EARL GREY LITHIUM PROJECT

VEGETATION CONDITION MONITORING

TRANSECT ESTABLISHMENT

Prepared By

Mattiske Consulting Pty Ltd

Prepared For

Covalent Lithium Pty Ltd

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LIST OF ABBREVIATIONS

BC Act:	*Biodiversity Conservation Act 2016* (WA)
BOM:	Bureau of Meteorology
Covalent:	Covalent Lithium Pty Ltd
DBCA:	Department of Biodiversity, Conservation and Attractions
EGLP:	Earl Grey Lithium Project
EPA:	Environmental Protection Authority
EPBC Act:	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
FVMP	Flora and Vegetation Management Plan
Mattiske Consulting:	Mattiske Consulting Pty Ltd
MS1118	Ministerial Statement 1118
PEA	plant pigment efficiency analyser
TSF:	tailings storage facility
WAH:	Western Australian Herbarium (PERTH)
Wescef	Wesfarmers Chemicals, Energy and Fertilisers Limited
WRD	waste rock dump
VEZ	Vegetation exclusion zone (as defined in MS1118)

EXECUTIVE SUMMARY

The Earl Grey Lithium Project is owned by Covalent Lithium Pty Ltd. Ministerial approval for the implementation of the development of the Earl Grey Lithium Project was provided under Ministerial Statement 1118 in November of 2019. In order to meet Condition 6 of Ministerial Statement 1118, Covalent Lithium Pty Ltd has developed a Flora and Vegetation Management Plan, which is intended to meet the key environmental outcome of condition 6-1(1) of Ministerial Statement 1118, which states:

- The proponent shall ensure there is no proposal-related direct or adverse indirect impacts to flora and vegetation within the exclusion zones as shown on Figure 3 and delineated by coordinates in Schedule 2.

The Flora and Vegetation Management Plan involves the 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 vegetation exclusion zones;
- assess whether any changes in flora and vegetation are due to the project or external/natural factors; and,
- provide a methodology for ongoing monitoring to enable time-based comparisons.

The plant condition monitoring program, designed to provide an assessment of the vegetation condition, will be undertaken at permanent representative sites within vegetation exclusion zones and at control sites away from any proposal related indirect effects. The Flora and Vegetation Management Plan provides for two mechanism to assess plant condition:

- A visual (qualitative) assessment of a range of parameters (vegetation condition, leaf die-off, new tip growth, epicormic growth, reproductive state and insect damage); and
- A quantitative assessment, using a plant pigment efficiency analyser, to measure chlorophyll fluorescence.

A total of 19 plant condition monitoring transects were established, comprising nine control and ten impact transects. Of these, five were originally established in October of 2019. The remaining transects were established between the 7th and 25th October 2020 over the course of two separate field visits, at which time the transects established in 2019 were re-surveyed. Within each transect, all species present were recorded, and 20 dominant/keystone species were tagged for the long term monitoring of the following individual plant condition qualitative attributes: canopy health, leaf die-off, new tip growth, reproductive state, epicormic growth, and insect damage.

A total of 179 species, representative of 75 genera and 29 families were recorded across the 19 transects surveyed. The most commonly represented families were the Myrtaceae (52 taxa), Proteaceae (30 taxa), and Fabaceae (21 taxa). One threatened and 15 priority plant taxa were recorded across the surveyed transects. No introduced (exotic) species were recorded during the survey. The number of native species recorded (both non- and conservation significant species) in the transects represented half the number recorded during the 2017 vegetation mapping of the Earl Grey Lithium Project, and thus provide a good representation of the flora present, and can therefore be considered to be representative of the vegetation within the EGLP. None of the plant condition parameters measured differed between the paired control-impact transects such that there would be a concern in respect of the conditions therein.

The present report forms the first part of baseline data recording prior to commencement of construction. Consequently, there is no set of previous data to which comparison can be made. The intent of the present survey is ensuring that pre-construction baseline data is gathered to enable any changes to plant conditions to meaningfully be assessed over the longer operational phases.

1. INTRODUCTION

The Earl Grey Lithium Project (EGLP) is owned by Covalent Lithium Pty Ltd (Covalent). Covalent is a joint venture between Wesfarmers Chemicals, Energy and Fertilisers Limited (Wescef) and Sociedad Quimica y Minera de Chile. In 2016 Kidman Resources Limited, subsequently purchased by Wescef, discovered a pegmatite-hosted lithium deposit at its Earl Grey Prospect, south of Southern Cross, near Mt Holland in Western Australia.

Ministerial approval for the implementation of the development of the EGLP was provided under Ministerial Statement 1118 (MS1118) in November of 2019. In order to meet Condition 6 of MS1118, Covalent have developed a Flora and Vegetation Management Plan (FVMP). The Covalent FVMP (2020) aims to meet the key environmental outcome of condition 6-1(1) of MS1118, which states:

- The proponent shall ensure there is no proposal-related direct or adverse indirect impacts to flora and vegetation within the exclusion zones as shown on Figure 3 and delineated by coordinates in Schedule 2.

1.1 Project location and scope of plant condition monitoring

The EGLP lies within the Eremaean Botanical Province (Beard 1990). The EGLP, which is located approximately 105 km southeast of the town of Southern Cross, is situated on the abandoned Mt Holland Mine Site (Figure 1). The EGLP occupies an area of 1,984 ha. The project footprint is 667 ha, of which 386 ha represents clearing of native vegetation and 281 ha represents existing cleared areas.

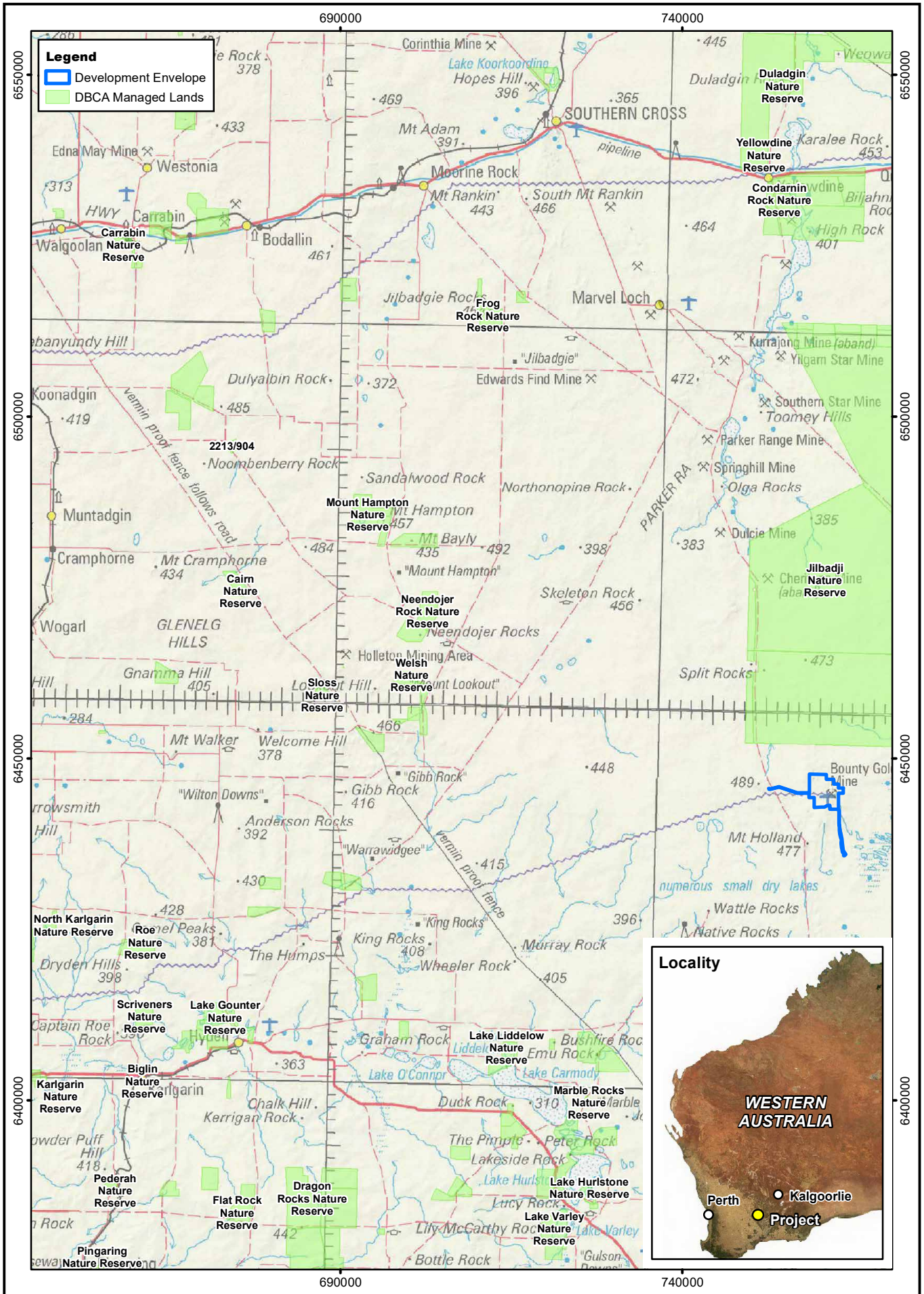
The FVMP (Covalent 2020) involves the monitoring of plant condition, dust deposition and weed monitoring in order to:

- determine if there are any changes occurring to flora and vegetation condition and health in the vegetation exclusion zones (VEZs);
- assess whether any changes in flora and vegetation are due to the Project or external/natural factors; and,
- provide a methodology for ongoing monitoring to enable time-based comparisons.

The plant condition monitoring program, designed to provide an assessment of the vegetation condition, will be undertaken at permanent representative sites within the VEZs and control sites away from any proposal related indirect effects. Each monitoring transect will consist of a quadrat 10 m by 40 m arranged linearly with four sub-quadrats of 10m x 10m. The FVMP (Covalent 2020) provides for two mechanism to assess plant condition:

- A visual (qualitative) assessment of a range of parameters (vegetation condition, leaf die-off, new tip growth, epicormic growth, reproductive state and insect damage); and,
- A quantitative assessment, using a plant pigment efficiency analyser, to measure chlorophyll fluorescence.

Only qualitative assessments were made of plant condition at each transect during the establishment phase (this report), at the request of Covalent. Dust deposition monitoring, at this time, will be addressed directly by Covalent. Weed monitoring was initially undertaken in the winter/spring of 2019 / 2020. This consisted of broad scale weed surveys across the EGLP project area to ascertain the range and locations of weed species present within the project area (principally existing cleared areas, exploration drill tracks and drill pads). A report summarising the findings of these surveys has been prepared (Mattiske 2020). Ongoing weed monitoring will consist of monitoring in transects which form the plant condition monitoring transects, monitoring of areas where weeds are currently established, together with routine surveys across the project area to ascertain if any new weed infestations occur within the project area.



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Date: November 2019 | Rev: A | A4

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Covalent Lithium Pty Ltd

Earl Grey Lithium Project

Project Area Locality

Figure: 1

1.2 Potential impacts to flora and vegetation

Baseline plant condition monitoring will consist of two baseline monitoring events undertaken in the spring and post-summer period prior to commencement of construction. This is to provide data in the post-winter and dry summer periods to establish typical plant responses to the annual weather cycle. Mine construction and subsequent operation could potentially impact the flora and vegetation adversely through a range of potential impacts, including:

- the clearing of native vegetation;
- altered local hydrology as a result of changes to surface water flow patterns, water table draw down, including the associated potential to cause erosion;
- the potential use or release of local, hypersaline water within the project area;
- dust deposition from vehicles, mining operations, stockpiles and cleared areas on adjacent native vegetation;
- the potential for vehicles to bring introduced plant species on-site, particularly given that vehicles transiting on/off site pass through the adjacent wheatbelt agricultural areas;
- introduction of pathogens, such as die-back (e.g., *Phytophthora* sp.);
- failure to adhere to clearing boundaries within the project area;
- unauthorised vehicle access to areas of native vegetation; and
- release of contaminated water or solvents from operational facilities, including but not limited to waste landforms, tailings storage facility (TSF) and processing plants areas.

1.3 Climate

Beard (1990) described the climate of the wider region containing the EGLP as Mediterranean, with a pronounced winter maximum and long dry summer, and annual precipitation of just over 330mm, consistent with descriptions of a characteristically arid to semi-arid climate with 200-300 mm of precipitation (Beard 1990, Cowan *et al.*, 2001). Narembeen, which is located approximately 130 km west of the EGLP has an average annual rainfall of 335 mm (Bureau of Meteorology, BOM 2021). Rainfall and temperature data for Narembeen is illustrated in Figure 2. The rainfall and temperature data displayed spans the period October 2019 to October 2020. Rainfall for the period June to September 2020 was 114.6 mm, which is approximately 68% of the long-term average for the corresponding period.

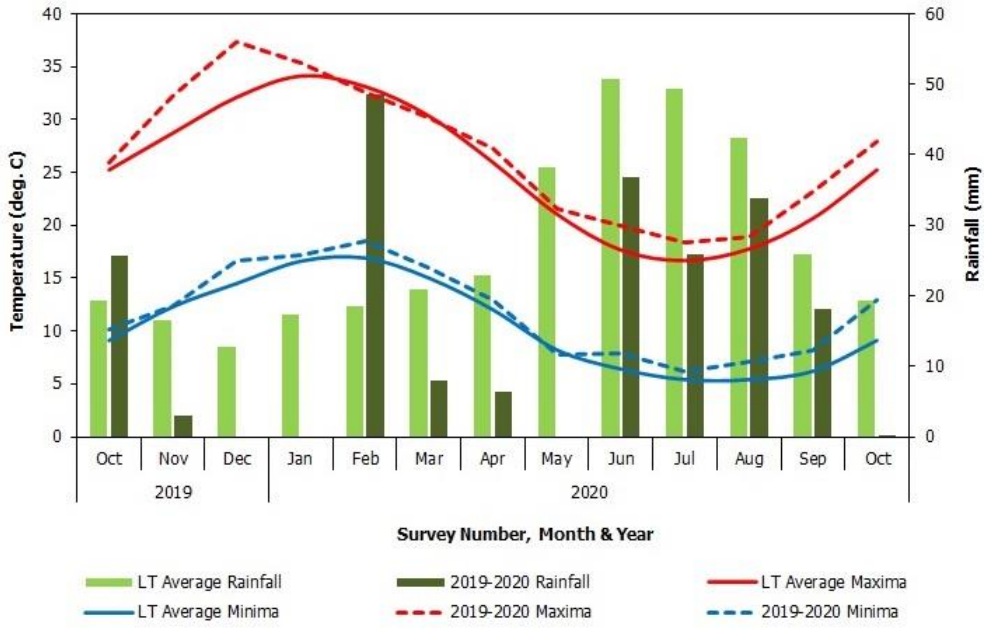


Figure 2: Rainfall and temperature data for Narembeen.
Long term average rainfall and temperature data, together with monthly rainfall data for the period October 2019 to October 2020 are shown (BOM 2021).

2. METHODS

2.1. Plant condition monitoring transect site selection

The locations of plant condition monitoring transects took into account the following considerations:

- condition 6-1 (1) states that 'The Proponent shall ensure there is no proposal-related direct or adverse indirect impacts to flora and vegetation within the exclusion zones'. The vegetation exclusion zones are shown on Figure 3;
- impact monitoring transects would be placed in close proximity (10 m) to an area of disturbance. The disturbance area may be part of an existing disturbance area or may form part of the project infrastructure footprint subject to clearing subsequent to transect establishment;
- control monitoring transects should be placed sufficiently distant from an area of disturbance such that they will be unaffected by mine site operations. A nominal distance of 1 km was used as a basis for control transect location, within the constraints imposed by the project area and adjacent tenement stakeholders. Additionally, the control monitoring transects should be sited in the same vegetation type as the corresponding impact monitoring transects, and should consist of a similar species composition;
- impact and control monitoring transect locations should represent a range of the vegetation communities present within the EGLP;
- impact and control monitoring transect should contain a range of the conservation significant flora which have been recorded within the EGLP (Mattiske 2019); and
- it is acknowledged that for construction considerations, impact monitoring transects were not established about the proposed waste rock dump (WRD) and TSF areas due to the high likelihood that construction may result in transects being destroyed.

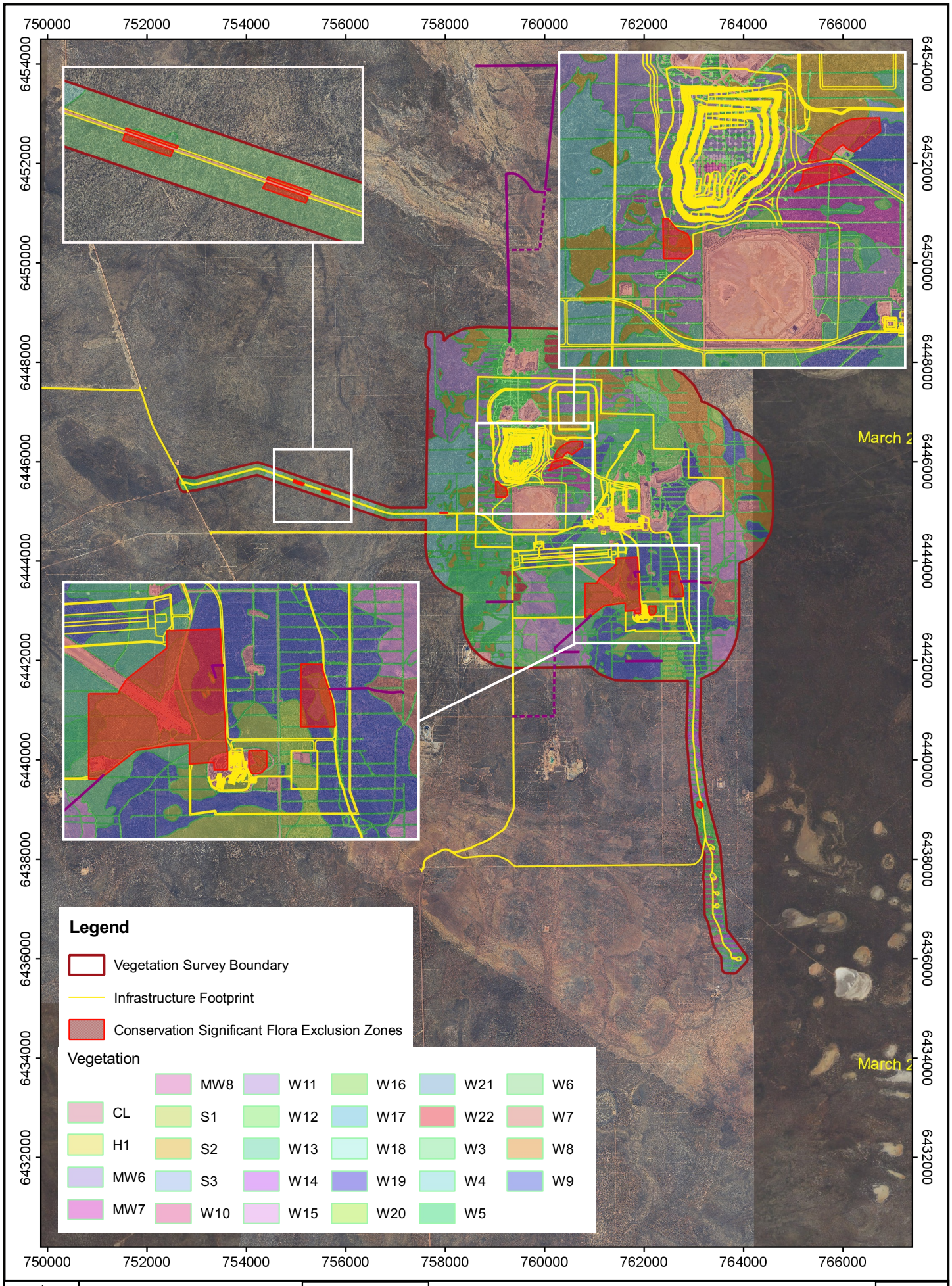
2.2. Plant condition monitoring transect design

Permanent plant condition monitoring transects cover an area equivalent to a 20 m x 20 m quadrat in size, to conform to the recommended survey quadrat size for the bioregion (Environmental Protection Authority Technical Guidance, EPA 2016). Each transect comprises four 10 m x 10 m sub-quadrats arranged as a belt transect (Figure 4). In the case of impact transects one end of the transect will be located within 10 m of an impact area, with the remaining three transects being aligned adjacent to and perpendicular to the impact area. This arrangement will provide scope to assess plant condition with respect to distance from the impact area.

2.3. Survey data collection

2.3.1. Transect location and photographic record

At each transect the geographic coordinates of the north-west and south-west corners of the transect (Figure 4, reference points A-A) were recorded. A photograph was taken from the north-west corner of each of the four sub-quadrats (Figure 4), facing in the direction of the south-east corner of the sub-quadrat, to provide long term temporal imagery of the transect.



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Scale: 1:100,000

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Covalent Lithium Pty Ltd
Conservation Significant Flora Exclusion Zones
(Ministerial Statement 1118)

Figure:

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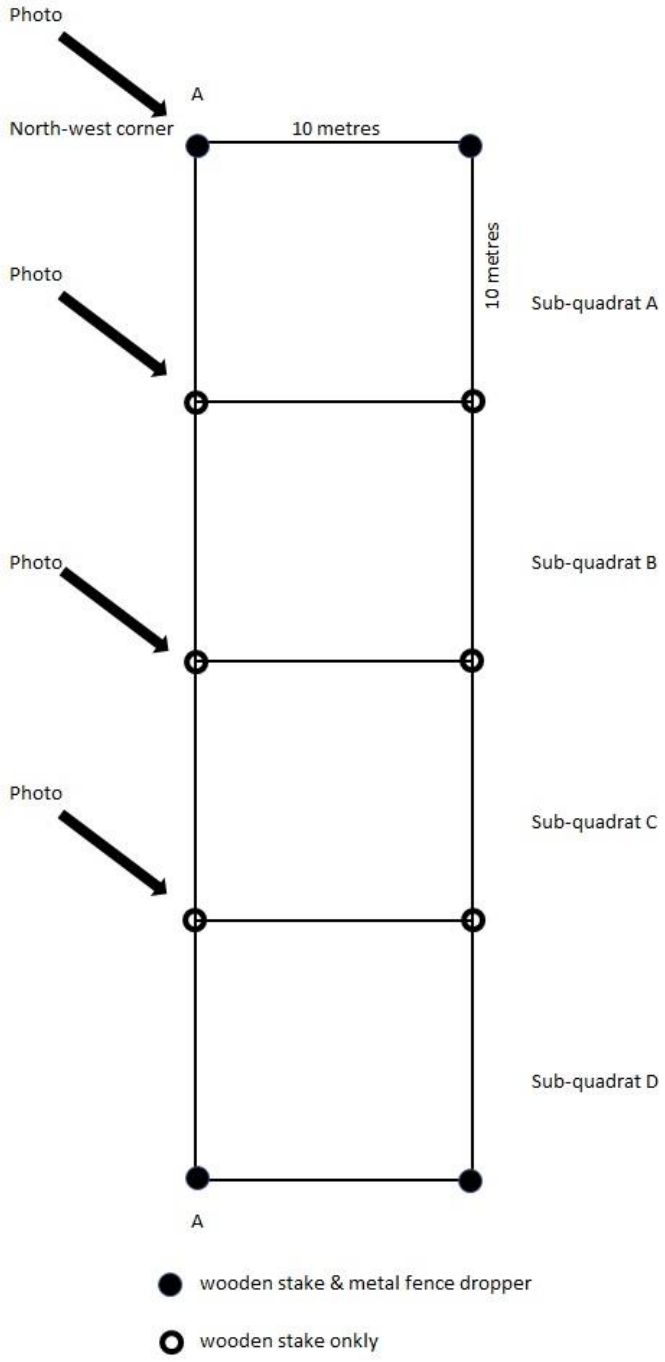


Figure 4: Plant condition monitoring transect layout.

2.3.2. Plant species data

Within each sub-quadrat, the following data was recorded:

- all plant species, both native and introduced;
- the average height of each species present; and,
- the estimated percentage projected foliage cover (dead/alive) for each species;

In addition, during transect establishment the population of each plant species in each sub-quadrat was recorded to provide baseline population data. Population data will not necessarily form a part of routine surveys.

All plant specimens collected during the field survey were dried and processed in accordance with the requirements of the Western Australia Herbarium (WAH). All plant specimens were identified through comparisons with pressed specimens housed at the Mattiske Consulting herbarium and the WAH. Where appropriate, plant taxonomists with specialist skills were consulted. Nomenclature of the species recorded is in accordance with the WAH (1998-).

2.3.3. Tagged plant species

At each transect, a minimum of five (dominant/keystone) species were tagged in each sub-quadrat. In total, 20 plants were tagged at each transect. Wherever possible the same five species were tagged in each sub-quadrat to provide for replication. The visual assessment of a range of parameters to assist in determining plant health score, was based on a stem classification system which has been used by Mattiske Consulting on numerous projects, together with a modification of the method of Souter *et al*. (2009), 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 was primarily measured by determining the extent and density of the foliage on the plant, or the crown cover of a tree (Table 1). In addition, a range of attributes were scored to standardise the visual assessment process. Some of the attributes are positive, in terms of plant health – 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 scored were:

- leaf die-off
- new tip growth
- reproductive state
- epicormic growth
- insect damage

These attributes were assessed using the scale set out in Table 2. A photograph of each tagged plant was taken to provide for a visual temporal record.

Table 1: Plant condition scoring

CONDITION	FACTORS
Healthy (score = 4)	• > 90% of foliage present • canopy is intact • if a tree or mallee, 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 or mallee, then no epicormic growth present • 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 or mallee, then none to some epicormic growth present • 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 or mallee, 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 fine twigs absent. If a tree, the barks is also absent (DO- dead old)

Table 2: 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

2.3.4. Vegetation disturbance scale

The overall condition of the vegetation at each transect was 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 3.

Table 3: 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. Vegetation condition triggers

Section 2 of the FVMP (Covalent 2020) specifies threshold criteria in terms of changes (declines) in plant health condition scores which will trigger investigations to determine if the changes are attributable to the Project, and if so, what management measures are required to be put in place to meet the defined environmental outcomes. The defined environmental outcome is that no proposal related indirect impacts will occur within a VEZ. The threshold level for a statistically significant reduction in mean vegetation condition rating is a 20% decline in vegetation health within a VEZ in comparison to the relevant control transect.

Section 2 of the FVMP (Covalent 2020) also specifies that, where a plant pigment efficiency analyser (PEA) is used to derive quantitative plant health data based on the index of chlorophyll fluorescence (Fv/Fm), a Fv/Fm value of <0.6 will be used as an indicator of stress. The PEA records a score of between 0.0 to 1 for Fv/Fm 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.

3. RESULTS

3.1. Survey limitations

A general assessment was made of the current survey against a range of factors that may have limited the outcomes and conclusions of this report (Table 4). The survey was not constrained by factors which would adversely affect the outcomes of the survey nor the conclusions formed from the results of the survey.

3.2. Plant condition monitoring transect locations and justification

A total of 19 plant condition monitoring transects were established, comprising nine control and ten impact transects. Of these, five were originally established in October of 2019. The remaining transects were established between the 7th and 25th October 2020 over the course of two separate field visits, at which time the transects established in 2019 were re-surveyed. The geographic coordinates of each transect established together with their associated vegetation community and justification for location selection are set out in Table 5. Figure 5 shows the locations of all impact and control transects established at the EGLP.

With the exception of impact transect 6, all other impact transects have paired control transects. Impact transect 6 was originally established in October of 2019 at the request of Covalent. This transect is located to the north-west of the Western Power sub-station in an area of historically cleared land. The area had subsequently been rehabilitated, prior to Covalent acquiring the tenement, and now has a large population of *Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1), amongst other species. The original intent of establishing this transect was to monitor any impacts associated with the planned processing facility which will be constructed immediately to the north. An appropriate location for a control transect is not available.

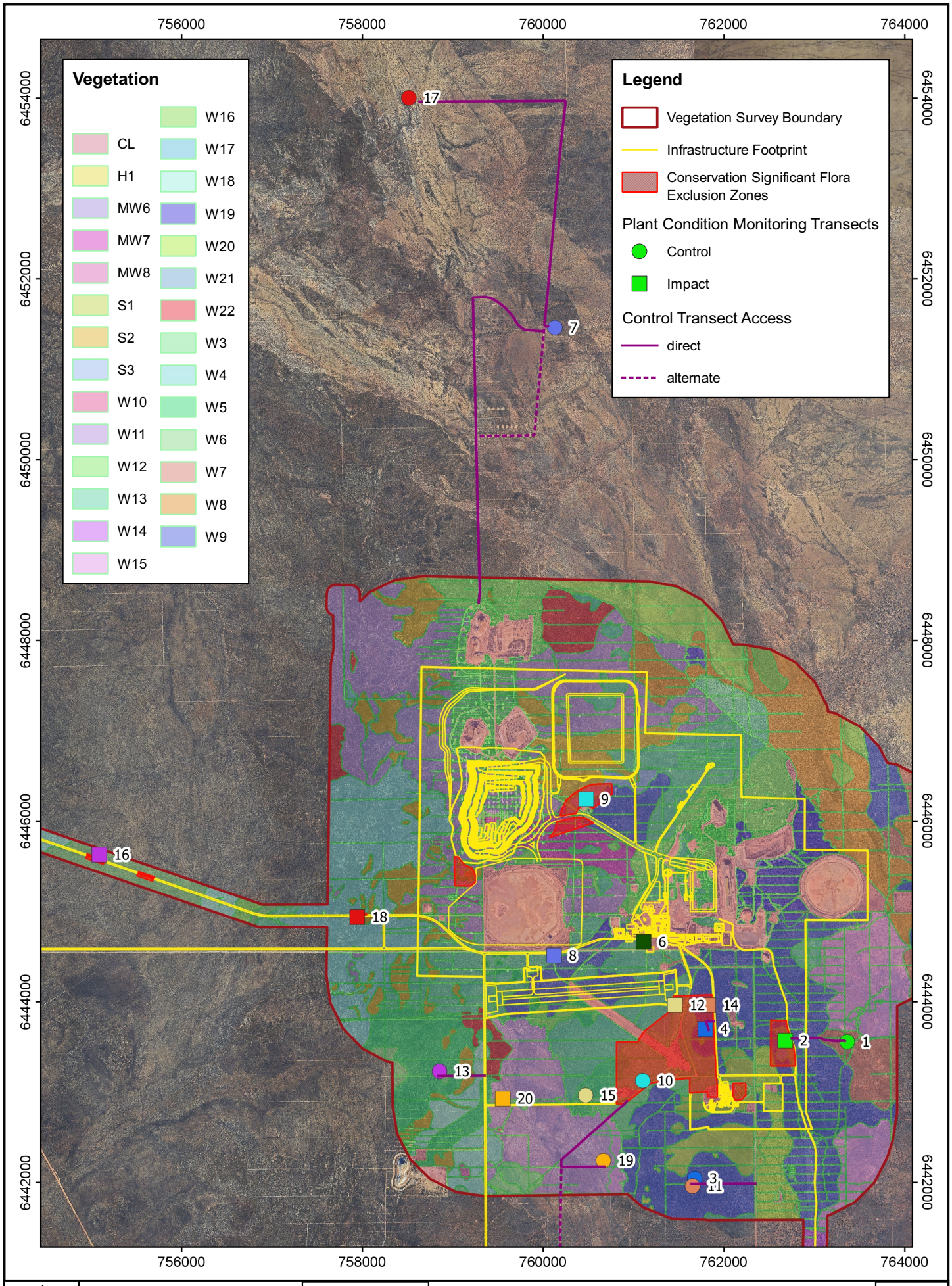
3.3. Flora

A total of 179 species, representative of 75 genera and 29 families were recorded across the 19 transects surveyed. The most commonly represented families were Myrtaceae (52 taxa), Proteaceae (30 taxa), and Fabaceae (21 taxa). The taxa recorded during the survey are set out in Appendix A. A list of plant taxa recorded at each transect is set out in Appendix B. Several species collected could not be identified to species level (Appendix A). This was primarily due to the specimens being from juvenile or sterile plants. No introduced (exotic) species were recorded at any of the transects surveyed.

One threatened plant taxon pursuant to subsection (1), section 19 of the *Biodiversity Conservation Act 2016* (BC Act) and as listed by the WAH (1998-) was recorded during the survey. This taxon was *Banksia sphaerocarpa* var. *dolichostyla* (T). This taxon is also listed as vulnerable under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act; Department of Agriculture, Water and the Environment 2020). Fifteen priority plant taxa, as listed by the WAH (1998-), were recorded during the survey. The threatened and priority taxa recorded and their associated transects are set out in Table 6.

Table 4: Potential survey limitations for the establishment of plant condition monitoring transects

POTENTIAL SURVEY LIMITATION	IMPACT ON CURRENT SURVEY
Availability of contextual information at a regional and local scale	**Not a constraint.** Detailed local information on the flora and vegetation of the Mt Holland area in and surrounding the EGLP has been established (Mattiske 2018, 2020a). This formed the basis for selection of locations for siting of vegetation health monitoring transects.
Competency/experience of team carrying out survey; experience in the bioregion surveyed	**Not a constraint.** The survey team comprised personnel with experience of the project area and its flora and vegetation, the result of 24 surveys since the spring of 2016.
Proportion of flora collected and identification issues	**Not a constraint.** All flora within the vegetation health monitoring transects were identified and / or collected.
Effort and extent of survey	**Not a constraint.** Transects were established as proscribed within MS1118, with the exception of a transect associate with one VEZ, located at the southern end of the proposed mine pit. This transect may be established at a future date once the mine footprint is finalised. Nineteen transects have been established and will undergo two surveys prior to commencement of construction, and thus there is deemed to be sufficient data being recorded prior to construction, as proscribed in the FVMP.
Access restrictions within survey area	**Minor constraint.** Access to all transects established, particularly control transect locations, is via existing tracks. A minor constraint exists, in terms of the tenement stakeholders other than those under Covalent control, which would otherwise have provided for preferential control transect locations.
Survey timing, rainfall, season of survey	**Not a constraint.** Transects establishment and subsequent surveys have and will be timed to occur during the spring, and post-summer period, to gain an understanding of annual variation in vegetation health with respect to seasonal influences.
Disturbances (fire/flood/clearing)	**Minor constraint.** Four of the 19 transects established are located in either previously disturbed lands, or in areas which were subject to fire approximately five years ago. In the case of the former, this was a deliberate choice to enable monitoring of indirect impacts on a population of *Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1), which is located near the planned processing plant area. In the case of fire burnt areas, a matched pair of control/impact transects were placed in a fire burnt woodland to provide a fire burnt area monitoring site. One fire burnt area, comprising W4 vegetation located within the Jilbadji Nature Reserve was chosen as a control transect location due to the lack of suitable control transect locations areas within Covalent controlled tenements.
Data and statistical analysis	**Not a constraint.** In the context of this report, which forms baseline data, there is little statistical analysis required. Future analysis will focus on determining the changes, if any, of mine site operation on the health of the flora and vegetation against targets and thresholds set out in the FVMP.



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MGA 94
Zone 50

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Scale: 1:55,000

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Covalent Lithium Pty Ltd
Earl Grey Lithium Project
Plant Condition Monitoring Transect Locations

Figure:
5

Table 5: Location of plant condition monitoring transects at the EGLP

TRANSECT NUMBER[1]	PAIRED CONTROL / IMPACT[2]	LOCATION (GDA 94, ZONE 50	LOCALITY	WITHIN VEZ[3]	VEGETATION COMMUNTIY AND SUMMARY[4]	CONSERVATION SIGNIFICANT FLORA PRESENT	FIRE HISTORY
1	A (impact)	763363 mE, 6443557 mN	70 m west of bore field access track.	yes	W17: *Eucalyptus capillosa* subsp. *polyclada* low open mallee woodland over *Hakea pendens* (P3), *Beyeria sulcata*, *Santalum acuminatum* mid sparse shrubland over *Rinzia sessilis*, *Westringia cephalantha* subsp. *cephalantha*, *Hibbertia ancistrophylla* low sparse shrubland.	*Hakea pendens* (P3)	> 20 years
2	A (control)	762678 mE 6443570 mN	600 m east of borefield access track.	no		*Hakea pendens* (P3)	> 20 years
3	B (control)	761675 mE 6442044 mN	770 m south of accommodation village.	no	H1: *Melaleuca cliffortioides*, *Allocasuarina campestris*, *Dodonaea adenophora* mid open heathland over *Grevillea lissopleura* (P1), *Trymalium myrtillus* subsp. *myrtillus* low sparse shrubland.	*Grevillea lissopleura* (P1) *Hibbertia tuberculata* (P1) *Rinzia medifila* (P1)	> 20 years
4	B (impact)	761794 mE 6443696 mN	95 m west of accommodation village access road.	yes		*Grevillea lissopleura* (P1)	> 20 years
5	C (control)	No appropriate control area available to match impact transect.					
6	C (impact)	761111 mE 6444662 mN	50 m north-west of Western Power sub-station.	yes	Cleared and rehabilitated land	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1) *Microcorys elatoides* (P1) *Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	> 20 years
7	D (control)	760130 mE 6451461 mN	3.8 km north of EGLP development envelope.	no	W13: *Callitris preissii*, *Eucalyptus rigidula* low open mallee woodland over *Micromyrtus erichsenii*, *Persoonia coriacea*, *Allocasuarina spinosissima* mid tall sparse shrubland over *Beyeria sulcata* var. *gracilis*, *Drummondita hassellii* low sparse shrubland	*Acacia undosa* (P3)	> 20 years
8	D (impact)	760120 mE 6444511 mN	60 m south of Western Power easement and 290 m east of planned airstrip access road.	no		*Acacia undosa* (P3)	> 20 years

Table 5: Location of plant condition monitoring transects at the EGLP (continued)

TRANSECT NUMBER[1]	PAIRED CONTROL / IMPACT[2]	LOCATION (GDA 94, ZONE 50)	LOCALITY	WITHIN VEZ[3]	VEGETATION COMMUNTIY AND SUMMARY[4]	CONSERVATION SIGNIFICANT FLORA PRESENT	FIRE HISTORY
10	E (control)	761102 mE 6443126 mN	54 m north of access road south of original Mt Holland airstrip.	yes	S3: *Allocasuarina acutivalvis*, *Eucalyptus burracoppinensis* tall sparse shrubland over *Banksia purdieana*, *Hakea subsulcata*, *Melaleuca cordata* mid sparse shrubland over *Micromyrtus erichsenii*, *Persoonia coriacea* low isolated shrubs	*Banksia sphaerocarpa* var. *dolichostyla* (T) *Boronia ternata* var. *promiscua* (P3) *Daviesia sarissa* subsp. *redacta* (P2) *Microcorys elatoides* (P1)	> 20 years
9	E (impact)	760476 mE 6446242 mN	adjacent to old borrow pit , on northern side of original Earl Grey haul road.	yes		*Banksia sphaerocarpa* var. *dolichostyla* (T) *Microcorys elatoides* (P1)	> 20 years
11	F (control)	761652 mE 6441960 mN	860 m south of accommodation village.	no	W9: *Eucalyptus urna*, *Eucalyptus ravida*, *Eucalyptus prolixa* low mallee woodland over *Melaleuca pauperiflora*, *Dodonaea stenozyga*, *Daviesia argillacea* mid sparse shrubland over *Acacia merrallii*, *Grevillea acuaria*, *Microcybe multiflora* subsp. *multiflora* low sparse shrubland	*Eutaxia lasiocalyx* (P2)	> 20 years
14	F (impact)	761826 mE 6443962 mN	53 m west of access road to accommodation village.	yes			> 20 years
15	G (control)	760469 mE 6442964 mN	1.1 km east of Blue Vein Rd and 82 m north of access road south of original Mt Holland airstrip.	no	W5: *Eucalyptus rigidula*, *Eucalyptus burracoppinensis* low open mallee woodland over *Micromyrtus erichsenii*, *Persoonia coriacea, Hakea erecta* mid sparse heathland over *Hibbertia rostellata*, *Hibbertia stowardii* low isolated shrubs	*Boronia ternata* var. *promiscua* (P3) *Microcorys elatoides* (P1)	> 20 years
12	G (impact)	761457 mE 6443963 mN	20 m east of new airstrip boundary.	yes	W13: *Callitris preissii*, *Eucalyptus rigidula* low open mallee woodland over *Micromyrtus erichsenii*, *Persoonia coriacea*, *Allocasuarina spinosissima* mid tall sparse shrubland over *Beyeria sulcata* var. *gracilis*, *Drummondita hassellii* low sparse shrubland	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1) *Banksia sphaerocarpa* var. *dolichostyla* (T) *Boronia ternata* var. *promiscua* (P3) *Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1) *Microcorys elatoides* (P1)	> 20 years

Table 5: Location of plant condition monitoring transects at the EGLP (continued)

TRANSECT NUMBER[1]	PAIRED CONTROL / IMPACT[2]	LOCATION (GDA 94, ZONE 50	LOCALITY	WITHIN VEZ[3]	VEGETATION COMMUNTIY AND SUMMARY[4]	CONSERVATION SIGNIFICANT FLORA PRESENT	FIRE HISTORY
13	H (control)	758853 mE 6443230 mN	495 m west of Blue Vein Rd.	no	S3: *Allocasuarina acutivalvis*, *Eucalyptus burracoppinensis* tall sparse shrubland over *Banksia purdieana*, *Hakea subsulcata*, *Melaleuca cordata* mid sparse shrubland over *Micromyrtus erichsenii*, *Persoonia coriacea* low isolated shrubs	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1) *Banksia sphaerocarpa* var. *dolichostyla* (T) *Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1) *Daviesia sarissa* subsp. *redacta* (P2) *Microcorys elatoides* (P1) *Verticordia stenopetala* (P3)	> 20 years
16	H (impact)	755088 mE 6445627 mN	10 m north of EGLP main access road, 2.4 km east of Forrestania Rd.	yes		*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1) *Banksia sphaerocarpa* var. *dolichostyla* (T) *Verticordia stenopetala* (P3)	> 20 years
17	I (control)	758514 mE 6454004 mN	6.3 km north of EGLP development envelope, within Jilbadji Nature Reserve.	no	W4: *Eucalyptus flocktoniae* subsp. *flocktoniae*, *Eucalyptus eremophila* low open mallee woodland over *Melaleuca depauperata*, *Callitris preissii*, *Melaleuca phoidophylla* mid-tall sparse shrubland over *Acacia tetraptera*, *Grevillea acuaria* low isolated heath shrubs	*Acacia lachnocarpa* (P1)	5 years (fire of Feb 2016)
18	I (impact)	757942 mE 6444937 mN	10m south of EGLP main access road, 5.4 km east of Forrestania Rd.	yes		*Acacia lachnocarpa* (P1)	> 20 years

Table 5: Location of plant condition monitoring transects at the EGLP (continued)

TRANSECT NUMBER[1]	PAIRED CONTROL / IMPACT[2]	LOCATION (GDA 94, ZONE 50	LOCALITY	WITHIN VEZ[3]	VEGETATION COMMUNTIY AND SUMMARY[4]	CONSERVATION SIGNIFICANT FLORA PRESENT	FIRE HISTORY
19	J (control)	760666 mE 6442241 mN	633 m south of EGLP development envelope, 1.3 km east of Blue Vein Rd.	no	W11: *Eucalyptus eremophila*, *Eucalyptus rigidula*, *Eucalyptus flocktoniae* subsp. *flocktoniae* low mallee woodland over *Melaleuca lateriflora*, *Melaleuca eleuterostachya*, *Melaleuca acuminata* subsp. *acuminata* mid sparse shrubland over *Grevillea acuaria*, *Acacia hystrix* subsp. *hystrix*, *Microcybe ambigua* low sparse shrubland	*Banksia sphaerocarpa* var. *dolichostyla* (T) *Boronia ternata* var. *promiscua* (P3) *Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1) *Daviesia sarissa* subsp. *redacta* (P2) *Microcorys elatoides* (P1) *Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	5 years (fire of Feb 2016)
20	J (impact)	759552 mE 6442928 mN	46 m north of access road south of original Mt Holland airstrip, 190 m east of Blue Vein Rd.	no		*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1) *Boronia ternata* var. *promiscua* (P3) *Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1) *Daviesia sarissa* subsp. *redacta* (P2) *Grevillea marriottii* (P3) *Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	5 years (fire of Feb 2016)

Notes

1 Transects 3, 4, and 6 were originally established on 9/10/2019. Transects 9 and 10 were originally established on 10/10/2019.

2. Control-Impact paired transects are represented by the same letter designation.
3. VEZ as defined in MS1118
4. Vegetation communities are defined in Mattiske (2018)

Table 6: Threatened and priority plant taxa recorded within plant condition monitoring transects

TAXON	FAMILY	BC ACT / DBCA LISTING	EPBC ACT	RECORDED TRANSECTS
Banksia sphaerocarpa var. *dolichostyla*	Proteaceae	T	V	9, 10, 12, 13, 16, 19
Acacia lachnocarpa	Fabaceae	P1		17, 18
Acacia undosa	Fabaceae	P3		7, 8
Baeckea sp. Forrestania (K.R. Newbey 1105)	Myrtaceae	P1		6, 12, 13, 16, 20
Boronia ternata var. *promiscua*	Rutaceae	P3		10, 12, 15, 19, 20
Chamelaucium sp. Parker Range (B.H. Smith 1255)	Myrtaceae	P1		12, 13, 19, 20
Daviesia sarissa subsp. *redacta*	Fabaceae	P2		10, 13, 19, 20
Eutaxia lasiocalyx	Fabaceae	P2		11
Grevillea lissopleura	Proteaceae	P1		3, 4,
Grevillea marriottii	Proteaceae	P1		20
Hakea pendens	Proteaceae	P3		1, 2
Hibbertia tuberculata	Dilleniaceae	P1		2
Microcorys elatoides	Lamiaceae	P1		6, 9, 10, 12, 13, 15, 19
Microcorys sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927)	Lamiaceae	P1		6, 19, 20
Rinzia medifila	Myrtaceae	P1		2
Verticordia stenopetala	Myrtaceae	P3		13, 16

3.4. Species richness

Plant species richness per transect is set out in Table 7. The most species rich transects were transects 19 and 20 (control/impact pair J), which were situated in woodland which had been burnt approximately five years previously. Transects 13 and 16 (control/impact pair H) were also similarly species rich. These transects were sited in a narrow band of S3 vegetation (Table 5) which abuts W5 vegetation. The least species rich transects were transects 3 and 4 (control/impact pair B) which is situated in the H1 vegetation community, which is the most restricted type of vegetation recorded within the EGLP (Mattiske 2018). The H1 vegetation was the least species rich community recorded in 2017 (Mattiske 2018).

The numbers of each species present at each transect was recorded during the establishment of transects. This information is summarised in Appendix C.

3.5. Species projected foliage cover

The sum of projected dead and alive foliage cover for each transect is shown graphically in Figure 6. There are large differences in the sum of projected foliage cover between the control and impact paired transects associated with pairs A (transects 1 and 2) and I (transects 17 and 18). This is similarly reflected in the species richness data (Table 7) for the corresponding transects. The sum of projected foliage cover is lowest in the transects 19 and 20 (control/impact pair J) which was burnt approximately 5 years previously.

Table 7: Plant species richness per transect, October 2020

TRANSECT	TYPE[1]		NUMBER OF TAXA	NUMBER OF CONSERVATION SIGNIFICANT TAXA
1	impact	A	11	1
2	control	A	22	1
3	control	B	12	3
4	impact	B	7	1
5	not used	C	-	-
6	impact	C	16	3
7	control	D	21	1
8	impact	D	18	1
9	impact	E	21	2
10	control	E	27	4
11	control	F	12	1
12	impact	G	36	5
13	control	H	42	6
14	impact	F	10	0
15	control	G	28	2
16	impact	H	42	3
17	control	I	14	1
18	impact	I	21	1
19	control	J	40	5
20	impact	J	43	6

1. Letter codes (A, B, etc.) indicate control/impact transect pairs

Figure 6: Sum of alive and dead projected foliage cover at plant condition monitoring transects, October 2020
Paired control/impact transects are indicated by the letters A through J.

3.6. Tagged species

A total of twenty individual pants were tagged at each transect for more detailed plant condition assessment (refer Section 2.3.3). The assessment of individual plants comprised positive and negative plant condition trajectory attributes. These attributes were:

Positive trajectory attributes

- canopy percentage
- epicormic growth
- new tip growth
- reproductive state

Negative trajectory attributes

- leaf die-off
- insect leaf damage

The raw individual plant condition assessment data is set out in Appendix D. The average canopy health scores are shown in Figure 7. Figure 8 shows the differences in canopy health scores for each transect pair. All paired transects have a less than 8% difference between their control and impact transects, which falls below the 20% trigger value, specified within the FVMP (Covalent 2020).

None of the other positive (epicormic growth, new tip growth, reproductive state) or negative (leaf die-off, insect leaf damage) attributes measured (Appendix D) were demonstrably correlated with the canopy health.

3.7. Comparison of 2019 and 2020 data

Five of the transects surveyed in 2020 were originally established in 2019. These were transects 3, 4, 6, 9, and 10. Transects 3 and 4 comprise a control/impact pair (group B). The average canopy health score for the five transects in 2019 and 2020 is shown in Figure 9. The canopy health score for transect 6 declined 4.76% between the two years, and that of transect 10 declined 1.59% over the same period. The other three transects did not show any change in their average canopy health score between the two years.

3.8. Photographic records

Appendix E comprises the photograph of each transects north-west corner recorded in October 2020. Appendix F contains a photograph of each tagged plant species at each transect in October 2020.

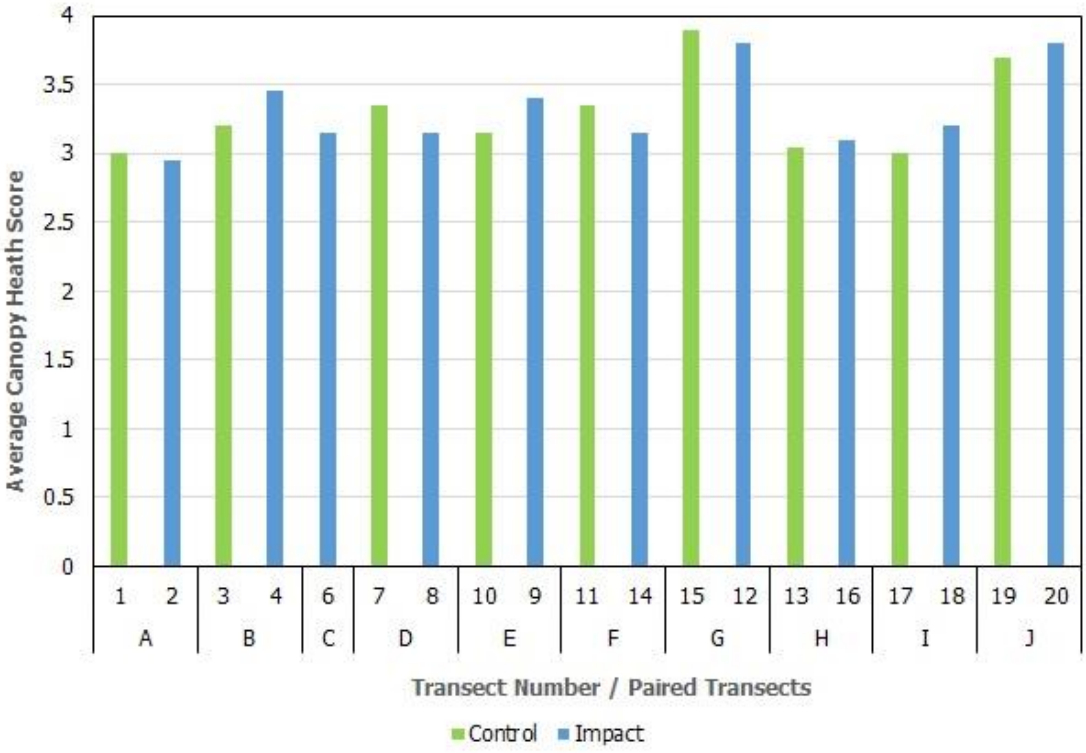

Figure 7: Average canopy health scores for 20 tagged plants at each plant condition monitoring transect, October 2020
Paired control/impact transects are indicated by the letters A through J. Canopy health scores: 0 dead; 1 very stressed; 2 stressed; 3 slightly stressed; 4 healthy. Refer to Table 1 for a detailed description of each health score.

Figure 8: Control-Impact paired transect differential health scores, October 2020
The percentage difference between the control, and impact transects are shown, together with positive and negative trigger values.

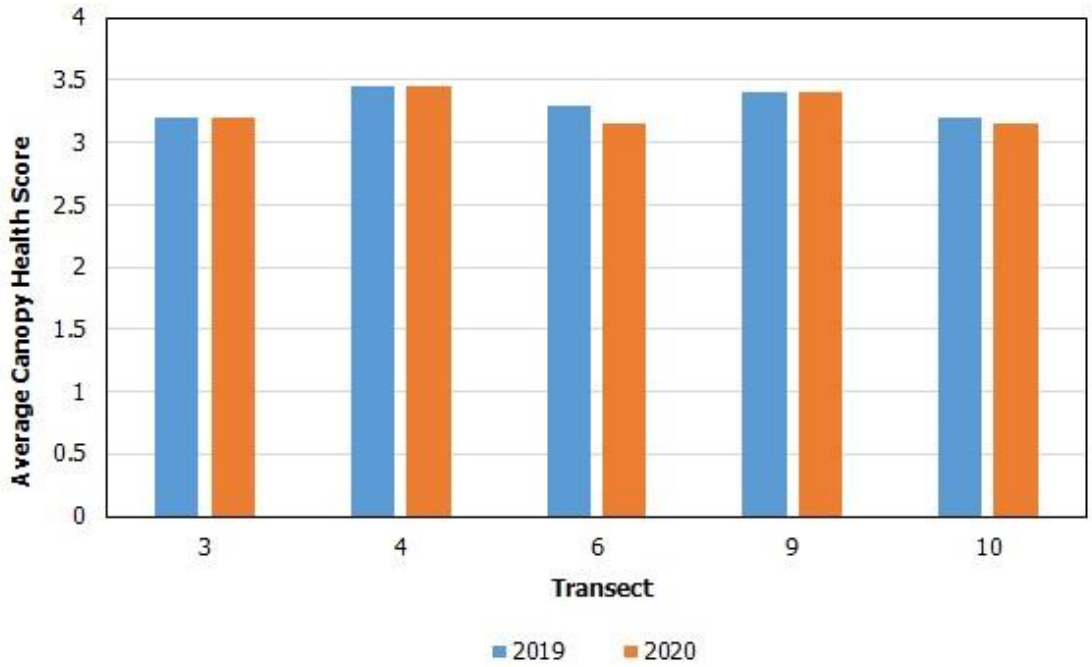

Figure 9: Average canopy health scores for 20 tagged plants at plant condition monitoring transects established in October 2019, and resurveyed in October 2020

4. DISCUSSION

4.1. Transect location

A total of 19 plant condition monitoring transects have been established at the EGLP. Ten of the transects are impact plant condition monitoring transects. Nine of the transects are control plant condition monitoring transects. All transects consist of four 10m x 10m quadrats arranged in a continuous belt, covering an area of 400m^2. This is the same area which would apply to survey quadrats within the bioregion (EPA 2016).

The impact transects are arranged such that the base of the transect is located within 10m of an impact area. In some cases, impact transects have been placed approximately 10m from the edge of areas scheduled for clearing during construction. Seven of the impact transects are situated within the VEZs specified in MS1118 (Figure 3). Two of the impact transects (transects 8 and 12, Figure 5) have been placed approximately 10 m from planned areas of disturbance, which will be cleared once construction commences. A single impact transect (transect 6, Figure 5) is located within a previously disturbed area near the planned processing facility, and which contains a large population of *Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927). No corresponding control transect has been established due to the unique nature of the impact site precluding an appropriate control site being located. Additional impact transects could be sited about planned WRD and TSF areas. However, at the time of transect establishment in 2020, plans for infrastructure were under review and it was decided to wait for planning to be finalised before making a decision on further transect placement. Given that ten impact monitoring transects have been established in areas where there is expected to be activity, there is likely to be adequate condition monitoring areas prior to commencement of construction.

Control transects have been placed in the same vegetation type with similar species composition as the corresponding impact transect. In the case of transect 17, which is a control transect within W4 vegetation (Mattiske 2018), this has been sited within an area of the Jilbadji Nature Reserve. This is because an appropriate control location to the south-west of the EGLP is not within a tenement under Covalent control, and which is sufficiently distant from any areas of disturbance to represent a genuine control vegetation location. It was not always possible to achieve a minimum 1km spatial distance to separate control transects from areas of disturbance. In some cases, the distance is 700m. This proved to be more problematic with the more restricted vegetation types, such as the H1 and W17 vegetation (Mattiske 2018). In the case of transect 10, which is located to the north of an existing access route to the south of the Mt Holland airstrip, its use as a control location was justified on the basis that the access road will be closed off to traffic unless during an emergency, and thus it provides adequate spatial separation from operational areas.. The other constraint on locating suitable control locations was long-term access, and avoiding area which may potentially represent future areas for mine development. This effectively meant that areas to the north and west of the current development envelope were avoided in 2020.

4.2. Flora and vegetation

The location of transects was, in part, selected on the basis of vegetation types and to ensure that a range of conservation significant flora present within the EGLP were being monitored. Mattiske (2019) states that 29 conservation significant taxa have been recorded within the EGLP development envelope. Sixteen of these taxa are located in the plant condition monitoring transects (Table 6), and represent a selection of conservation significant flora based on their conservation status, plant family, and the representation of taxa which were newly uncovered during surveys of the EGLP. In the case of the latter, four of the six species newly uncovered during surveys associated with the EGLP are represented in the plant health condition monitoring transects. These are *Acacia lachnocarpa* (P1), *Hibbertia tuberculata* (P1), *Microcorys elatoides* (P1), and *Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1).

In terms of the number of plant species recorded across all established transects, 179 species, representative of 75 genera and 29 families were recorded. During the vegetation mapping of the EGLP (Mattiske 2018), 369 vascular plant taxa which were representative of 140 genera and 49 families were recorded across 214 survey quadrats. Consequently, the plant health monitoring transects represent approximately half of all plant species recorded within the EGLP, and thus provide a good representation of the flora present, and thus can be considered to be representative of the vegetation within the EGLP.

In terms of species richness and foliage cover, when paired control/impact transects are compared (Table 7, Figure 6), there is a notable difference between the species richness and foliage cover for transects 17 and 18 (group I). The reason for this is that the control transect location (transect 17) was burnt approximately 5 years ago, whereas the impact transect area is unburnt. The location of transect 17 was based on the presence of *Acacia lachnocarpa* (P1). This taxon is currently only known from two areas in the Mt Holland area. A location for the control transect, in unburnt W4 type vegetation, was not possible due to it being within a tenement outside Covalent control. The low levels of foliage cover in transects 19 and 20 (group J) is a result of both transects being situated in areas burnt by fire approximately 5 years ago.

In addition to the information on species presence and foliage coverage, the number of each species present was also recorded. Whilst this was not a specific requirement in the FVMP (Covalent 2020), it was deemed worthwhile to record during transect establishment to enable any future decision on plant populations to be related to pre-construction data. Plant population data, at this time, will not form a routine component of annual transect surveys, but may be of use in assessing the performance of the more recently burnt transects temporally.

4.3. Plant health

Twenty plants within each transect (five per 10m x 10m sub-quadrat) were tagged for long term individual assessment. Six attributes were scored for each plant. These were: canopy percentage, epicormic growth, new tip growth, reproductive state, leaf die-off, and insect leaf damage. The first four of these attributes are classed as positive indicators of plant health, whereas the latter two are classed as negative indicators of plant health (Souter *et al*. 2009).

The most immediately useful measure of plant condition was the qualitative assessment of plant canopy health (Figure 8). The differences in plant canopy health scores (Figure 8) between control and impact transects pairs was less than 8%. Section 2 of the FVMP (Covalent 2020) sets out a range of outcome-based and management based provisions with respect to environmental management within the EGLP. Specifically, the FVMP, as it relates to plant condition monitoring, states that there should be no proposal related indirect impact to flora and vegetation within a VEZ resulting in an adverse impact. The threshold and trigger criteria associated with this which would mandate a response actions are:

- **Trigger criteria** – a statistically significant reduction in mean condition ratings (more than 20% difference for both qualitative and quantitative) of vegetation health within a VEZ in comparison to control sites and a mean Fv/Fm (index of Chlorophyll florescence) of <0.6.
- **Threshold criteria** - Flora and vegetation within a VEZ experiences a statistically significant higher mortality rate than that of control sites (where that mortality is not attributed to direct impacts).

The present report forms the first part of baseline data recording prior to commencement of construction. Consequently, there is no set of prior data to which comparison can be made. The intent of the present survey is ensuring that pre-construction baseline data is gathered to enable any changes to plant conditions to meaningfully be assessed.

The other measures of plant health did not show a correlation trend, particularly with the canopy health score. In the case of the negative health attributes described it is will be necessary to obtain data from more than one survey period to determine the level of correlation between leaf die-off or insect leaf damage and its relationship to the canopy health score, and thus the usefulness of recording such attributes. Positive health attributes, such as leaf tip growth and reproductive state may also tend to

reflect seasonal variation, and hence a number of surveys may be required to establish any trend in relation to overall plant condition. In the short term, plant canopy health, as described in Table 1, is likely to be the most useful measure, at least until more temporal data has been acquired.

5. CONCLUSION

The survey results presented in this report represent the first round of baseline plant condition monitoring. A second pre-construction baseline monitoring survey is planned for the autumn of 2021, and will effectively complete the pre-construction phase of plant condition monitoring establishment. Impact monitoring transects have been established in the VEZs as stipulated in MS1118. Further transects may be established in the future once mine infrastructure is finalised. Areas to the north and west of the current infrastructure footprint were avoided at this juncture due to the potential for impact transects in these areas to be destroyed as part of the construction phase.

6. ACKNOWLEDGEMENTS

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7. PERSONNEL

The following Mattiske Consulting Pty Ltd personnel were involved in this project:

NAME	POSITION	PROJECT INVOLVEMENT	FLORA COLLECTION PERMITS
Dr E. M. Mattiske	Managing Director & Principal Ecologist	Planning & reporting	N/A
Mr D. Angus	Senior Botanist	Planning, fieldwork, data analysis, plant identifications, report preparation	FB62000022-2 TFL25-1920
Mr Z. Sims	Experienced Botanist	Planning, fieldwork, plant identifications, report review	FB62000025-2
Mr B. Ellery	Experienced Botanist	Fieldwork	FB62000024-2

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APPENDIX A: VASCULAR PLANT SPECIES RECORDED WITHIN THE PLANT CONDITION MONITORING TRANSECTS, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

FAMILY	SPECIES
Cupressaceae	*Callitris columellaris*
	Callitris preissii
Poaceae	Poaceae sp.
Cyperaceae	*Lepidosperma sanguinolentum* sens .lat.
	Lepidosperma sp.
Asparagaceae	*Chamaexeros fimbriata*
	Thysanotus sp. Twining Wheatbelt (N.H. Brittan 81/29)
Casuarinaceae	*Allocasuarina acutivalvis* subsp*. acutivalvis*
	Allocasuarina campestris
	Allocasuarina spinosissima
	Allocasuarina sp. (juvenile)
	Casuarina sp.
Proteaceae	*Adenanthos argyreus*
	Banksia laevigata subsp*. fuscolutea*
	Banksia purdieana
	Banksia sphaerocarpa var. *dolichostyla* (T)
	Grevillea acuaria
	Grevillea acuaria sens. lat.
	Grevillea acuaria sens. lat. (shiny leaf form)
	Grevillea ?biformis
	Grevillea hookeriana subsp*. apiciloba*
	Grevillea huegelii
	Grevillea lissopleura (P1)
	Grevillea marriottii (P1)
	Grevillea oncogyne
	Grevillea pterosperma
	Grevillea shuttleworthiana subsp. *obovata*
	Grevillea sp.
	Hakea erecta
	Hakea meisneriana
	Hakea multilineata group
	Hakea pendens (P3)
	Hakea scoparia subsp. *scoparia*
	Hakea subsulcata

APPENDIX A: VASCULAR PLANT SPECIES RECORDED WITHIN THE PLANT CONDITION MONITORING TRANSECTS, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

FAMILY	SPECIES
Proteaceae (continued)	*Isopogon gardneri*
	Isopogon scabriusculus subsp. *pubifloris*
	Persoonia coriacea
	Persoonia ?quinquenervis
	Persoonia saundersiana
	Petrophile stricta
Santalaceae	*Exocarpos aphyllus*
	Leptomeria preissiana
	Santalum acuminatum
	Santalum sp.
Lauraceae	*Cassytha aurea var. hirta*
	Cassytha sp.
Droseraceae	*Drosera* sp. (climbing)
Fabaceae	*Acacia assimilis* subsp. *assimilis*
	Acacia camptoclada
	Acacia lachnocarpa (P1)
	Acacia merrallii
	Acacia resinimarginea
	Acacia sphacelata subsp. *sphacelata*
	Acacia steedmanii subsp. *steedmanii*
	Acacia sulcata var. *platyphylla*
	Acacia undosa (P3)
	Acacia yorkrakinensis subsp. *acrita*
	Daviesia aphylla
	Daviesia argillacea
	Daviesia cardiophylla
	Daviesia sarissa subsp. *redacta* (P2)
	Daviesia scoparia
	Eutaxia lasiocalyx (P2)
	Gastrolobium floribundum
	Gastrolobium spinosum
	Gompholobium hendersonii
	Gompholobium obcordatum
	Jacksonia nematoclada

APPENDIX A: VASCULAR PLANT SPECIES RECORDED WITHIN THE PLANT CONDITION MONITORING TRANSECTS, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

FAMILY	SPECIES
Rutaceae	*Boronia ternata* var. *promiscua* (P3)
	Drummondita hassellii
	Microcybe ambigua
	Microcybe multiflora subsp. *multiflora*
	Phebalium filifolium
	Phebalium megaphyllum
	Phebalium obovatum
	Phebalium sp.
	Philotheca rhomboidea
Euphorbiaceae	*Beyeria minor*
	Beyeria sulcata var. *gracilis*
	Beyeria sulcata var. *sulcata*
	Monotaxis grandiflora
Celastraceae	*Psammomoya choretroides*
	Stackhousia sp.
Sapindaceae	*Dodonaea bursariifolia*
	Dodonaea microzyga var. *acrolobata*
	Dodonaea stenozyga
Rhamnaceae	*Cryptandra ?distigma*
	Cryptandra sp.
	Stenanthemum stipulosum
	Trymalium myrtillus subsp. *myrtillus*
Malvaceae	*Lasiopetalum ferraricollinum*
Dilleniaceae	*Hibbertia rostellata*
	Hibbertia rupicola
	Hibbertia stowardii
	Hibbertia tuberculata (P1)
	Hibbertia sp.
Violaceae	*Hybanthus floribundus*
Thymelaeaceae	*Pimelea sulphurea*
	Pimelea sp.

APPENDIX A: VASCULAR PLANT SPECIES RECORDED WITHIN THE PLANT CONDITION MONITORING TRANSECTS, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

FAMILY	SPECIES
Myrtaceae	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)
	Beaufortia interstans
	Beaufortia orbifolia
	Beaufortia puberula
	Beaufortia schaueri
	Calothamnus gilesii
	Calytrix breviseta subsp. *stipulosa*
	Calytrix tetragona
	Chamelaucium ciliatum
	Chamelaucium sp. Parker Range (B.H. Smith 1255) (P1)
	Chamelaucium virgatum
	Cyathostemon sp.
	Ericomyrtus serpyllifolia
	Eucalyptus burracoppinensis
	Eucalyptus ?capillosa
	Eucalyptus calycogona subsp. *calycogona*
	Eucalyptus cylindriflora
	Eucalyptus eremophila
	Eucalyptus horistes
	Eucalyptus protensa
	Eucalyptus rigidula
	Eucalyptus salubris
	Eucalyptus urna
	Eucalyptus sp.
	Eucalyptus sp. 1
	Euryomyrtus maidenii
	Homalocalyx pulcherrimus
	Leptospermum roei
	Leptospermum spinescens
	Melaleuca acuminata subsp. *acuminata*
	Melaleuca calyptroides
	Melaleuca cliffortioides
	Melaleuca condylosa
	Melaleuca cordata
	Melaleuca cucullata
	Melaleuca depauperata
	Melaleuca eleuterostachya
	Melaleuca halmaturorum
	Melaleuca lateriflora
	Melaleuca laxiflora

APPENDIX A: VASCULAR PLANT SPECIES RECORDED WITHIN THE PLANT CONDITION MONITORING TRANSECTS, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

FAMILY	SPECIES
Myrtaceae (continued)	*Melaleuca pauperiflora* subsp*. pauperiflora*
	Melaleuca phoidophylla
	Melaleuca pungens
	Melaleuca scalena
	Melaleuca sparsiflora
	Melaleuca sp.
	Micromyrtus erichsenii
	Rinzia carnosa
	Rinzia medifila (P1)
	Rinzia sessilis
	Thryptomene kochii
	Verticordia chrysantha
	Verticordia stenopetala (P3)
	?*Verticordia* sp.
Haloragaceae	*Glischrocaryon aureum*
Apiaceae	*Platysace maxwellii*
Ericaceae	*Acrotriche lancifolia*
	Leucopogon sp. Forrestania (G.F. Craig 2386)
	Leucopogon sp. outer wheatbelt (M. Hislop 30)
	Lysinema ciliatum
	Styphelia exserta
	Styphelia serratifolia
Boraginaceae	*Halgania integerrima*
Lamiaceae	*Cyanostegia angustifolia*
	Hemigenia westringioides
	Microcorys elatoides (P1)
	Microcorys sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)
	Pityrodia loricata
	Westringia cephalantha
	Westringia rigida
Scrophulariaceae	*Eremophila dempsteri*
	Eremophila sp.

APPENDIX A: VASCULAR PLANT SPECIES RECORDED WITHIN THE PLANT CONDITION MONITORING TRANSECTS, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

FAMILY	SPECIES
Goodeniaceae	*Dampiera obliqua*
	Dampiera sp.
	?*Dampiera* sp.
	Goodenia sp. (juvenile)
Stylidiaceae	*Stylidium involucratum*
	Stylidium sp.
Asteraceae	*Olearia muelleri*
	Olearia ramosissima

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
Acacia assimilis subsp. *assimilis*						x			x	x			x	x	x	x			x	x
Acacia camptoclada								x												
Acacia lachnocarpa (P1)																	x	x		
Acacia merrallii							x				x									
Acacia resinimarginea																x				
Acacia sphacelata subsp. *sphacelata*						x										x				x
Acacia steedmanii subsp. *steedmanii*																	x			
Acacia sulcata var. *platyphylla*				x																
Acacia undosa (P3)							x	x												
Acacia yorkrakinensis subsp. *acrita*									x	x			x	x	x					
Acrotriche lancifolia		x															x			
Adenanthos argyreus									x					x	x				x	x
Allocasuarina acutivalvis subsp. *acutivalvis*		x	x			x			x	x			x	x	x	x	x	x	x	
Allocasuarina campestris				x	x															
Allocasuarina spinosissima		x	x											x		x				
Allocasuarina sp. (juvenile)																				x
Baeckea sp. Forrestania (K.R. Newbey 1105) (P1)						x								x	x	x				x
Banksia laevigata subsp. *fuscolutea*									x							x				
Banksia purdieana									x	x			x	x	x	x			x	
Banksia sphaerocarpa var. *dolichostyla* (T)									x	x				x	x	x			x	
Beaufortia interstans							x								x					
Beaufortia orbifolia									x	x			x	x	x				x	
Beaufortia puberula																x				

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
Beaufortia schaueri									x				x	x	x	x				
Beyeria minor																			x	x
Beyeria sulcata var*. gracilis*			x																	
Beyeria sulcata var*. sulcata*																				x
Boronia ternata var*. promiscua* (P3)									x				x	x					x	x
Callitris columellaris		x															x	x		
Callitris preissii			x					x												x
Calothamnus gilesii		x																		
Calytrix breviseta subsp*. stipulosa*															x	x			x	
Calytrix tetragona					x															
Cassytha aurea var*. hirta*									x	x										
Cassytha sp.		x	x	x									x	x	x			x	x	
Casuarina sp*.*																			x	x
Chamaexeros fimbriata																				x
Chamelaucium ciliatum								x							x					
Chamelaucium sp. Parker Range (B.H. Smith 1255) (P1)														x	x				x	x
Chamelaucium virgatum															x	x				
Cryptandra ?distigma							x													
Cryptandra sp.			x																	
Cyanostegia angustifolia																			x	
Cyathostemon sp.																	x			
Dampiera obliqua						x													x	x
Dampiera sp.																	x			

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
?*Dampiera* sp.						x														
Daviesia aphylla																		x		
Daviesia argillacea			x				x				x									
Daviesia cardiophylla																x				
Daviesia sarissa subsp. *redacta* (P2)									x						x				x	x
Daviesia scoparia																		x		
Dodonaea bursariifolia			x				x											x		
Dodonaea microzyga var. *acrolobata*				x	x															
Dodonaea stenozyga											x	x								
Drosera sp. (climbing)				x																
Drummondita hassellii									x				x	x	x	x			x	x
Eremophila dempsteri												x								
Eremophila sp.							x													
Ericomyrtus serpyllifolia			x																	
Eucalyptus burracoppinensis									x	x			x	x	x	x				
Eucalyptus calycogona subsp. *calycogona*							x													
Eucalyptus ?capillosa		x																		
Eucalyptus cylindriflora							x	x												
Eucalyptus eremophila			x				x	x										x		
Eucalyptus horistes														x						
Eucalyptus protensa											x	x								
Eucalyptus rigidula																				x
Eucalyptus salubris											x	x						x		

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
Eucalyptus urna											x	x								
Eucalyptus sp.			x									x	x					x	x	
Eucalyptus sp. 1			x														x			
Euryomyrtus maidenii																x				
Eutaxia lasiocalyx (P2)											x									
Exocarpos aphyllus		x									x	x						x		
Gastrolobium floribundum									x	x						x			x	
Gastrolobium spinosum						x							x	x	x				x	x
Glischrocaryon aureum																			x	x
Gompholobium hendersonii										x				x	x				x	x
Gompholobium obcordatum															x					
Goodenia sp. (juvenile)																			x	
Grevillea acuaria							x													
Grevillea acuaria sens. lat.								x												
Grevillea acuaria sens. lat. (shiny leaf form)																		x		
Grevillea ?biformis															x	x				
Grevillea hookeriana subsp. *apiciloba*						x							x	x	x				x	x
Grevillea huegelii							x													
Grevillea lissopleura (P1)				x	x															
Grevillea marriottii (P1)																				x
Grevillea oncogyne														x				x		x
Grevillea pterosperma													x							
Grevillea shuttleworthiana subsp. *obovata*																x				

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
Grevillea sp.																x	x			
Hakea erecta								x	x					x	x	x				x
Hakea meisneriana									x	x						x				
Hakea multilineata group						x				x			x		x				x	x
Hakea pendens (P3)		x	x																	
Hakea scoparia subsp. *scoparia*																x	x			
Hakea subsulcata			x										x	x					x	
Halgania integerrima								x												x
Hemigenia westringioides																			x	
Hibbertia rostellata			x			x									x	x			x	x
Hibbertia rupicola							x													
Hibbertia stowardii									x	x			x	x	x	x			x	
Hibbertia tuberculata (P1)				x																
Hibbertia sp.																	x			
Homalocalyx pulcherrimus																x				
Hybanthus floribundus																				x
Isopogon gardneri									x	x				x	x				x	
Isopogon scabriusculus subsp. *pubifloris*						x								x		x				x
Jacksonia nematoclada									x				x	x	x					x
Lasiopetalum ferraricollinum														x	x	x			x	
Lepidosperma sanguinolentum sens .lat.				x																
Lepidosperma sp.																x				
Leptomeria preissiana																				x

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
Leptospermum roei						x														
Leptospermum spinescens										x									x	
Leucopogon sp. Forrestania (G.F. Craig 2386)																x				
Leucopogon sp. outer wheatbelt (M. Hislop 30)													x							
Lysinema ciliatum																x				
Melaleuca acuminata subsp. *acuminata*							x	x										x		
Melaleuca calyptroides													x	x	x	x				x
Melaleuca cliffortioides				x	x															
Melaleuca condylosa																	x	x		
Melaleuca cordata									x	x			x	x	x	x			x	
Melaleuca cucullata											x	x								
Melaleuca depauperata							x	x												
Melaleuca eleuterostachya							x	x												
Melaleuca halmaturorum																		x		
Melaleuca lateriflora							x	x												
Melaleuca laxiflora								x												
Melaleuca pauperiflora subsp. *pauperiflora*											x									
Melaleuca phoidophylla												x								
Melaleuca pungens									x					x		x				
Melaleuca scalena			x				x	x					x					x		
Melaleuca sparsiflora																		x		
Melaleuca sp.																			x	
Microcorys elatoides (P1)						x			x	x			x	x	x				x	

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
Microcorys sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)						x													x	x
Microcybe ambigua															x	x				
Microcybe multiflora subsp. *multiflora*											x	x								
Micromyrtus erichsenii			x						x	x			x		x	x				x
Monotaxis grandiflora															x					
Olearia muelleri							x													
Olearia ramosissima								x												
Persoonia coriacea						x				x			x	x	x				x	x
Persoonia ?quinquenervis													x				x			
Persoonia saundersiana										x										
Petrophile stricta															x					
Phebalium filifolium																x				x
Phebalium megaphyllum		x	x															x		
Phebalium obovatum			x																	
Phebalium sp.																	x			
Philotheca rhomboidea																				x
Pimelea sulphurea																				x
Pimelea sp.																			x	
Pityrodia loricata																				x
Platysace maxwellii					x					x					x				x	x
Poaceae sp.							x													
Psammomoya choretroides																x				

APPENDIX B: VASCULAR PLANT SPECIES RECORDED AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Note: P1 to P4 denotes prioirty taxon (DBCA 2021a, WAH 1998-); T denotes threatened taxon (DBCA 2021b)

SPECIES	Transect Pair	A		B		C	D		E		F		G		H		I		J	
	Transect Type	control	impact	control	impact	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact	control	impact
	Transect Number	1	2	3	4	6	7	8	10	9	11	14	15	12	13	16	17	18	19	20
Rinzia carnosa																		x		
Rinzia medifila (P1)				x																
Rinzia sessilis			x																	
Santalum acuminatum			x										x	x				x		
Santalum sp.									x		x								x	
Stackhousia sp. (recollect next trip)																			x	
Stenanthemum stipulosum						x														x
Stylidium involucratum																				x
Stylidium sp.														x						x
Styphelia exserta				x	x															
Styphelia serratifolia		x												x		x				
Thryptomene kochii									x				x	x						x
Thysanotus sp. Twining Wheatbelt (N.H. Brittan 81/29)								x												
Trymalium myrtillus subsp. *myrtillus*				x																
Verticordia chrysantha															x	x				
Verticordia stenopetala (P3)															x	x				
?*Verticordia* sp.									x											
Westringia cephalantha			x					x												
Westringia rigida							x													

APPENDIX C: POPULATIONS OF PLANT SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

SPECIES	TRANSECT																		
	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Acacia assimilis subsp. *assimilis*					6			1	1		2	2		9	1			46	159
Acacia camptoclada							1												
Acacia lachnocarpa (P1)																224	134		
Acacia merrallii						1				3									
Acacia resinimarginea															3				
Acacia sphacelata subsp. *sphacelata*					22										1				3
Acacia steedmanii subsp. *steedmanii*																6			
Acacia sulcata var. *platyphylla*			5																
Acacia undosa (P3)						106	137												
Acacia yorkrakinensis subsp. acrita								1	1		15	5		17					
Acrotriche lancifolia	2															12			
Adenanthos argyreus									14		6	17						99	1
Allocasuarina acutivalvis subsp. *acutivalvis*	29	106			2			100	203		3	13		13	99	3	11	5	
Allocasuarina campestris			31	4															
Allocasuarina spinosissima	1	2									3				12				
Allocasuarina sp. (juvenile)																			17
Baeckea sp. Forrestania (K.R. Newbey 1105) (P1)					3						5	62			25				15
Banksia laevigata subsp. fuscolutea									2						2				
Banksia purdieana								562	153		4	432		3	38			102	
Banksia sphaerocarpa var. *dolichostyla* (T)								15	14		1	2			15			19	
Beaufortia interstans						1						24							
Beaufortia orbifolia								279	171		3	23		4				86	
Beaufortia puberula															241				
Beaufortia schaueri									63		49	5		8	148				
Beyeria minor																		20	28
Beyeria sulcata var. *gracilis*		19.2																	
Beyeria sulcata var. *sulcata*																			1

APPENDIX C: POPULATIONS OF PLANT SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

SPECIES	TRANSECT																		
	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Boronia ternata var. *promiscua* (P3)									2		10			11				14	1
Callitris columellaris	319															28	67		
Callitris preissii		2					1												5
Calothamnus gilesii	4																		
Calytrix breviseta subsp. *stipulosa*												23			8			31	
Calytrix tetragona				126															
Cassytha aurea var. *hirta*								5	6										
Cassytha sp.	3	1	1								20	10		3			1	17	
Casuarina sp.																		33	1
Chamaexeros fimbriata																			4
Chamelaucium ciliatum							1					29							
Chamelaucium sp. Parker Range (B.H. Smith 1255) (P1)											8	4						67	6
Chamelaucium virgatum												15			4				
Cryptandra ?*distigma*						4													
Cryptandra sp.		1																	
Cyanostegia angustifolia																		2	
Cyathostemon sp.																40			
Dampiera obliqua					15													378	5
Dampiera sp.																128			
?*Dampiera* sp.					1														
Daviesia aphylla																	19		
Daviesia argillacea		2				4				9									
Daviesia cardiophylla															7				
Daviesia sarissa subsp. *redacta* (P2)									6			5						22	28
Daviesia scoparia																	2		
Dodonaea bursariifolia		4				3											1		
Dodonaea microzyga var. *acrolobata*			9	27															

APPENDIX C: POPULATIONS OF PLANT SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

SPECIES	TRANSECT																		
	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Dodonaea stenozyga										70			142						
Drosera sp. (climbing)																			
Drummondita hassellii									18		14	126		37	127			6	101
Eremophila dempsteri													1						
Eremophila sp.						1													
Ericomyrtus serpyllifolia		7																	
Eucalyptus burracoppinensis								6	8		2	9		10	5				
Eucalyptus calycogona subsp. *calycogona*						19													
Eucalyptus ?capillosa	11																		
Eucalyptus cylindriflora						1	33												
Eucalyptus eremophila		5				25	1										10		
Eucalyptus horistes											11								
Eucalyptus protensa										3			3						
Eucalyptus rigidula																			4
Eucalyptus salubris										5			1				1		
Eucalyptus urna										52			79						
Eucalyptus sp.		3											1	1			8	8	
Eucalyptus sp.1		1														12			
Euryomyrtus maidenii															58				
Eutaxia lasiocalyx (P2)										1									
Exocarpos aphyllus	1									8			1				4		
Gastrolobium floribundum								3	2						1			190	
Gastrolobium spinosum					15						2	1		18				45	87
Glischrocaryon aureum																		1	20
Gompholobium hendersonii								1			1	1						9	1
Gompholobium obcordatum												2							
Goodenia sp. (juvenile)																		16	

APPENDIX C: POPULATIONS OF PLANT SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

SPECIES	TRANSECT																		
	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Grevillea acuaria						1													
Grevillea acuaria sens. lat.							13												
Grevillea acuaria sens. lat. (shiny leaf form)																	16		
Grevillea ?biformis												1			1				
Grevillea hookeriana subsp. *apiciloba*					6						4	4		1				18	121
Grevillea huegelii						1													
Grevillea lissopleura (P1)			104	124															
Grevillea marriottii (P1)																			67
Grevillea oncogyne											2						2		16
Grevillea pterosperma														3					
Grevillea shuttleworthiana subsp. *obovata*															1				
Grevillea sp.															1	1			
Hakea erecta							3		1		7	2			16				18
Hakea meisneriana								79	60						1				
Hakea multilineata group					1			1				1		2				14	84
Hakea pendens (P3)	8	11																	
Hakea scoparia subsp. *scoparia*															20	779			
Hakea subsulcata		2									6			7				33	
Halgania integerrima							9												68
Hemigenia westringioides																		8	
Hibbertia rostellata		22			48							31			1			9	95
Hibbertia rupicola						4													
Hibbertia stowardii								3	84		64	77		62	32			8	
Hibbertia tuberculata (P1)			549																
Hibbertia sp.																52			
Homalocalyx pulcherrimus															1				
Hybanthus floribundus																			3

APPENDIX C: POPULATIONS OF PLANT SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

SPECIES	TRANSECT																	
	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Isopogon gardneri								33	77		9	2						2	
Isopogon scabriusculus subsp. *pubifloris*					1						1				30				
Jacksonia nematoclada									1		3	175		2					79
Lasiopetalum ferraricollinum											3	59			12			4	
Lepidosperma sanguinolentum sens .lat.			272																
Lepidosperma sp.															13				
Leptomeria preissiana																			1
Leptospermum roei					3														
Leptospermum spinescens								6										1	
Leucopogon sp. Forrestania (G.F. Craig 2386)															89				
Leucopogon sp. outer wheatbelt (M. Hislop 30)														1					
Lysinema ciliatum															1				
Melaleuca acuminata subsp. *acuminata*						1	22										1		
Melaleuca calyptroides											301	6		23	22				77
Melaleuca cliffortioides			292	141															
Melaleuca condylosa																607	4		
Melaleuca cordata								16.1	41		146	48		196	19			81	
Melaleuca cucullata										53			36						
Melaleuca depauperata						39	37												
Melaleuca eleuterostachya						11	12												
Melaleuca halmaturorum																	25		
Melaleuca lateriflora						16	85												
Melaleuca laxiflora							10												
Melaleuca pauperiflora subsp. *pauperiflora*										362									
Melaleuca phoidophylla													3						
Melaleuca pungens									49		152				2				
Melaleuca scalena		12				10	15							2			33		

APPENDIX C: POPULATIONS OF PLANT SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

SPECIES	TRANSECT																		
	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Melaleuca sparsiflora																	162		
Melaleuca sp.																		2	
Microcorys elatoides (P1)					5			35	6		52	41		45				39	
Microcorys sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)					34													652	3
Microcybe ambigua												33			25				
Microcybe multiflora subsp. *multiflora*										71			4						
Micromyrtus erichsenii		2						1	1			10		2	11				2
Monotaxis grandiflora												1							
Olearia muelleri						1													
Olearia ramosissima							60												
Persoonia coriacea					23			1			1	8		4				2	31
Persoonia saundersiana								1											
Persoonia ?quinquenervis														1		1			
Petrophile stricta												4							
Phebalium filifolium															8				5
Phebalium megaphyllum	92	73															5		
Phebalium obovatum		32																	
Phebalium sp.																2			
Philotheca rhomboidea																			12
Pimelea sulphurea																			5
Pimelea sp.																		1	
Pityrodia loricata																			5
Platysace maxwellii				3				4				21						262	6
Poaceae sp.						1													
Psammomoya choretroides															9				
Rinzia carnosa																	51		

APPENDIX C: POPULATIONS OF PLANT SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

SPECIES	TRANSECT																		
	1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Rinzia medifila (P1)			3																
Rinzia sessilis		52																	
Santalum acuminatum		10									4			3			1		
Santalum sp.									4	3								2	
Stackhousia sp. (recollect next trip)																		2	
Stenanthemum stipulosum					1														1
Stylidium involucratum																			1
Stylidium sp.											1								2
Styphelia exserta			4	234															
Styphelia serratifolia	2										1				1				
Thryptomene kochii									36		66			3					14
Thysanotus sp. Twining Wheatbelt (N.H. Brittan 81/29)							5												
Trymalium myrtillus subsp. *myrtillus*			73																
Verticordia chrysantha												6			67				
Verticordia stenopetala (P3)												4			3				
?*Verticordia* sp.									1										
Westringia cephalantha		12					26												
Westringia rigida						8													

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 1							
1	*Hakea pendens* (P3)	2	0	3	0	0	0
2	*Phebalium megaphyllum*	3	0	0	0	1	0
3	*Callitris columellaris*	3	0	3	0	1	0
4	*Allocasuarina acutivalvis* subsp*. acutivalvis*	2	0	0	0	0	0
5	*Styphelia serratifolia*	4	0	2	0	1	0
6	*Hakea pendens* (P3)	2	0	2	0	0	0
7	*Allocasuarina acutivalvis* subsp*. acutivalvis*	1	0	1	0	1	0
8	*Callitris columellaris*	4	0	3	3	1	0
9	*Phebalium megaphyllum*	4	0	0	0	1	0
10	*Callitris columellaris*	4	0	3	3	1	0
11	*Phebalium megaphyllum*	3	0	1	0	1	0
12	*Phebalium megaphyllum*	4	0	1	1	0	0
13	*Hakea pendens* (P3)	3	0	2	3	1	1
14	*Callitris columellaris*	3	0	1	1	2	0
15	*Allocasuarina acutivalvis* subsp*. acutivalvis*	1	0	0	0	3	0
16	*Allocasuarina acutivalvis* subsp*. acutivalvis*	3	0	2	1	1	0
17	*Hakea pendens* (P3)	3	0	1	0	1	0
18	*Phebalium* sp.	4	0	1	0	1	0
19	*Phebalium megaphyllum*	3	0	1	1	1	0
20	*Callitris columellaris*	4	0	1	0	2	0
TRANSECT 2							
1	*Rinzia sessilis*	2	0	0	2	1	0
2	*Beyeria sulcata*	3	0	1	3	1	0
3	*Allocasuarina acutivalvis* subsp*. acutivalvis*	3	0	0	2	0	0
4	*Phebalium megaphyllum*	3	0	0	0	1	0
5	*Hakea pendens* (P3)	4	0	0	3	0	0
6	*Beyeria sulcata*	1	0	0	0	2	0
7	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	0	2	0	0
8	*Hakea pendens* (P3)	1	0	2	3	1	0
9	*Phebalium megaphyllum*	3	0	1	2	1	0
10	*Rinzia sessilis*	3	0	2	2	1	0
11	*Allocasuarina acutivalvis* subsp*. acutivalvis*	3	0	1	2	1	0
12	*Rinzia sessilis*	3	0	2	0	1	0
13	*Beyeria sulcata*	3	0	1	3	2	0
14	*Phebalium megaphyllum*	3	0	2	3	1	0
15	*Hakea pendens* (P3)	3	0	1	3	1	0
16	*Beyeria sulcata*	3	0	1	2	1	0
17	*Phebalium megaphyllum*	3	0	1	2	1	0
18	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	1	3	0	0
19	*Hakea pendens* (P3)	4	0	2	3	1	0
20	*Rinzia sessilis*	3	0	2	2	1	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 3							
1	*Melaleuca cliffortioides*	3	0	0	0	1	0
2	*Melaleuca cliffortioides*	3	0	1	3	1	0
3	*Grevillea lissopleura* (P1)	3	0	2	0	1	0
4	*Hibbertia tuberculata* (P1)	3	0	1	0	1	0
5	*Trymalium myrtillus* subsp. *myrtillus*	3	0	0	3	1	0
6	*Melaleuca cliffortioides*	4	0	2	3	1	0
7	*Hibbertia tuberculata* (P1)	3	0	1	1	1	0
8	*Grevillea lissopleura* (P1)	2	0	1	0	1	0
9	*Trymalium myrtillus* subsp. *myrtillus*	2	0	1	0	1	0
10	*Dodonaea microzyga* var. *acrolobata*	3	0	1	0	1	0
11	*Melaleuca cliffortioides*	4	0	2	3	1	0
12	*Grevillea lissopleura* (P1)	2	0	2	0	1	2
13	*Hibbertia tuberculata* (P1)	4	0	1	0	1	0
14	*Trymalium myrtillus* subsp. *myrtillus*	3	0	1	0	1	0
15	*Dodonaea microzyga* var. *acrolobata*	3	0	2	3	1	0
16	*Melaleuca cliffortioides*	4	0	2	3	1	0
17	*Styphelia exserta*	4	0	2	0	1	0
18	*Dodonaea microzyga* var. *acrolobata*	4	0	2	3	1	0
19	*Hibbertia tuberculata* (P1)	4	0	1	0	1	0
20	*Grevillea lissopleura* (P1)	3	0	1	0	1	1
TRANSECT 4							
1	*Grevillea lissopleura* (P1)	2	0	0	0	1	2
2	*Dodonaea microzyga* var. *acrolobata*	3	0	1	3	1	0
3	*Calytrix tetragona*	4	0	0	2	2	0
4	*Styphelia exserta*	4	0	1	3	0	0
5	*Melaleuca cliffortioides*	4	0	0	0	1	0
6	*Melaleuca cliffortioides*	4	0	1	0	1	0
7	*Grevillea lissopleura* (P1)	3	0	0	0	1	1
8	*Calytrix tetragona*	4	0	0	2	1	0
9	*Styphelia exserta*	4	0	1	3	1	0
10	*Dodonaea microzyga* var. *acrolobata*	4	0	1	3	1	0
11	*Styphelia exserta*	4	0	1	3	1	0
12	*Calytrix tetragona*	4	0	0	3	1	0
13	*Melaleuca cliffortioides*	4	0	0	0	1	0
14	*Grevillea lissopleura* (P1)	3	0	0	0	3	3
15	*Dodonaea microzyga* var. *acrolobata*	2	0	0	3	1	0
16	*Melaleuca cliffortioides*	4	0	0	3	1	0
17	*Dodonaea microzyga* var. *acrolobata*	2	0	0	3	1	0
18	*Grevillea lissopleura* (P1)	2	0	0	0	1	3
19	*Calytrix tetragona*	4	0	0	3	1	0
20	*Styphelia exserta*	4	0	0	3	1	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 6							
1	*Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	3	0	2	2	0	0
2	*Persoonia coriacea*	4	0	0	0	1	0
3	*Acacia sphacelata* subsp. *sphacelata*	1	0	2	3	0	0
4	*Microcorys elatoides* (P1)	4	0	0	2	0	0
5	*Hibbertia rostellata*	3	0	0	2	1	0
6	*Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	3	0	1	2	2	0
7	*Persoonia coriacea*	4	0	0	0	0	0
8	*Hibbertia rostellata*	4	0	1	2	0	0
9	*Acacia sphacelata* subsp. *sphacelata*	2	0	2	0	0	0
10	*Microcorys elatoides* (P1)	4	0	1	2	1	0
11	*Persoonia coriacea*	3	0	0	0	2	2
12	*Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	2	0	2	2	1	1
13	*Hibbertia rostellata*	3	0	1	2	2	1
14	*Acacia sphacelata* subsp. *sphacelata*	3	0	2	0	2	0
15	*Microcorys elatoides* (P1)	3	0	2	2	0	0
16	*Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	4	0	3		0	0
17	*Acacia sphacelata* subsp. *sphacelata*	4	0	3	3	0	0
18	*Persoonia coriacea*	3	0	0	0	1	2
19	*Microcorys elatoides* (P1)	3	0	0	2	1	0
20	*Hibbertia rostellata*	3	0	1	2	1	1
TRANSECT 7							
1	*Melaleuca lateriflora*	4	0	3	0	1	0
2	*Daviesia argillacea*	3	0	1	0	1	0
3	*Acacia undosa* (P3)	2	0	2	0	2	0
4	*Eucalyptus calycogona* subsp. *calycogona*	3	0	1	3	1	2
5	*Melaleuca eleuterostachya*	4	0	3	0	1	0
6	*Acacia undosa* (P3)	3	0	0	0	1	0
7	*Grevillea acuaria*	4	0	2	0	1	0
8	*Melaleuca lateriflora*	4	0	2	0	1	0
9	*Eucalyptus calycogona* subsp. *calycogona*	3	0	1	0	1	1
10	*Melaleuca eleuterostachya*	4	0	3	0	0	0
11	*Melaleuca eleuterostachya*	3	0	2	0	1	0
12	*Acacia undosa* (P3)	3	0	1	0	1	0
13	*Daviesia argillacea*	4	0	2	0	0	0
14	*Eucalyptus calycogona* subsp. *calycogona*	3	2	1	3	0	2
15	*Acacia undosa* (P3)	4	0	2	0	1	0
16	*Acacia undosa* (P3)	3	0	1	0	2	0
17	*Hibbertia rupicola*	4	0	1	0	0	0
18	*Acrotriche lancifolia*	3	0	1	3	1	0
19	*Eucalyptus calycogona* subsp. *calycogona*	3	0	1	0	1	2
20	*Melaleuca lateriflora*	3	0	3	3	0	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 8							
1	*Acacia undosa* (P3)	3	0	2	0	1	0
2	*Grevillea acuaria*	4	0	2	0	1	0
3	*Melaleuca lateriflora*	3	0	2	0	1	0
4	*Eucalyptus cylindriflora*	3	2	1	3	1	2
5	*Melaleuca eleuterostachya*	3	0	2	0	1	0
6	*Melaleuca lateriflora*	3	0	3	0	0	0
7	*Eucalyptus cylindriflora*	3	0	2	3	0	1
8	*Acacia undosa* (P3)	2	0	1	0	1	0
9	*Melaleuca eleuterostachya*	3	0	3	0	0	0
10	*Grevillea acuaria*	2	0	0	0	1	2
11	*Melaleuca eleuterostachya*	3	0	3	0	0	0
12	*Eucalyptus cylindriflora*	3	0	1	3	1	0
13	*Melaleuca lateriflora*	4	0	3	0	1	0
14	*Grevillea acuaria*	4	0	3	3	2	0
15	*Acacia undosa* (P3)	3	0	3	0	1	0
16	*Acacia undosa* (P3)	3	0	1	0	1	2
17	*Melaleuca lateriflora*	3	0	3	0	0	0
18	*Eucalyptus cylindriflora*	3	2	1	3	1	0
19	*Grevillea acuaria*	4	0	3	2	0	0
20	*Melaleuca eleuterostachya*	4	0	3	0	0	0
TRANSECT 9							
1	*Banksia sphaerocarpa* var. *dolichostyla* (T)	4	0	0	0	1	0
2	*Microcorys elatoides* (P1)	3	0	0	2	1	0
3	*Allocasuarina acutivalvis* subsp. *acutivalvis*	4	0	0	0	1	0
4	*Beaufortia orbifolia*	3	0	1	0	1	0
5	*Banksia purdieana*	3	0	2	0	3	0
6	*Banksia sphaerocarpa* var. *dolichostyla* (T)	3	0	0	0	2	0
7	*Microcorys elatoides* (P1)	3	0	0	0	1	0
8	*Allocasuarina acutivalvis* subsp. *acutivalvis*	4	0	2	0	0	0
9	*Beaufortia orbifolia*	3	0	1	0	2	0
10	*Banksia purdieana*	4	0	2	0	1	0
11	*Banksia sphaerocarpa* var. *dolichostyla* (T)	4	0	0	0	1	0
12	*Microcorys elatoides* (P1)	4	0	0	0	1	1
13	*Allocasuarina acutivalvis* subsp. *acutivalvis*	4	0	0	2	0	0
14	*Beaufortia orbifolia*	3	0	2	0	2	0
15	*Banksia purdieana*	2	0	1	0	3	0
16	*Banksia sphaerocarpa* var. *dolichostyla* (T)	4	0	0	0	1	0
17	*Microcorys elatoides* (P1)	4	0	0	0	1	0
18	*Allocasuarina acutivalvis* subsp. *acutivalvis*	4	0	0	2	1	0
19	*Banksia purdieana*	2	0	0	0	3	0
20	*Beaufortia orbifolia*	3	0	2	0	2	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 10							
1	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	3	2	0	0
2	*Banksia purdieana*	3	0	1	3	2	0
3	*Beaufortia orbifolia*	3	0	1	0	1	0
4	*Microcorys elatoides* (P1)	3	0	2	0	0	0
5	*Banksia sphaerocarpa* var*. dolichostyla* (T)	3	0	0	0	1	0
6	*Banksia sphaerocarpa* var*. dolichostyla* (T)	2	0	0	3	1	0
7	*Beaufortia orbifolia*	3	0	2	0	2	0
8	*Banksia purdieana*	3	0	2	0	2	0
9	*Allocasuarina acutivalvis* subsp*. acutivalvis*	3	0	1	3	0	0
10	*Microcorys elatoides* (P1)	4	0	3	0	1	0
11	*Banksia purdieana*	3	0	2	0	2	0
12	*Microcorys elatoides* (P1)	4	0	3	3	0	0
13	*Beaufortia orbifolia*	4	0	3	3	2	0
14	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	2	2	0	0
15	*Banksia sphaerocarpa* var*. dolichostyla* (T)	2	0	1	0	2	0
16	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	3	2	1	0
17	*Beaufortia orbifolia*	3	0	2	0	1	0
18	*Eucalyptus burracoppinensis*	2	1	1	0	1	2
19	*Banksia purdieana*	3	0	1	3	2	0
20	*Banksia sphaerocarpa* var*. dolichostyla* (T)	3	0	0	0	1	0
TRANSECT 11							
1	*Melaleuca cucullata*	3	0	2	0	0	0
2	*Melaleuca pauperiflora* subsp*. pauperiflora*	4	0	2	2	1	0
3	*Microcybe multiflora* subsp*. multiflora*	4	0	0	2	0	0
4	*Dodonaea stenozyga*	3	0	0	3	1	0
5	*Exocarpos aphyllus*	3	0	0	0	1	0
6	*Melaleuca pauperiflora* subsp*. pauperiflora*	4	0	1	0	0	0
7	*Dodonaea stenozyga*	3	0	1	3	0	0
8	*Melaleuca pauperiflora* subsp*. pauperiflora*	4	0	2	0	0	0
9	*Microcybe multiflora* subsp*. multiflora*	3	0	0	0	1	0
10	*Exocarpos aphyllus*	2	0	1	0	1	0
11	*Eucalyptus urna*	4	0	0	0	1	0
12	*Dodonaea stenozyga*	3	0	1	3	1	0
13	*Melaleuca pauperiflora* subsp*. pauperiflora*	3	0	2	3	1	0
14	*Melaleuca cucullata*	4	0	2	2	0	0
15	*Daviesia argillacea*	3	0	0	0	1	0
16	*Melaleuca pauperiflora* subsp*. pauperiflora*	4	0	1	2	2	0
17	*Melaleuca cucullata*	3	0	3	3	0	0
18	*Microcybe multiflora* subsp*. multiflora*	3	0	1	1	1	0
19	*Dodonaea stenozyga*	4	0	3	3	1	0
20	*Daviesia argillacea*	3	0	1	0	1	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 12							
1	*Acacia yorkrakinensis* subsp*. acrita*	4	0	0	0	0	0
2	*Melaleuca calyptroides*	4	0	1	0	0	0
3	*Hakea erecta*	4	0	2	0	1	0
4	*Microcorys elatoides* (P1)	3	0	0	2	1	0
5	*Drummondita hassellii*	4	0	0	2	0	0
6	*Hakea erecta*	3	0	1	0	1	0
7	*Acacia yorkrakinensis* subsp*. acrita*	4	0	0	0	1	0
8	*Melaleuca calyptroides*	4	0	0	0	0	0
9	*Melaleuca pungens*	4	0	2	2	0	0
10	*Drummondita hassellii*	4	0	0	2	0	0
11	*Thryptomene kochii*	3	0	0	2	2	0
12	*Melaleuca pungens*	4	0	1	0	0	0
13	*Acacia yorkrakinensis* subsp*. acrita*	4	0	0	0	1	0
14	*Microcorys elatoides* (P1)	4	0	0	0	0	0
15	*Isopogon gardneri*	4	0	1	0	0	0
16	*Isopogon gardneri*	4	0	2	0	0	0
17	*Acacia yorkrakinensis* subsp*. acrita*	3	0	0	0	1	0
18	*Melaleuca pungens*	4	0	2	2	0	0
19	*Microcorys elatoides* (P1)	4	0	0	2	0	0
20	*Isopogon gardneri*	4	0	2	2	0	0
TRANSECT 13							
1	*Microcorys elatoides* (P1)	3	0	1	0	2	0
2	*Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1)	3	0	1	0	2	0
3	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	3	0	2	2	1	0
4	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	2	2	0	0
5	*Banksia sphaerocarpa* var. *dolichostyla* (T)	2	0	1	3	2	0
6	*Allocasuarina acutivalvis* subsp*. acutivalvis*	3	0	1	2	1	0
7	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	3	0	1	2	1	0
8	*Hakea erecta*	4	0	3	0	1	0
9	*Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1)	3	0	1	0	2	0
10	*Banksia sphaerocarpa* var. *dolichostyla* (T)	3	0	0	3	2	0
11	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	2	2	1	0
12	*Banksia sphaerocarpa* var. *dolichostyla* (T)	2	0	1	0	2	1
13	*Microcorys elatoides* (P1)	3	0	2	2	1	0
14	*Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1)	3	0	1	0	0	0
15	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	3	0	1	3	1	0
16	*Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1)	3	0	1	0	2	0
17	*Microcorys elatoides* (P1)	3	0	0	0	1	0
18	*Allocasuarina acutivalvis* subsp*. acutivalvis*	3	0	1	2	2	0
19	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	3	0	1	1	2	0
20	*Banksia sphaerocarpa* var. *dolichostyla* (T)	3	0	0	3	2	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 14							
1	*Dodonaea stenozyga*	3	0	1	3	1	0
2	*Melaleuca cucullata*	3	0	2	3	1	0
3	*Eremophila dempsteri*	2	0	0	0	2	0
4	*Melaleuca phoidophylla*	3	0	3	3	1	0
5	*Eucalyptus urna*	3	0	1	0	0	0
6	*Dodonaea stenozyga*	4	0	3	3	1	0
7	*Eucalyptus urna*	4	0	2	3	0	0
8	*Exocarpos aphyllus*	2	0	0	3	2	0
9	*Eucalyptus salubris*	4	0	1	3	1	0
10	*Melaleuca cucullata*	3	0	2	3	1	0
11	*Dodonaea stenozyga*	3	0	1	3	1	0
12	*Melaleuca cucullata*	4	0	2	3	1	0
13	*Eucalyptus urna*	2	0	0	0	1	2
14	*Eucalyptus protensa*	4	0	2	3	1	1
15	*Dodonaea stenozyga*	2	0	1	2	2	0
16	*Melaleuca phoidophylla*	3	0	2	2	1	0
17	*Microcybe multiflora* subsp*. multiflora*	4	0	2	2	1	0
18	*Dodonaea stenozyga*	3	0	1	3	2	0
19	*Eucalyptus urna*	3	0	1	0	1	1
20	*Melaleuca cucullata*	4	0	3	3	0	0
TRANSECT 15							
1	*Drummondita hassellii*	4	0	2	2	1	0
2	*Melaleuca cordata*	3	0	3	0	1	0
3	*Beaufortia schaueri*	4	0	1	0	1	0
4	*Acacia yorkrakinensis* subsp*. acrita*	4	0	0	0	1	1
5	*Microcorys elatoides* (P1)	4	0	0	0	1	0
6	*Microcorys elatoides* (P1)	4	0	2	0	1	0
7	*Drummondita hassellii*	4	0	2	2	0	0
8	*Hakea subsulcata*	4	0	2	0	0	0
9	*Acacia yorkrakinensis* subsp*. acrita*	4	0	0	0	1	0
10	*Melaleuca cordata*	4	0	2	0	1	0
11	*Hakea subsulcata*	4	0	2	0	0	0
12	*Melaleuca cordata*	3	0	2	0	1	0
13	*Microcorys elatoides* (P1)	4	0	2	0	0	0
14	*Acacia yorkrakinensis* subsp*. acrita*	4	0	0	0	1	0
15	*Drummondita hassellii*	4	0	2	2	1	0
16	*Microcorys elatoides* (P1)	4	0	2	3	0	0
17	*Drummondita hassellii*	4	0	2	2	0	0
18	*Acacia yorkrakinensis* subsp*. acrita*	4	0	0	0	1	0
19	*Hakea subsulcata*	4	0	1	0	0	0
20	*Melaleuca cordata*	4	0	3	0	1	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 16							
1	*Banksia sphaerocarpa* var. *dolichostyla* (T)	3	0	1	3	1	1
2	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	3	0	2	2	1	0
3	*Hakea erecta*	2	0	1	3	1	0
4	*Leucopogon* sp. Forrestania (G.F. Craig 2386)	3	0	0	0	2	2
5	*Allocasuarina acutivalvis* subsp. *acutivalvis*	4	0	2	3	0	0
6	*Leucopogon* sp. Forrestania (G.F. Craig 2386)	3	0	1	0	2	1
7	*Hakea erecta*	3	0	3	3	2	0
8	*Allocasuarina acutivalvis* subsp. *acutivalvis*	3	0	2	3	1	0
9	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	3	0	2	2	0	0
10	*Banksia sphaerocarpa* var. *dolichostyla* (T)	4	0	3	3	1	0
11	*Leucopogon* sp. Forrestania (G.F. Craig 2386)	3	0	1	0	2	2
12	*Hakea erecta*	3	0	0	3	1	0
13	*Banksia sphaerocarpa* var. *dolichostyla* (T)	2	0	1	3	1	0
14	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	3	0	2	2	0	0
15	*Allocasuarina acutivalvis* subsp. *acutivalvis*	4	0	2	3	1	0
16	*Hakea erecta*	3	0	0	3	2	0
17	*Banksia sphaerocarpa* var. *dolichostyla* (T)	3	0	2	3	1	0
18	*Leucopogon* sp. Forrestania (G.F. Craig 2386)	2	0	1	0	2	0
19	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	4	0	2	2	0	0
20	*Allocasuarina acutivalvis* subsp. *acutivalvis*	4	0	3	3	1	0
TRANSECT 17							
1	*Melaleuca condylosa*	4	0	3	0	1	0
2	*Eucalyptus* sp. 1	3	0	1	3	1	2
3	*Acacia lachnocarpa* (P1)	3	0	3	3	1	0
4	*Hakea scoparia* subsp. *scoparia*	3	0	0	0	2	2
5	*Acrotriche lancifolia*	3	0	3	0	0	0
6	*Acrotriche lancifolia*	3	0	3	0	0	0
7	*Melaleuca condylosa*	3	0	3	0	1	0
8	*Hakea scoparia* subsp. *scoparia*	2	0	0	0	2	1
9	*Acacia lachnocarpa* (P1)	3	0	3	0	1	0
10	*Eucalyptus* sp. 1	3	0	2	3	1	2
11	*Melaleuca condylosa*	3	0	3	0	1	0
12	*Hakea scoparia* subsp. *scoparia*	3	0	0	0	2	0
13	*Acacia lachnocarpa* (P1)	3	0	2	0	1	0
14	*Eucalyptus* sp. 1	3	0	2	0	1	1
15	*Acrotriche lancifolia*	3	0	3	0	1	0
16	*Melaleuca condylosa*	3	0	3	0	0	0
17	*Eucalyptus* sp. 1	3	0	2	0	1	3
18	*Acrotriche lancifolia*	3	0	0	0	2	2
19	*Hakea scoparia* subsp. *scoparia*	3	0	1	0	1	1
20	*Acacia lachnocarpa* (P1)	3	0	3	3	1	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 18							
1	*Melaleuca sparsiflora*	3	0	2	0	1	0
2	*Grevillea acuaria* sens. lat. (shiny leaf form)	3	0	2	0	1	0
3	*Acacia lachnocarpa* (P1)	1	0	0	0	2	0
4	*Callitris columellaris*	3	0	3	0	1	0
5	*Melaleuca halmaturorum*	3	0	2	0	1	0
6	*Acacia lachnocarpa* (P1)	4	0	3	3	0	0
7	*Grevillea oncogyne*	4	0	0	2	1	0
8	*Callitris columellaris*	3	0	2	0	1	0
9	*Daviesia scoparia*	3	0	0	2	1	1
10	*Melaleuca sparsiflora*	3	0	3	0	1	0
11	*Melaleuca condylosa*	3	0	0	2	1	0
12	*Phebalium megaphyllum*	3	0	0	0	1	0
13	*Acacia lachnocarpa* (P1)	4	0	2	3	0	0
14	*Allocasuarina acutivalvis* subsp*. acutivalvis*	4	0	1	0	0	0
15	*Callitris columellaris*	3	0	3	0	1	0
16	*Allocasuarina acutivalvis* subsp*. acutivalvis*	3	0	0	0	1	0
17	*Acacia lachnocarpa* (P1)	4	0	3	0	0	0
18	*Melaleuca sparsiflora*	4	0	2	0	0	0
19	*Callitris columellaris*	3	0	2	0	1	0
20	*Melaleuca scalena*	3	0	2	0	1	0
TRANSECT 19							
1	*Banksia sphaerocarpa* var*. dolichostyla* (T)	3	0	1	0	2	0
2	*Daviesia sarissa* subsp. *redacta* (P2)	3	0	2	0	0	0
3	*Microcorys* sp. Mt Holland broad-leaf (G. Barrett s.n. PERTH 04104927) (P1)	4	0	2	2	0	0
4	*Acacia assimilis* subsp*. assimilis*	4	0	2	0	0	0
5	*Microcorys elatoides* (P1)	4	0	2	2	0	0
6	*Acacia assimilis* subsp*. assimilis*	4	0	1	0	0	0
7	*Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1)	4	0	1	0	0	0
8	*Daviesia sarissa* subsp. *redacta* (P2)	4	0	1	0	0	0
9	*Microcorys elatoides* (P1)	3	0	0	0	1	0
10	*Banksia purdieana*	4	0	2	0	1	0
11	*Acacia assimilis* subsp*. assimilis*	4	0	1	0	0	0
12	*Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1)	4	0	1	0	0	0
13	*Microcorys elatoides* (P1)	4	0	2	2	0	0
14	*Banksia sphaerocarpa* var*. dolichostyla* (T)	3	0	0	0	2	0
15	*Daviesia sarissa* subsp. *redacta* (P2)	4	0	0	0	0	0
16	*Daviesia sarissa* subsp. *redacta* (P2)	3	0	1	0	0	0
17	*Banksia sphaerocarpa* var*. dolichostyla* (T)	3	0	0	0	1	0
18	*Acacia assimilis* subsp*. assimilis*	4	0	1	0	0	0
19	*Chamelaucium* sp. Parker Range (B.H. Smith 1255) (P1)	4	0	2	0	0	0
20	*Microcorys elatoides* (P1)	4	0	2	2	0	0

APPENDIX D: HEALTH SCORES FOR INDIVIDUALLY TAGGED PLANTS AT PLANT HEALTH MONITORING TRANSECTS, OCTOBER 2020

Refer to Methods (Section 2.3.3) for score definitions.

TAG	SPECIES	CANOPY	EPICORMIC GROWTH	NEW TIP GROWTH	REPRODUCTIVE STATE	LEAF TIP DIE OFF	INSECT LEAF DAMAGE
TRANSECT 20							
1	*Acacia assimilis* subsp*. assimilis*	4	0	1	0	0	0
2	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	4	0	2	2	0	0
3	*Grevillea marriottii* (P1)	3	0	1	0	1	1
4	*Daviesia sarissa* subsp. *redacta* (P2)	3	0	2	0	0	0
5	*Persoonia coriacea*	3	0	0	0	0	0
6	*Daviesia sarissa* subsp. *redacta* (P2)	4	0	2	0	0	0
7	*Grevillea marriottii* (P1)	4	0	1	3	0	1
8	*Persoonia coriacea*	4	0	1	0	0	0
9	*Baeckea* sp. Forrestania (K.R. Newbey 1105) (P1)	4	0	1	2	0	0
10	*Acacia assimilis* subsp*. assimilis*	4	0	0	0	0	0
11	*Grevillea marriottii* (P1)	3	0	1	2	0	1
12	*Melaleuca ?calyptroides*	4	0	2	0	0	0
13	*Acacia assimilis* subsp*. assimilis*	4	0	1	0	0	0
14	*Persoonia coriacea*	4	0	0	0	0	0
15	*Daviesia sarissa* subsp. *redacta* (P2)	4	0	0	0	1	0
16	*Melaleuca ?calyptroides*	4	0	2	0	0	0
17	*Grevillea marriottii* (P1)	4	0	0	0	0	1
18	*Persoonia coriacea*	4	0	0	0	1	1
19	*Acacia assimilis* subsp*. assimilis*	4	0	1	0	0	0
20	*Daviesia sarissa* subsp. *redacta* (P2)	4	0	2	0	0	1

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 1 (A- control)

Quadrat 1a

Quadrat 1b

Quadrat 1c

Quadrat 1d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 2 (A - impact)

Quadrat 2a

Quadrat 2b

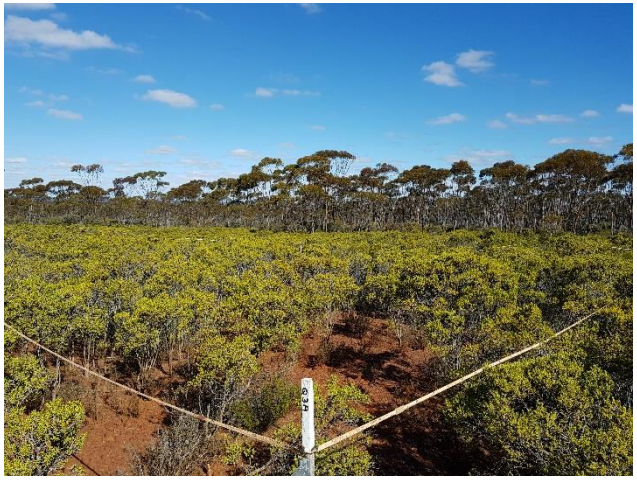
Quadrat 2c

Quadrat 2d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

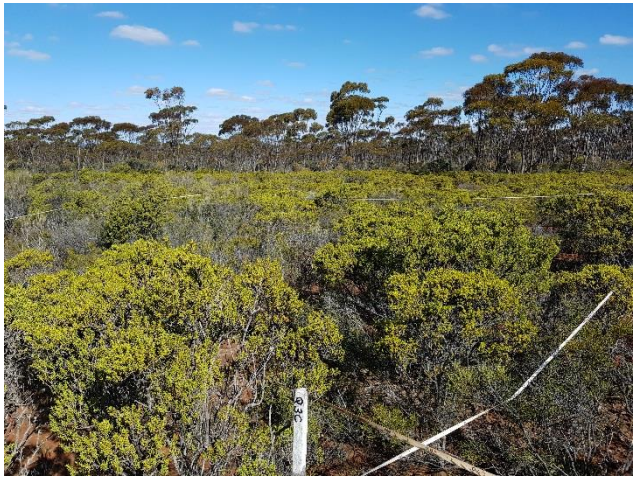
Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 3 (B - control)

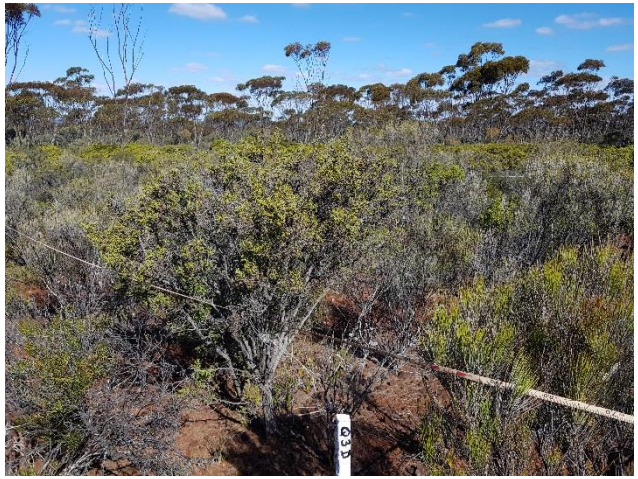


Quadrat 3a

Quadrat 3b



Quadrat 3c

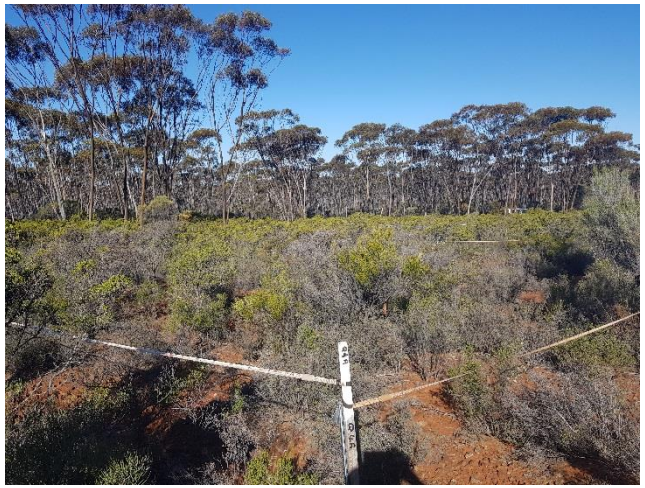


Quadrat 3d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 4 (B - impact)



Quadrat 4a

Quadrat 4b

Quadrat 4c

Quadrat 4d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 6 (C - impact)

Quadrat 6a

Quadrat 6b

Quadrat 6c

Quadrat 6d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 7 (D - control)

Quadrat 7a

Quadrat 7b

Quadrat 7c

Quadrat 7d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 8 (D - impact)

Quadrat 8a

Quadrat 8b

Quadrat 8c

Quadrat 8d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 9 (E - impact)

Quadrat 9a

Quadrat 9b

Quadrat 9c

Quadrat 9d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 10 (E - control)

Quadrat 10a

Quadrat 10b

Quadrat 10c

Quadrat 10d

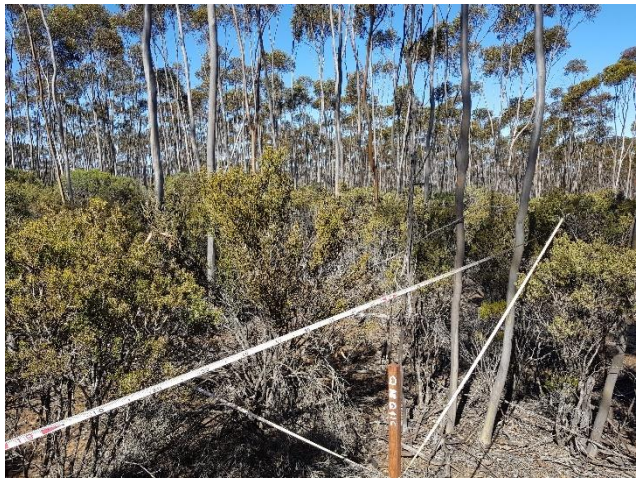
APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 11 (F - control)

Quadrat 11a

Quadrat 11b



Quadrat 11c

Quadrat 11d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 12 (G - impact)

Quadrat 12a

Quadrat 12b

Quadrat 12c

Quadrat 12d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 13 (H - control)

Quadrat 13a

Quadrat 13b

Quadrat 13c

Quadrat 13d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 14 (F - impact)

Quadrat 14a

Quadrat 14b

Quadrat 14c

Quadrat 14d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 15 (G - control)

Quadrat 15a

Quadrat 15b

Quadrat 15c

Quadrat 15d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 16 (H - impact)

Quadrat 16a

Quadrat 16b

Quadrat 16c

Quadrat 16d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 17 (I - control)

Quadrat 17a

Quadrat 17b

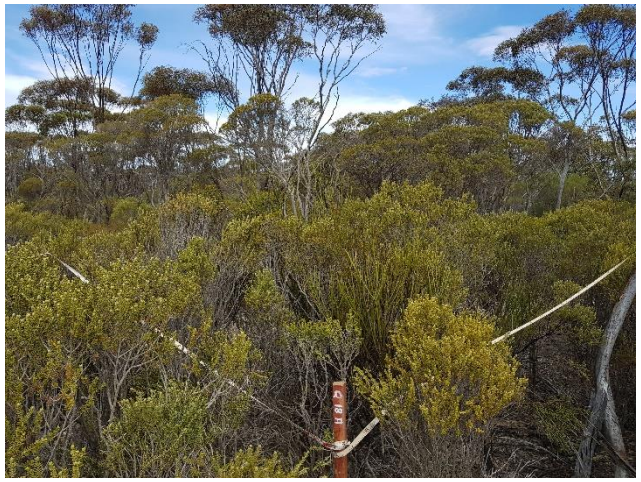
Quadrat 17c

Quadrat 17d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 18 (I - impact)



Quadrat 18a

Quadrat 18b

Quadrat 18c

Quadrat 18d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 19 (J - control)

Quadrat 19a

Quadrat 19b

Quadrat 19c

Quadrat 19d

APPENDIX E: PHOTOGRAPHIC RECORD OF PLANT CONDITION MONITORING TRANSECTS, OCOTBER 2020

Each transect consisted of four 10m x 10m quadrats, arranged as a contiguous belt. Four photographs were taken at each transect, one at the north-west corner of each 10m x 10m sub-quadrat (quadrts a, b. c and d).

Transect 20 (J - impact)

Quadrat 20a

Quadrat 20b

Quadrat 20c

Quadrat 20d

APPENDIX F

PHOTOGRAPHIC RECORD OF TAGGED SPECIES AT EACH PLANT CONDITION MONITORING TRANSECT, OCTOBER 2020

Photographs are labelled in sequence by transect and tagged plant number.

Transect 1-1

Transect 1-2

Transect 1-3

Transect 1-4

Transect 1-5

Transect 1-6

Transect 1-7

Transect 1-8

Transect 1-9

Transect 1-10

Transect 1-11

Transect 1-12

Transect 1-13

Transect 1-14

Transect 1-15

Transect 1-16

Transect 1-17

Transect 1-18

Transect 1-19

Transect 1-20

Transect 2-1

Transect 2-2

Transect 2-3

Transect 2-4

Transect 2-5

Transect 2-6

Transect 2-7

Transect 2-8

Transect 2-9

Transect 2-10

Transect 2-11

Transect 2-12

Transect 2-13

Transect 2-14

Transect 2-15

Transect 2-16

Transect 2-17

Transect 2-18

Transect 2-19

Transect 2-20

Transect 3-1

Transect 3-2

Transect 3-3

Transect 3-4

Transect 3-5

Transect 3-6

Transect 3-7

Transect 3-8

Transect 3-9

Transect 3-10

Transect 3-11

Transect 3-12

Transect 3-13

Transect 3-14

Transect 3-15

Transect 3-16

Transect 3-17

Transect 3-18

Transect 3-19

Transect 3-20

Transect 4-1

Transect 4-2

Transect 4-3

Transect 4-4

Transect 4-5

Transect 4-6

Transect 4-7

Transect 4-8

Transect 4-9

Transect 4-10

Transect 4-11

Transect 4-12

Transect 4-13

Transect 4-14

Transect 4-15

Transect 4-16

Transect 4-17

Transect 4-18

Transect 4-19

Transect 4-20

Transect 6-1

Transect 6-2

Transect 6-3

Transect 6-4

Transect 6-5

Transect 6-6

Transect 6-7

Transect 6-8

Transect 6-9

Transect 6-10

Transect 6-11

Transect 6-12

Transect 6-13

Transect 6-14

Transect 6-15

Transect 6-16

Transect 6-17

Transect 6-18

Transect 6-19

Transect 6-20

Transect 7-1

Transect 7-2

Transect 7-3

Transect 7-4

Transect 7-5

Transect 7-6

Transect 7-7

Transect 7-8

Transect 7-9

Transect 7-10

Transect 7-11

Transect 7-12

Transect 7-13

Transect 7-14

Transect 7-15

Transect 7-16

Transect 7-17

Transect 7-18

Transect 7-19

Transect 7-20

Transect 8-1

Transect 8-2

Transect 8-3

Transect 8-4

Transect 8-5

Transect 8-6

Transect 8-7

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Transect 8-20

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Transect 9-2

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