



**Western
Botanical**

Cumulative Impacts on Significant Flora by the Earl Grey

Lithium Project to July 2025

Prepared for: Covalent Lithium Pty Ltd

Report Ref: WB1101



© Landcare Holdings Pty Ltd trading as Western Botanical
5 Robinson Road Mahogany Creek WA 6072
PO Box 294 Mundaring WA 6073
T: 0407 193 637 E: info@westernbotanical.com.au

Citation: Western Botanical (2025) Cumulative Impacts on Significant Flora by the Earl Grey Lithium Project to July 2025. Consultants Memo Report to Client. Report Ref: WB1101

Version	Prepared By	Approved for Issue	Issue Date
1	G. Cockerton	17/12/25	17/12/25
2 Corrected <i>B. dolichostyla</i> data, expanded Methodology Limitations	G. Cockerton	18/12/25	18/12/25

This document has been prepared to the requirements of the client identified on this page and no representation is made to any third party. It may be cited for the purposes of scientific research or other fair use, but it may not be reproduced or distributed to any third party by any physical or electronic means without the express permission of the client for whom it was prepared or Western Botanical.

This report has been designed for double-sided printing

Contents

1.	Background	1
2.	Field Survey Methodology	3
3.	Results	5
3.1.	Threatened and Priority Flora	5
3.2.	Completeness of Survey	8
3.3.	Limitations	8
4.	Bibliography	11

Tables

Table 1.	Cumulative Impacts on Threatened and Priority Flora – Numbers of plants	1
Table 2.	Cumulative Impacts on Threatened and Priority Flora, – Percentage Impacts	3
Table 3.	Cumulative Impacts on Species of Interest – numbers of plants	7
Table 4.	Cumulative Impacts on Species of Interest – Percentage Impacts	9

1. Background

Covalent Lithium Pty Ltd (Covalent) operate the Earl Grey Lithium Project (EGLP) near Mount Holland, W.A., and propose to further develop the mine in the Life of Mine (LOM) proposal. This document presents an assessment of Cumulative Impacts to Significant Flora including Threatened flora, Priority flora and otherwise Significant Species (novel taxa) proposed by the EGLP in their Life of Mine proposal, in response to a Request for Further Information from the Department of Water and Environmental Regulation. Data is current to 10th July 2025.

This report presents records within and outside the EGLP's DE as well as the water pipeline and associated power line and booster stations servicing the EGLP from the Goldfields water supply and the upgraded Logistics Road from Moorine Rock to Mount Holland. It is intended to supply cumulative impacts data to the Department of Water and Environmental Regulation (DWER) providing summary regional context for Threatened, Priority a flora and Species of Interest (SOI, novel taxa).

The data set also includes a few data points for some species with Conservation Significance which do not occur within the EGLP's DE, (eg: one point for *Drummondita wilsonii* (P1)). These represent opportunistic records made while undertaking regional surveys for Covalent.

Records for Threatened and Priority flora are accompanied by records for SOI which represent taxa which are considered representative of novel flora species. While most of these have been reviewed by the WA Herbarium, that organisation does not have capacity to evaluate the taxonomic status of these species and many remain unrecognised formally.

Data presented here has been collected by various consults for Covalent Lithium and includes contributions by those noted in Table 1.

Table 1. Data Contributors

IBSA/ISA Number	Study Area	Consulting Group
IBSA-2023-0393	Logistics Road Central	Western Botanical
IBSA-2023-0315	Logistics Road Northern	Western Botanical
IBSA-2023-0297	Logistics Road Southern	Western Botanical
IBSA-2023-0451	Life of Mine Expansion Area and Regional Survey	Mattiske Consulting
ISA-0001015	Booster Station 3 Development Envelope	Western Botanical
ISA-0001017	<i>Microcorys elatoides</i> Regional Surveys	Western Botanical
ISA-0001018	<i>Regional Surveys for Threatened, Priority Flora and Species of Interest for the Earl Grey Lithium Project 2023-2024</i>	Western Botanical

IBSA/ISA Number	Study Area	Consulting Group
	On-mine footprint surveys for the EGLP	360 Environmental Pty Ltd AECOM Australia Pty Ltd Culhig Surveying Emerge Associates GHD Pty Ltd Matiske Consulting Pty Ltd Strategen-JBS&G

2. Field Survey Methodology

In all Targeted Flora Surveys for Covalent Lithium and the EGLP, the following methodology was employed.

Flora surveys within the flowering period of many species were regarded as being essential to effective assessment and where this was the case, those species were only targeted during their respective flowering periods. The allocation of human resources and timing of flora surveys was carefully managed so that optimal survey results would be likely. This means that particular areas often had to be assessed at least twice, sometime three times, in a given season as the flowering phenology of the numerous targeted species progressed, meaning that as some species finished flowering, others would commence flowering. This applied to species flowering in early Spring such as *Balaustion grandibracteatum* subsp. *junctura* (P2), *Balaustion grandibracteatum* subsp. *grandibracteatum* (P3) and diminutive species such as *Gompholobium cinereum* (P3). Species requiring survey in late Spring to early summer included most *Verticordia* species other than *Verticordia stenopetala* (P3) which could be recognised outside flowering. Typically, *Chamelaucium* sp. Mt Holland (G. Cockerton & G. Grigg WB40918) (P1), *Thryptomene jilbadji* (P1) and *Verticordia* species were the last to flower in late Spring to early Summer (Nov-Dec) each year.

Field teams were led by experienced, senior botanists familiar with the significant flora of the region. Staff were all made aware of the significant flora being targeted within a particular survey area and reference specimens were either viewed (in the case of *Banksia dolichostyla* (T)) or reference specimens of Priority or otherwise significant flora were viewed and/or collected by staff for ready confirmation of taxa encountered during survey. A comprehensive Reference Field Herbarium was maintained and available to the team during surveys for further morphological review of specimens.

During field surveys, team members walked pre-determined parallel traverses shown on the iPads at 10m spacings, each operator effectively covering a 10m wide swathe. Typically recording points were made every 5m to 10m within a given transect line.

Within vegetation of a given fire-age (years since last known fire), plants of each target species generally conformed to a single size class, *i.e.* plants observed were largely uniform in size and therefore assumed age.

This was particularly the case for species which are obligate re-seeder species which regenerate from soil-stored or canopy stored seed following a fire. Examples of this are *Chamelaucium jilbadji* (P1) and *Chamelaucium* sp. King Ingram Road (G. Grigg WB40916) (P1).

In the case of resprouter species such as *Microcorys elatoides* (P1), it was very difficult to distinguish seedlings from small resprouted plants. In these cases, both appear as small single-stemmed plants and may have been in the order of 10 to 40 cm tall and the presence of a small resilient root stock was not able to be discerned until the base of the plant was excavated or the

plant was removed to investigate the rootstock. This was clearly not feasible in other than a few specific cases where plant growth was reviewed. Older plants with a significant lignotuber were readily recognised but were in the minority in areas that had been recently burnt (within the last 2 to 3 years).

In all cases, the numbers of observed target plants were counted as one size class, or estimated in the case of large numbers, and values entered directly into iPads running ARCGIS FieldMaps®. High resolution satellite imagery on the iPads ensured location of collection was correctly recorded with a typical estimated positional error of +/- 2.5m.

Data was uploaded at the end of each work day to the CAD Resources Pty Ltd ESRI Server and reviewed daily and at the end of a field survey by the field team leader before being synthesized into the Covalent Significant Flora Database held by CAD Resources Pty Ltd.

Specimens of significant flora were collected on an ad-hock basis for vouchering at the WA Herbarium. Some specimens have already been vouchered while others are awaiting delivery to the WA Herbarium.

As the methods of counting individuals of Significant Flora outside the proposed EGLP Development Envelope and mine footprint are essentially equivalent to those used within EGLP Development Envelope and mine footprint, we believe the numbers within and outside the DE and mine footprint can be compared directly.

3. Results

For the purposes of data management and discussion, the following terms have been applied to populations of flora recorded:

Not Taken	Plants that lie outside any proposed development envelope operated by Covalent Lithium Pty Ltd in support of the EGLP and have not been taken in development.
Taken	Plants that within any proposed development envelope operated by Covalent Lithium Pty Ltd in support of the EGLP and have either have or could be taken in development.
Local	Plants that within any proposed development envelope operated by Covalent Lithium Pty Ltd in support of the EGLP
Regional	Plants that outside any proposed development envelope operated by Covalent Lithium Pty Ltd in support of the EGLP

3.1. Threatened and Priority Flora

The following represents numbers of Threatened and Priority Flora recorded for Covalent Lithium within and outside the EGLP Development Envelope and incorporates data held by the Department of Biodiversity, Conservation and Attractions (DBCA).

Cumulative Impacts on Threatened and Priority Flora are presented in Table 2 (numbers of plants) and Table 3 (percentage impacts).

Note that for *Banksia dolichostyla* (T), two plants are approved to be taken (MS1199) while a further 10 plants are located adjacent to proposed areas of clearing and are considered at risk of Indirect Impact. The data in Table 2 therefore notes 12 plants to be taken.

In response to a December 2025 request for Further Information (RFI) from the Department of Biodiversity, Conservation and Attractions (DBCA), the following Priority flora are discussed below:

Taxon	Overall % Cumulative Impact
<i>Daviesia sarissa subsp. redacta</i> (P1)	7.60%
<i>Eutaxia sp. North Ironcap</i> (P. Armstrong PA 06/898) (P1)	4.33%
<i>Labichea rossii</i> (P1)	4.67%
<i>Thryptomene jilbadji</i> (P1)	9.14%
<i>Thryptomene salina</i> (P1)	3.34%

***Daviesia sarissa* subsp. *redacta* (P2)**

Daviesia sarissa subsp. *redacta* is represented at the WA Herbarium by seven records, all from within or adjacent to the Boorabbin National Park between Southern Cross and Coolgardie. No specimens from the Mt Holland region have been vouchered as yet. It is a single-stemmed, obligate-reseeder rounded shrub 0.6m to 0.8m in height with characteristically retrorse leafless spiny stems and can be recognised at any time of year.

The Mount Holland populations lie some 100km south of the Boorabbin National Park and occur in three locations: (i) three populations south of the old airstrip, (ii) one population west of the Mount Holland minesite and the Marvel Loch – Forrestania Road, and (iii) a single record near the intersection of Southern Cross Road and Meranda North Road, some 58 km west of Mount Holland. The species is found on shallow sand over laterite gravel and is a fire-responsive species. It is not known how long plants live after fire. A total population, including the DBCA data at Boorabbin N.P. of 2,014 plants is calculated. Of these, 24 plants were taken within the MP12183 footprint and a further 129 are proposed to be taken within the LOM Development Envelope, with a total proportional impact of 7.60%.

Given the fire-responsiveness of the species; the extents of occurrence being 50 to 100km apart; and significant areas of suitable sandplain over laterite gravel habitat being known in the region between these points that has yet to be surveyed, it is considered highly likely that the species is more abundant and more widespread than the current limited data indicates. It is suggested that the species is poorly surveyed.

***Eutaxia* sp. *North Ironcap* (P. Armstrong PA 06/898) (P1)**

Eutaxia sp. *North Ironcap* (P. Armstrong PA 06/898) (P1) is a cryptic species that needs to be assessed either when in flower (early Spring) or in fruit (mid to late Spring). It is a diminutive geosporous obligate reseeder lacking lignotuber. It is best observed after fire when other vegetation has been burnt away. It has been observed fruiting within 12 months of fire when plants may only be 10 to 15 cm tall but can also be longer-lived, growing to 0.5m in height and 1m in diameter. Florabase records indicate two populations, one north of EGLP minesite south of Jilbadji Nature reserve and one approximately 11.31 km N of North Ironcap.

In the Mt Holland area, *Eutaxia* sp. *North Ironcap* is found associated with *Melaleuca johnsonii*, *M. lateriflora*, *M. acuminata*, *M. hamata* and other *Melaleuca* species. These species favour low lying sites with clayey soils and likely subject to some waterlogging.

To date, records indicate 52,777 plants have been counted. Near Mt Holland, the species is known from 14 loci (sub-populations) within a 20 km radius plus the records held by DBCA. Thirteen of these sub-populations occur outside the EGLP Development Envelope. One population with three sub-populations occur within the LOM footprint. Data provided shows that 2,266 individuals are proposed to be taken in the LOM footprint, with total impact of 4.33%. Based on information

available to date, *Eutaxia sp. North Ironcap* (P. Armstrong PA 06/898) appears to be associated with the Ironcap Priority Ecological Community and is a short-range endemic.

***Labichea rossii* (P1)**

Labichea rossii (P1) is a lignotuberous resprouter and geosporous reseeder low shrub commonly between 0.2 and 0.6m high x 0.2 to 1m wide. Six sub-populations are known from within a 10km radius of an area between the EGLP Development Envelope and Mount Holland with one sub-population being adjacent to a Shire gravel pit south-west of Mt Holland. It is known from laterite gravely rises, associated with *Melaleuca hamata* shrublands. Two subpopulations noted on Florabase are in the same area and may represent two of the subpopulations noted above. Based on information available to date, *Labichea rossii* appears to be a Mt Holland short-range endemic.

To date, 10,775 plants are known from all sources with 463 already taken within the MP121883 mining proposal and a further 40 plants to be taken in the EGLP Life of Mine Development Envelope, total impacts 4.67%.

***Thryptomene jilbadji* (P1)**

Thryptomene jilbadji (P1) is a geosporous obligate reseeder known from Unallocated Crown Land and two Nature Reserves (Jilbadji Nature Reserve and an unnamed Nature Reserve 52.2km NNE (5.84 deg) of Hyden on Soldiers Road). It occurs on shallow white to yellow sand over laterite gravel and is often found in significant numbers associated with *Allocasuarina spinosissima*, *A. acutivalvis* and *Thryptomene kochii*. It is particularly common on sandplains near Mt Holland and it is often associated with *Chamelaucium* sp. Mt Holland (G. Cockerton & G. Grigg WB40918) (P1). Surveys have found 364,577 plants in total with 66,566 proposed to be taken within the LOM footprint and 255 plants already taken within the Mining Proposal MP121883 footprint. Up to 13,776 plants were to be taken in the upgrade to the Marvel Loch-Forrestania Road alignment in CPS10049, not all of which may have been taken as those works are now complete. Total impacts stand at 9.14%.

***Thryptomene salina* (P1)**

Thryptomene salina (P1) is a geosporous obligate reseeder known from two populations: (i) the TYPE location adjacent to the Vermin Proof Fence and 54.8km east of Hyden, on the fringes of a saline playa lake system; and (ii) within the western portion of the EGLP LOM Development Envelope.

Surveys have found 50,268 plants in total, at two populations: (i) the TYPE locality 47,855 plants have been counted, occurring as a medium shrub to 1m tall on white to yellow sand, low in the landscape with fringing *Melaleuca* species, above the halophytic Samphire shrubland; and (ii) the EGLP population of 2,361 plants reported, occurring as a low shrub to 0.7m tall under mallees on white to yellow sand, in a shallow swale. The EGLP proposes to take 1,681 plants within the LOM footprint. Total impacts stand at 7.60%.

3.2. Completeness of Survey

Surveys for Threatened and Priority Flora within proposed disturbance footprints were conducted in accordance with EPA Guidance 2016 and the field methodology above by numerous Botanical Consultancies. These are considered thorough, effective and complete within the limits of field survey ability at the time of survey. Western Botanical has not verified those data within the EGLP Development Envelope.

Assessments of numbers of plants outside the Development Envelope were conducted in accordance with EPA Guidance 2016 until the proportional impacts to Threatened and Priority flora were calculated as being within acceptable limits, *i.e.* within the limits as communicated by DBCA or as noted within Ministerial Statement 1199. The targets were to locate quantify sufficient numbers of plants of each species outside the Development Envelope (DE) to bring projected impacts by the EGLP to less than 5% of the overall population. In many cases, the numbers generated outside the DE fall below 2% proportional impact. These targets were achieved in most cases.

Surveys for Species of Interest, those considered Significant Species which may represent new taxa (EPA, 2016), were conducted concurrently and at the same level of intensity as for Threatened and Priority Flora. However, surveys were not necessarily targeting as stringent a proportional impact calculation. One difficulty in assessing the SOI species was the inability of the WA Herbarium to independently verify the taxonomy of most species with a suitable level of confidence. However, species were retained on the targeted SOI list regardless of this factor and recorded where ever they were observed.

A discussion of Limitations is presented below.

3.3. Limitations

Limitation	Discussion
Available sources of contextual information	<ul style="list-style-type: none"> • At the time of commencement of surveys, desktop information on the flora and vegetation of the Study Area was limited. • Mattiske consulting had developed a document providing information on the Threatened and Priority flora of the EGLP Study Area, which was most useful. • Further, through use of WA Herbarium and JSTOR Global Plants resources, and occasional reference to specialist

Limitation	Discussion
	<p>taxonomists in WA and other states, flora identifications were adequately resourced.</p> <p>This is not a Limitation for the works reported</p>
The Scope of the survey	<ul style="list-style-type: none"> • The assessment was Scoped as a Targeted Survey for Significant Flora, meeting EPA Guidance 2016. <p>This is not a Limitation for the works reported</p>
Proportion of flora collected and identified	<ul style="list-style-type: none"> • Experienced senior botanists lead teams in the field at all times. • All Threatened and Priority encountered flora were thoroughly assessed with reference material for all significant species maintained and referred to on a regular basis. • Through the collection of specimens of all species encountered, those that represented potential new species were recognised and added to a dynamic Reference Field Herbarium. <p>This is not a Limitation for the works reported</p>
Completeness and further work which may be needed	<ul style="list-style-type: none"> • Through on-going works from 2019 to Dec 2024, a good understanding of the species vs soil type / landform and vegetation community associations was developed. • Project areas were carefully evaluated and were thoroughly assessed at 10m spacings between operators, allowing excellent coverage of the areas surveyed. • Within the areas assessed, where a particular group of species were targeted, surveys were thorough and carefully conducted to minimise gaps in coverage. • Targeted Surveys for significant flora were conducted with a target cumulative impact calculation for all species of less than 5%. Where ever possible, species were included in field surveys until this target was achieved. Once the low percentage impact was achieved, species were not further specifically targeted but were recorded where ever observed incidentally to other works in the area. • The surveys presented here can be considered thorough and accurate for the areas and species assessed. • It should be noted that further survey in areas not yet assessed will likely yield additional numbers of individuals and potentially additional populations of some or all of the target

Limitation	Discussion
	<p>species. However, given the quantum of surveys undertaken; the detail at which it was undertaken; and the low level of cumulative impacts achieved, further survey of most significant flora is not regarded as being required. Essentially, the more we search, the more we find, but in diminishing returns for effort.</p> <p>This is not a Limitation for the works reported</p>
Mapping reliability	<ul style="list-style-type: none"> • Mapping was conducted utilising iPads running ARCGIS FieldMaps application with high resolution satellite imagery base maps and GPS accuracy of between +/- 2.5m to 3.5m regularly achieved. • Data points included counts and / or estimates of numbers of plants within a 5m radius of each point. <p>This is not a Limitation for the works reported</p>
Timing: weather, season	<ul style="list-style-type: none"> • Data presented here incorporates records from 2016 to 2024, a period of eight years. There were many opportunities to address species in the appropriate time of year to maximise effectiveness and accuracy. • Despite the extensive period of surveys, few days were lost to inclement weather, either heat or cold/wet conditions, and the quality of surveys was not compromised. • Many species targeted were cryptic and needed to be assessed when in flower. This applied, for example, to early season flowering genera such as <i>Balaustion</i>, <i>Eutaxia</i>, <i>Gompholobium</i> and late-flowering genera such as <i>Chamelaucium</i> and <i>Verticordia</i>. • Field surveys were planned and undertaken in appropriate seasons that were favourable to the ready sighting and identification of each species assessed. • Due to the flowering phenology of the broad of species targeted, some areas were assessed two or three times as some species finished flowering and other species commenced flowering. <p>This is not a Limitation for the works reported</p>

Limitation	Discussion
Disturbances	<ul style="list-style-type: none"> • Two disturbances influenced the effectiveness of surveys undertaken for EGLP: (i) occurrence of wildfires which stimulated fire-responsive species; and (ii) establishment of strategic firebreaks (chaining and burning of 50 to 100m wide strips of vegetation on roadsides) by DBCA on King Ingram Road and on the Marvel Loch – Forrestania Road alignments. • The north-eastern portion of the Life of Mine Development Envelope was burnt in 2013 which meant that assessment within the LOM 2016 to 2019 were undertaken in favourable timeframes following fire. • The roadside strategic firebreaks on King Ingram Road and the Marvel Loch – Forrestania Road were established in 2018 and vegetation was in an early stage of recovery when surveys commenced in that part of the Study Area in 2021. • In both cases, the disturbances stimulated establishment of understory species to either germinate from seed or re-sprout from rootstocks and lignotubers, and benefited the assessment of target species. <p>This is not a Limitation for the works reported</p>
Intensity	<ul style="list-style-type: none"> • Surveys were undertaken at 10m spacings between individual observers, on pre-determined grids which were depicted on iPads running the ESRI FieldMaps application and using high resolution satellite imagery base maps. • Spacings of operators allowed full coverage of areas assessed for all species. • In the case of assessments for <i>Eutaxia</i> sp. North Ironcap (P1), spacings of operators was usually reduced to 5m apart as this species is very cryptic. <p>This is not a Limitation for the works reported.</p>

Limitation	Discussion
Resources	<ul style="list-style-type: none"> Adequate resources and funds were made available by Covalent to address the agreed Scope at all times. <p>This is not a Limitation for the proposal</p>
Access	<ul style="list-style-type: none"> Access to the Study Area was excellent in all areas. <p>This is not a Limitation for the proposal</p>
Experience levels	<ul style="list-style-type: none"> The team developed and utilised for this project undertook the works in a systematic fashion and was led at all times by at least one senior botanist per team. All but two team members have maintained longevity in the Western Botanical team throughout the period, conducting surveys between Moorine Rock and Forrestania, meaning that knowledge of the flora of the region has been gained and maintained. The use of a dynamic field herbarium and contemporaneous identification of species while field works were being implemented meant that the field teams were responsive to newly recognised significant flora in appropriate timeframes to allow assessments to be undertaken in appropriate seasonal conditions in most cases. <p>This is not a Limitation for the proposal</p>

Geoff Cockerton B.Sc.

18th Dec 2025

Table 2. Cumulative Impacts on Threatened and Priority Flora – Numbers of plants

Taxon	Not Taken - Regional - DBCA	Not Taken - Regional - Other Consultants	Not Taken - Regional - Western Botanical	Not Taken - Survey Area outside of CPS 10049	Not Taken - Survey Area outside of CPS	Not Taken - Survey Area outside of CPS 10265	Not Taken - Within LOM DE	Not Taken - Within LOM Footprint	Not Taken - Within MP121883 DE	Taken - Within CPS 10049 Footprint	Taken - Within CPS 10197 Footprint	Taken - Within CPS 10265 Footprint	Taken - Within CPS TEC Footprint	Taken - Within LOM Footprint	Taken - Within MLF MS1199 Footprint	Taken - Within MP 121883	Taken - Within PRR MS1119 Footprint	Grand Total
T																		
<i>Banksia dolichostyla</i>	880	12,915	8,520	319			102	150	5,145					12		59		28,102
<i>Eremophila verticillata</i>	994	8,796	4,194						844									14,828
P1																		
<i>Acacia lachnocarpa</i>	146	65,301	1,218				265		542					494		502		68,468
<i>Acacia sp. Forrestania (D. Angus DA 3001)</i>	3	7,327	13						242									7,585
<i>Brachyloma stenolobum</i>	500	836	7,755	1,197	1		2,329		50	10				448		2		13,128
<i>Chamelaucium sp. King Ingram (G. Grigg WB40916)</i>			16	93					3	107					1			220
<i>Chamelaucium sp. Mount Holland (G. Cockerton & G. Grigg WB40918)</i>	2	243	22,259	8,846			1,190	311	2,961	653				2,037		6		38,508
<i>Dicrastylis capitellata</i>			34,259	7					622									34,888
<i>Eutaxia sp. North Ironcap (P. Armstrong PA 06/898)</i>	5	2,346	47,711	15			413			18				2,266		3		52,777
<i>Grevillea lissopleura</i>	7	2,448	466	1,814					924	74			86					5,819
<i>Grevillea marriottii</i>	2,437	710	17,406				89		779					257		35		21,713
<i>Hibbertia hapalophylla</i>	1,000	1,012	6,841					1	237							404		9,495
<i>Hibbertia tuberculata</i>	14	10,547	1,538						1,087									13,186
<i>Labichea rossii</i>		246	2,750					6	7,270					40		463		10,775
<i>Microcorys elatoides</i>	14	46,216	219,437	4,989			19,631	399	29,595	3,070				33,256	8	7,962		364,577
<i>Microcorys sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927)</i>	4	2,283	29,656				6,227	181	3,004					955		642		42,952
<i>Thryptomene jilbadji</i>	1	175,313	284,081	190,433			147,768		3,720	13,776				66,556	41	255		881,944
<i>Thryptomene salina</i>	1	51	47,855				680							1,681				50,268
P2																		
<i>Acacia asepala</i>	250	1	678	5,237		18,731			5	98		82	103					25,185
<i>Balaustion grandibracteatum subsp. junctura</i>	91	2,854	162,407	94,663			20,145		719	5,430				18,179	23	28		304,539
<i>Daviesia sarissa subsp. redacta</i>	17	118	671	2				101	952					129		24		2,014
<i>Eutaxia lasiocalyx</i>	8	44,372	98,186	8,458	1	4,208			18,803	42	4	1	4	3,633		8,810		186,530
<i>Orianthera exilis</i>	29		299						1									329

Note: Plants "Not Taken - Within LOM Footprint" fall within the old airstrip rehabilitation area within a Flora Protection Zone. They are within the disturbance footprint but will not be disturbed

Cumulative Impacts on Threatened and Priority Flora, – Numbers of plants continued.

Taxon	Not Taken - Regional - DBCA	Not Taken - Regional - Other Consultants	Not Taken - Regional - Western Botanical	Not Taken - Survey Area outside of CPS 10049	Not Taken - Survey Area outside of CPS 10007	Not Taken - Survey Area outside of CPS 10265	Not Taken - Within LOM DE	Not Taken - Within LOM Footprint	Not Taken - Within MP121883 DE	Taken - Within CPS 10049 Footprint	Taken - Within CPS 10197 Footprint	Taken - Within CPS 10265 Footprint	Taken - Within CPS TEC Footprint	Taken - Within LOM Footprint	Taken - Within MLF MS1199 Footprint	Taken - Within MP 121883	Taken - Within PRR MS1119 Footprint	Grand Total
P3																		
<i>Acacia undosa</i>	134	117,662	17,265				5,110		8,476					3,591		12,707		164,945
<i>Boronia ternata var. promiscua</i>	12	332	55,987	856		19	2,146	146	329	345		5		3,562		22		63,761
<i>Chorizema circinale</i>	77	420	427	1,418			132		100	826				14	14	59		3,487
<i>Eucalyptus urna subsp. xesta</i>			500	2,179		117				38		6	8			3		2,851
<i>Hakea pendens</i>	1,478	14	2,639	4,379	52	64			1,141	200	22	1		811				10,801
<i>Hibbertia glabriuscula</i>	101		1,424				105											1,630
<i>Phebalium drummondii</i>	253		2,460	2,863	139					20						1		5,736
<i>Rinzia torquata</i>			29	6,050					76	11					91	1		6,258
<i>Rinzia triplex</i>	1,464		1,452		4,568	405			5		60	42					223	8,219
<i>Stylidium sejunctum</i>	2,841	1,189	5,162	138				1	371									9,920
<i>Teucrium diabolicum</i>	23,573	16,581	22,406	3,478					11,057				4	19		485		77,603
<i>Verticordia gracilis</i>	38	11,099	1,381	16,452	1	21	461		14	5,641	1			482	4	11		35,606
<i>Verticordia mitodes</i>	44	1	2,472	378	1,371	5	44		1	128	52							4,496
<i>Verticordia stenopetala</i>	3,541	4,788	5,509	23,960	2,229	1,301	815		1,209	4,517	74	279		1,302	66	47		49,637

Table 3. Cumulative Impacts on Threatened and Priority Flora, – Percentage Impacts

Taxon	LOM Indicative Site Impact	Mining Proposal 101345 Footprint Impact	LOM Footprint Impact	LOM Indicative Site Impact Adjusted for MS 1199	Mining Proposal 101345 Footprint Impact Adjusted for MS 1199	CPS 10197/1 Impact PRR	CPS 10049/1 Impact MLF	CPS 10265/1 Impact Buffalo	CPS Impact TEC	MS 1199 Impact PRR	MS 1199 Impact MLF	Total Impact All Areas
T												
<i>Banksia dolichostyla</i>	0.25%	0.21%	0.04%	0.25%	0.21%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.25%
<i>Eremophila verticillata</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
P1												
<i>Acacia lachnocarpa</i>	1.45%	0.73%	0.72%	1.45%	0.73%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.45%
<i>Acacia sp. Forrestania (D. Angus DA 3001)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Acacia sp. Moorine Rock (B.R. Maslin 4474)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Alyogyne sp. Hyden (G. Durell 127)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Brachyloma stenolobum</i>	3.43%	0.02%	3.41%	3.43%	0.02%	0.00%	0.08%	0.00%	0.00%	0.00%	0.00%	3.50%
<i>Chamelaucium sp. King Ingram (G. Grigg WB40916)</i>	0.00%	0.00%	0.00%	0.45%	0.45%	0.00%	48.64%	0.00%	0.00%	0.00%	0.45%	49.09%
<i>Chamelaucium sp. Mount Holland (G. Cockerton & G. Grigg WB40918)</i>	5.31%	0.02%	5.29%	5.31%	0.02%	0.00%	1.70%	0.00%	0.00%	0.00%	0.00%	7.00%
<i>Chamelaucium sp. Parker Range (B.H. Smith 1255)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%	0.00%	0.04%	0.00%	0.00%	0.00%	0.09%
<i>Dicrastylis capitellata</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Drummondita wilsonii</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Eucalyptus calycogona subsp. miraculum</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.12%	0.00%	0.00%	0.00%	1.12%
<i>Eutaxia sp. North Ironcap (P. Armstrong PA 06/898)</i>	4.30%	0.01%	4.29%	4.30%	0.01%	0.00%	0.03%	0.00%	0.00%	0.00%	0.00%	4.33%
<i>Grevillea lissopleura</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.27%	0.00%	1.48%	0.00%	0.00%	2.75%
<i>Grevillea marriottii</i>	1.34%	0.16%	1.18%	1.34%	0.16%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.34%
<i>Hemigenia sp. Newdegate (E. Bishop 75)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Hibbertia hapalophylla</i>	4.25%	4.25%	0.00%	4.25%	4.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.25%
<i>Hibbertia tuberculata</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Taxon	LOM Indicative Site Impact	Mining Proposal 101345 Footprint Impact	LOM Footprint Impact	LOM Indicative Site Impact Adjusted for MS 1199	Mining Proposal 101345 Footprint Impact Adjusted for MS 1199	CPS 10197/1 Impact PRR	CPS 10049/1 Impact MLF	CPS 10265/1 Impact Buffalo	CPS Impact TEC	MS 1199 Impact PRR	MS 1199 Impact MLF	Total Impact All Areas
<i>Labichea rossii</i>	4.67%	4.30%	0.37%	4.67%	4.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.67%
<i>Lepidosperma sp. ?jacksonense (G. Cockerton 021)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Melaleuca grieviana</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.11%
<i>Melichrus sp. Coolgardie (K.R. Newbey 8698)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.64%	0.00%	0.00%	0.00%	1.64%
<i>Microcorys elatoides</i>	11.31%	2.18%	9.12%	11.31%	2.19%	0.00%	0.84%	0.00%	0.00%	0.00%	0.00%	12.15%
<i>Microcorys sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927)</i>	3.72%	1.49%	2.22%	3.72%	1.49%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.72%
<i>Microcorys sp. Parker Range (C. Hancock s.n. PERTH 09215123)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium sp. Mt Gibbs (G.F. Craig 6658)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Rinzia fimbriolata</i>	0.00%	0.00%	0.00%	1.45%	1.45%	0.00%	0.00%	0.00%	0.00%	1.45%	0.00%	1.45%
<i>Rinzia medifila</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	4.20%	0.00%	0.00%	0.00%	4.30%
<i>Stylidium validum</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Thryptomene jilbadji</i>	7.58%	0.03%	7.55%	7.58%	0.03%	0.00%	1.56%	0.00%	0.00%	0.00%	0.00%	9.14%
<i>Thryptomene salina</i>	3.34%	0.00%	3.34%	3.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	3.34%
P2												
<i>Acacia asepala</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.39%	0.33%	0.41%	0.00%	0.00%	1.12%
<i>Acacia concolorans</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.06%	0.06%	0.00%	0.00%	0.13%
<i>Balaustion grandibracteatum subsp. junctura</i>	5.98%	0.01%	5.97%	5.99%	0.02%	0.00%	1.78%	0.00%	0.00%	0.00%	0.01%	7.77%
<i>Conospermum sigmoideum</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Cyanothamnus westringioides</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Dampiera orchardii</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.32%	0.00%	0.00%	0.00%	0.00%	1.32%
<i>Daviesia sarissa subsp. redacta</i>	7.60%	1.19%	6.41%	7.60%	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.60%
<i>Eutaxia lasiocalyx</i>	6.67%	4.72%	1.95%	6.67%	4.72%	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	6.70%
<i>Halgania sp. Peak Eleanora (M.A. Burgman 3547 B)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Lepidium merrallii</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Taxon	LOM Indicative Site Impact	Mining Proposal 101345 Footprint Impact	LOM Footprint Impact	LOM Indicative Site Impact Adjusted for MS 1199	Mining Proposal 101345 Footprint Impact Adjusted for MS 1199	CPS 10197/1 Impact PRR	CPS 10049/1 Impact MLF	CPS 10265/1 Impact Buffalo	CPS Impact TEC	MS 1199 Impact PRR	MS 1199 Impact MLF	Total Impact All Areas
<i>Leucopogon sp. Yellowdine (M. Hislop & F. Hort MH 3194)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Logania nanophylla</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.61%	0.00%	0.00%	0.00%	2.61%
<i>Melaleuca ochroma</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.39%	0.00%	0.00%	0.00%	0.00%	2.39%
<i>Olearia laciniifolia</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Orianthera exilis</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Verticordia multiflora subsp. solox</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
P3												
<i>Acacia crenulata</i>	0.00%	0.00%	0.00%	2.83%	2.83%	0.13%	0.00%	0.00%	0.00%	2.83%	0.00%	2.96%
<i>Acacia undosa</i>	9.88%	7.70%	2.18%	9.88%	7.70%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.88%
<i>Balaustion grandibracteatum subsp. grandibracteatum</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.59%	0.00%	0.00%	0.00%	5.59%
<i>Banksia rufa subsp. chelomacarpa</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Boronia ternata var. promiscua</i>	5.62%	0.03%	5.59%	5.62%	0.03%	0.00%	0.54%	0.01%	0.00%	0.00%	0.00%	6.17%
<i>Chorizema circinale</i>	2.09%	1.69%	0.40%	2.49%	2.09%	0.00%	23.69%	0.00%	0.00%	0.00%	0.40%	26.18%
<i>Cyathostemon verrucosus</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Eucalyptus exigua</i>	0.00%	0.00%	0.00%	0.00%	0.00%	4.56%	0.38%	0.00%	0.00%	0.00%	0.00%	4.94%
<i>Eucalyptus polita sens. lat.</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.60%	0.00%	0.60%	0.00%	0.00%	0.00%	1.20%
<i>Eucalyptus urna subsp. xesta</i>	0.11%	0.11%	0.00%	0.11%	0.11%	0.00%	1.33%	0.21%	0.28%	0.00%	0.00%	1.93%
<i>Eutaxia acanthoclada</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Gompholobium cinereum</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	51.43%	0.00%	0.00%	0.00%	0.00%	51.43%
<i>Hakea pendens</i>	7.51%	0.00%	7.51%	7.51%	0.00%	0.20%	1.85%	0.01%	0.00%	0.00%	0.00%	9.57%
<i>Hibbertia glabriuscula</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Mirbelia densiflora</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Notisia intonsa</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Persoonia cymbifolia</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Taxon	LOM Indicative Site Impact	Mining Proposal 101345 Footprint Impact	LOM Footprint Impact	LOM Indicative Site Impact Adjusted for MS 1199	Mining Proposal 101345 Footprint Impact Adjusted for MS 1199	CPS 10197/1 Impact PRR	CPS 10049/1 Impact MLF	CPS 10265/1 Impact Buffalo	CPS Impact TEC	MS 1199 Impact PRR	MS 1199 Impact MLF	Total Impact All Areas
<i>Phebalium drummondii</i>	0.02%	0.02%	0.00%	0.02%	0.02%	0.00%	0.35%	0.00%	0.00%	0.00%	0.00%	0.37%
<i>Prostanthera nanophylla</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	18.31%	0.00%	0.00%	0.00%	0.00%	18.31%
<i>Rinzia torquata</i>	0.02%	0.02%	0.00%	1.47%	1.47%	0.00%	0.18%	0.00%	0.00%	0.00%	1.45%	1.65%
<i>Rinzia triplex</i>	0.00%	0.00%	0.00%	2.71%	2.71%	0.73%	0.00%	0.51%	0.00%	2.71%	0.00%	3.95%
<i>Seringia adenogyna</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%	0.11%
<i>Stylidium sejunctum</i>	2.20%	2.20%	0.00%	2.20%	2.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.20%
<i>Teucrium diabolicum</i>	0.65%	0.62%	0.02%	0.65%	0.62%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.65%
<i>Verticordia gracilis</i>	1.38%	0.03%	1.35%	1.40%	0.04%	0.00%	15.84%	0.00%	0.00%	0.00%	0.01%	17.24%
<i>Verticordia mitodes</i>	0.00%	0.00%	0.00%	0.00%	0.00%	1.16%	2.85%	0.00%	0.00%	0.00%	0.00%	4.00%
<i>Verticordia stenopetala</i>	2.72%	0.09%	2.62%	2.85%	0.23%	0.15%	9.10%	0.56%	0.00%	0.00%	0.13%	12.66%
P4												
<i>Banksia shanklandiorum</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.43%	0.00%	0.00%	0.00%	0.43%
<i>Eremophila biserrata</i>	0.27%	0.27%	0.00%	0.27%	0.27%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%
<i>Eremophila caerulea subsp. merrallii</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Eremophila inflata</i>	0.61%	0.00%	0.61%	0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.61%
<i>Grevillea neodissecta</i>	2.37%	0.05%	2.32%	2.37%	0.05%	0.08%	1.27%	0.00%	0.00%	0.00%	0.00%	3.72%
<i>Gyrostemon ditrigynus</i>	0.01%	0.00%	0.01%	0.01%	0.00%	0.00%	0.00%	0.01%	0.00%	0.00%	0.00%	0.02%
<i>Microcorys sp. Forrestania (V. English 2004)</i>	13.30%	0.00%	13.30%	13.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.30%
<i>Myriophyllum petraeum</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Stenanthemum aff. bremerense (WB40845)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Wurmbea murchisoniana</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 4. Cumulative Impacts on Species of Interest – numbers of plants

Taxon	Not Taken - Regional - DBCA	Not Taken - Regional - Other Consultants	Not Taken - Regional - Western Botanical	Not Taken - Survey Area outside of CPS 10049	Not Taken - Survey Area outside of CPS 10197	Not Taken - Survey Area outside of CPS 10265	Not Taken - Within LOM DE	Not Taken - Within LOM Footprint	Not Taken - Within MP121883 DE	Taken - Within CPS 10049 Footprint	Taken - Within CPS 10197 Footprint	Taken - Within CPS 10265 Footprint	Taken - Within CPS TEC Footprint	Taken - Within LOM Footprint	Taken - Within MLF MS1199 Footprint	Taken - Within MP 121883	Taken - Within PRR MS1119 Footprint	Grand Total
SOI																		
<i>Acacia intricata</i> Marvel Loch - Southern Cross form (WB40115)			25		230	2												257
<i>Acacia neurophylla</i> subsp. Resinous veins (G. Cockerton 797)			200		35	1,003					3							1,241
<i>Apectospermum</i> aff. <i>spinescens</i> (smooth bark) (D. Lievense 164)			62	21	7	3			142	3		1		1				240
<i>Brachyloma geissoloma</i> Inland variant (F. Keet 022)			20															20
<i>Cooperhooikia</i> sp. Mt Holland (G. Cockerton 381)			839	1,369					100	2,197						5		4,510
<i>Cryptandra</i> sp. Zigzag (G. Cockerton 319)				743						40								783
<i>Drummondita</i> sp. green flowers (L. Shelton 304)			43,958		4,656	2,843			1		21	601						52,080
<i>Drummondita</i> sp. hairy sepals (L. Shelton 409)			239		90				56		20					4	1	410
<i>Eucalyptus</i> aff. <i>salubris</i> pruinose branchlet form (G. Cockerton & J. Warden WB40196)			57	1,494	1	1				103		5						1,661
<i>Eutaxia</i> sp. Mt Holland (G. Cockerton & G. Grigg 758)			2													10		12
<i>Eutaxia</i> sp. Southern Cross (G. Grigg 010)			10															10
<i>Grevillea</i> aff. <i>acuarua</i> (G. Cockerton & L. Dalgliesh 2090)			117															117
<i>Grevillea</i> aff. <i>huegelii</i> Marvel Loch form (P.M. Olde 91/44 NSW782729)			8	12		478						10	6					514
<i>Grevillea communis</i> ms (P.M. Olde)			227	38	6						3							274
<i>Grevillea comosa</i> ms (P.M. Olde 91/14, 7 Sep 1991)			1,719	12,072	8	4,202				246		99	140					18,486
<i>Hibbertia</i> sp. <i>Forrestiana</i> (G. Cockerton WB40868, H. lateritica ms, K.R. Thiele)			1,384	1,402						3								2,789
<i>Melaleuca</i> aff. <i>spicigera</i> (G. Cockerton 638, 765)			1,193	938					24	3								2,158
<i>Melaleuca</i> sp. small green leaves (G. Cockerton & G. Grigg 768)			5,310						43									5,353
<i>Olearia magniflora</i>			22															22
<i>Persoonia</i> aff. <i>coriacea</i> falcate leaf (G. Cockerton 826)					89				51							32		172
<i>Persoonia</i> sp. Parker Range Road (D. Lievense 153a)			1,874	355		263	7		8							13		2,520

Taxon	Not Taken - Regional - DBCA	Not Taken - Regional - Other Consultants	Not Taken - Regional - Western Botanical	Not Taken - Survey Area outside of CPS 10049	Not Taken - Survey Area outside of CPS 10197	Not Taken - Survey Area outside of CPS 10265	Not Taken - Within LOM DE	Not Taken - Within LOM Footprint	Not Taken - Within MP121883 DE	Taken - Within CPS 10049 Footprint	Taken - Within CPS 10197 Footprint	Taken - Within CPS 10265 Footprint	Taken - Within CPS TEC Footprint	Taken - Within LOM Footprint	Taken - Within MLF MS1199 Footprint	Taken - Within MP 121883	Taken - Within PRR MS1119 Footprint	Grand Total
SOI																		
<i>Phebalium aff. brachycalyx 'tuberculata' (G. Cockerton 394)</i>			4,719	7,704	869	196			122	424	2	6				1	5	14,048
<i>Phebalium aff. laevigatum eastern form, pink fls (L. Shelton 492)</i>			13,530	5,986					1	44								19,561
<i>Phebalium aff. microphyllum tuberculata stems (L. Shelton 486)</i>	299		1	89						323								712
<i>Phebalium aff. sp. Yerilgee Sandplain (J. Jackson 223)</i>			12,672	8,254	1		80		45	1,103					4	3		22,162
<i>Phebalium aff. tuberosum short leaf (G. Cockerton 333)</i>				131														131
<i>Phebalium sp. British Hill (G. Cockerton, S. Cockerton, J. Warden WB41040)</i>			1,091	5,464						157								6,712
<i>Phebalium sp. ovate (WB40864)</i>			2,413	17	25				9		6					2	5	2,477
<i>Phebalium sp. Parker Range Rd (broad leaved variant)</i>			128	1,528	1	1				4			4					1,666
<i>Phebalium sp. Parker Range Road (G. Cockerton & B. Loudon WB40838)</i>			416	5,767	233	332				179	11	1	3					6,942
<i>Phebalium sp. Parkers Range intermediate</i>			2							3								5
<i>Phebalium sp. supermegawarty (G. Cockerton 396)</i>				38														38
<i>Phebalium sp. yellow flowers filifolium complex (G. Cockerton & L Dalgliesh 2137)</i>			10															10
<i>Phebalium tuberosum sens. lat. (short leaf form)</i>			15,113															15,113
<i>Prostanthera aff. campbellii (L. Shelton 125)</i>			59	33														92
<i>Wilsonia sp. upright (G. Cockerton 661)</i>				238		20											12	270
<i>Xanthorrhoea sp. Mt Holland (F. Keet 030)</i>			942	16					20									978
<i>Xanthorrhoea sp. nana complex</i>			274						5									279
<i>Xanthorrhoea sp. pineappleoides (F. Keet 036)</i>			133															133

Table 5. Cumulative Impacts on Species of Interest – Percentage Impacts

Taxon	Total Impact All Areas	LOM Indicative Site Impact	Mining Proposal 101345 Footprint Impact	LOM Footprint Impact	LOM Indicative Site Impact Adjusted for MS 1199	Mining Proposal 101345 Footprint Impact Adjusted for MS 1199	CPS 10197/1 Impact PRR	CPS 10049/1 Impact MLF	CPS 10265/1 Impact Buffalo	CPS Impact TEC	MS 1199 Impact PRR	MS 1199 Impact MLF
SOI												
<i>Acacia intricata</i> Marvel Loch - Southern Cross form (WB40115)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Acacia neurophylla</i> subsp. <i>Resinous veins</i> (G. Cockerton 797)	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Apectospermum</i> aff. <i>spinescens</i> (smooth bark) (D. Lievense 164)	2.08%	0.42%	0.00%	0.42%	0.42%	0.00%	0.00%	1.25%	0.42%	0.00%	0.00%	0.00%
<i>Brachyloma geissoloma</i> Inland variant (F. Keet 022)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Cooperookia</i> sp. Mt Holland (G. Cockerton 381)	48.82%	0.11%	0.11%	0.00%	0.11%	0.11%	0.00%	48.71%	0.00%	0.00%	0.00%	0.00%
<i>Cryptandra</i> sp. Zigzag (G. Cockerton 319)	5.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.11%	0.00%	0.00%	0.00%	0.00%
<i>Drummondita</i> sp. <i>green flowers</i> (L. Shelton 304)	1.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.04%	0.00%	1.15%	0.00%	0.00%	0.00%
<i>Drummondita</i> sp. <i>hairy sepals</i> (L. Shelton 409)	6.10%	0.98%	0.98%	0.00%	1.22%	1.22%	4.88%	0.00%	0.00%	0.00%	0.24%	0.00%
<i>Eucalyptus</i> aff. <i>salubris</i> <i>pruinose branchlet form</i> (G. Cockerton & J. Warden WB40196)	6.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.20%	0.30%	0.00%	0.00%	0.00%
<i>Eutaxia</i> sp. Mt Holland (G. Cockerton & G. Grigg 758)	83.33%	83.33%	83.33%	0.00%	83.33%	83.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Eutaxia</i> sp. Southern Cross (G. Grigg 010)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Grevillea</i> aff. <i>acuaria</i> (G. Cockerton & L. Dalgliesh 2090)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Grevillea</i> aff. <i>huegelii</i> Marvel Loch form (P.M. Olde 91/44 NSW782729)	3.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.95%	1.17%	0.00%	0.00%
<i>Grevillea communis</i> ms (P.M. Olde)	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Grevillea comosa</i> ms (P.M. Olde 91/14, 7 Sep 1991)	2.62%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.33%	0.54%	0.76%	0.00%	0.00%
<i>Hibbertia</i> sp. <i>Forrestania</i> (G. Cockerton WB40868, H. lateritica ms, K.R. Thiele)	0.11%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.11%	0.00%	0.00%	0.00%	0.00%
<i>Melaleuca</i> aff. <i>spicigera</i> (G. Cockerton 638, 765)	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%
<i>Melaleuca</i> sp. <i>small green leaves</i> (G. Cockerton & G. Grigg 768)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Olearia magniflora</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Taxon	Total Impact All Areas	LOM Indicative Site Impact	Mining Proposal 101345 Footprint Impact	LOM Footprint Impact	LOM Indicative Site Impact Adjusted for MS 1199	Mining Proposal 101345 Footprint Impact Adjusted for MS 1199	CPS 10197/1 Impact PRR	CPS 10049/1 Impact MLF	CPS 10265/1 Impact Buffalo	CPS Impact TEC	MS 1199 Impact PRR	MS 1199 Impact MLF
<i>Persoonia aff. coriacea falcate leaf (G. Cockerton 826)</i>	18.60%	18.60%	18.60%	0.00%	18.60%	18.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Persoonia sp. Parker Range Road (D. Lievense 153a)</i>	0.52%	0.52%	0.52%	0.00%	0.52%	0.52%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium aff. brachycalyx 'tuberculate' (G. Cockerton 394)</i>	3.12%	0.01%	0.01%	0.00%	0.04%	0.04%	0.01%	3.02%	0.04%	0.00%	0.04%	0.00%
<i>Phebalium aff. laevigatum eastern form, pink fls (L. Shelton 492)</i>	0.22%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.22%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium aff. microphyllum tuberculate stems (L. Shelton 486)</i>	45.37%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	45.37%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium aff. sp. Yerilgee Sandplain (J. Jackson 223)</i>	5.01%	0.01%	0.01%	0.00%	0.03%	0.03%	0.00%	4.98%	0.00%	0.00%	0.00%	0.02%
<i>Phebalium aff. tuberosum short leaf (G. Cockerton 333)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium sp. British Hill (G. Cockerton, S. Cockerton, J. Warden WB41040)</i>	2.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.34%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium sp. ovate (WB40864)</i>	0.52%	0.08%	0.08%	0.00%	0.28%	0.28%	0.24%	0.00%	0.00%	0.00%	0.20%	0.00%
<i>Phebalium sp. Parker Range Rd (broad leaved variant)</i>	0.48%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.24%	0.00%	0.24%	0.00%	0.00%
<i>Phebalium sp. Parker Range Road (G. Cockerton & B. Loudon WB40838)</i>	2.79%	0.00%	0.00%	0.00%	0.00%	0.00%	0.16%	2.58%	0.01%	0.04%	0.00%	0.00%
<i>Phebalium sp. Parkers Range intermediate</i>	60.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	60.00%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium sp. supermegawarty (G. Cockerton 396)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium sp. yellow flowers filifolium complex (G. Cockerton & L Dalglish 2137)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Phebalium tuberosum sens. lat. (short leaf form)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Prostanthera aff. campbellii (L. Shelton 125)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Wilsonia sp. upright (G. Cockerton 661)</i>	4.44%	0.00%	0.00%	0.00%	4.44%	4.44%	0.00%	0.00%	0.00%	0.00%	4.44%	0.00%
<i>Xanthorrhoea sp. Mt Holland (F. Keet 030)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Xanthorrhoea sp. nana complex</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<i>Xanthorrhoea sp. pineappleoides (F. Keet 036)</i>	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

4. Bibliography

Western Botanical (2025a) Review of *Microcorys elatoides* (P1) Conservation Listing. Letter to Catherine Bourke, DBCA originally dated 17 May 2022, updated to 16th Dec 2025, WB979 v3.

Western Botanical (2025b) *Microcorys elatoides* Pilot Demographic Study. Consultant's report prepared for Covalent Lithium Pty Ltd. Report Ref: WB1055 V2.

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.

Western Botanical (2025d) Review of *Microcorys elatoides* P1 2020-2025. Consultant's report to Covalent Lithium Pty Ltd, report ref: WB1083 v2.1.



**Western
Botanical**

E info@westernbotanical.com.au
www.westernbotanical.com.au