment Earl Grey Lithium Project Life of Mine Expansion Area. Report prepared by Angus D of Mattiske Consulting Pty Ltd for Covalent Pty Ltd. October

Native Vegetation Solutions (2014) *Targeted Banksia sphaerocarpa var. dolichostyla Survey*. Report prepared by Native Vegetation Solutions for Kidman Resources Ltd.

Native Vegetation Solutions (2016) *Level 1 Flora and Vegetation Survey Proposed Blue Vein Mine Mt Holland Project Tenement M77/1065.* Report prepared by Native Vegetation Solutions for Kidman Resources Ltd.

Native Vegetation Solutions (2017) *Targeted Search of Threatened Flora for Kidman Resources Limited – Mount Holland Gold Project.* Report prepared by Reid E of Native Vegetation Solutions for Blueprint Environmental Strategies on behalf of Kidman Resources Ltd. October 2017.

Western Botanical (2020) *Review of the distribution of Banksia sphaerocarpa var. dolichostyla*. Report prepared by Cockerton G of Western Botanical (Landcare Holdings Pty Ltd) for Covalent pty Ltd. Version 1. November 2020.

Western Botanical (2025a) *Review of Microcorys elatoides P1, September 2025*; Prepared by Western Botanical for Covalent Lithium Pty Ltd; Ref WB1083. September 2025

Western Botanical (2025b) *Targeted Flora and Vegetation of the Booster Station 3 Development Envelope*. Consultants report to Covalent Lithium Pty Ltd. Report Ref WB1048. October 2025

Western Botanical (2025c) *Regional Surveys for Threatened, Priority Flora and Species of Interest for the Earl Grey Lithium Project 2023-2024.* Consultant's Report to Covalent Lithium Pty Ltd. Report Ref: WB1082.

360 Environmental Pty Ltd (2020) *Targeted Flora Survey Mt Holland Lithium Project.* Report prepared by Walker S of 360 Environmental Pty Ltd for Covalent Pty Ltd. November 2020.

Appendix C: Changes to EMP Records

Complexity of changes	**Minor revisions** ■	**Moderate revisions** ☐	**Major revisions** ☐
Number of Key Environmental Factors	**One** ■	**2-3** ☐	**> 3** ☐
Date revision submitted to EPA: 30/10/2025			
Proponent's operational requirement timeframe for approval of revision **Reason for Timeframe: to coincide with approval of LOM Proposal**	**< One Month** ■	**< Six Months** ☐	**> Six Months** ☐ **None** ☐

Item no.	EMP section no.	Summary of change	Reason for change
1.	Various	Updated Figures throughout document	Figures to reflect revised DE (S43A approved October 2025) and revised impact assessment of conservation significant flora for the Proposal (JBS&G 2025).
2.	3.2.1	New section	New section to provide outcome of additional survey effort in relation to *M. elatoides,* further to revised impact assessment (JBS&G 2025)
3.	3.3	Revised impact numbers	Updated to reflect revised impact assessment of conservation significant flora for the Proposal (JBS&G 2025).
4.	Various	Minor typo. edits and changes to text for clarify	