

Appendix 10 – Flora Likelihood of Occurrence Assessment

Species	SCC	FCC	Lifeform Habit	Critical Timeframe	Optimal Timeframe	Landform Soil Type Outcropping	SubType Category	Associated Havel Site Types	Historic Records	Distribution	Distribution Context	MYARA	O'NEIL	ARUNDEL	LAREGO
Andersonia sp. Saxatilis (F. & J. Hort 3324)	CR	-	Perennial Shrub	Any Time	-----SO--	Gravelly clay Granite outcrops	Granite	G/R	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Population adjacent to future operational areas. Historic records within future operational areas (MN)	High	High	Low	Low
Anthocercis gracilis	VU	VU	Perennial Shrub	Any Time	-----SO--	Sandy or loamy soils Granite outcrops	Granite	G/R	Myara: Inside O'Neil: 10 - 20 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution overlapping Huntly mining area (Future and current). Historic records adjacent to historic operational areas	High	Moderate	Moderate	Moderate
Caladenia leucochila	EN	EN	Perennial Herb	-----ASO--	-----ASO--	Valley floors sand	Upland Forest (Sand)	P	Myara: >20 km O'Neil: >20 km Arundel: 0 - 10 km Larego: Inside	Myara: No O'Neil: No Arundel: Yes Larego: Yes	60km range extension found within proposed clearing areas at Larego	Low	Low	High	High
Diuris drummondii	VU	VU	Perennial Herb	J-----ND	J-----ND		GDE	A/C/W/D	Myara: 10 - 20 km O'Neil: >20km Arundel: 0 - 10 km Larego: 0 - 10 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Historic locations 10km from historic operational areas. Distribution intersects all future, current, and historic areas.	Moderate	Moderate	High	High
Diuris micrantha	VU	VU	Perennial Herb	-----SO--	-----SO--	Brown loamy clay.	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	No historic locations near historic, current, or future operational areas. Distribution intersects all future, current, and historic areas.	Moderate	Moderate	Moderate	Moderate
Diuris purdiei	EN	EN	Perennial Herb	-----SO--	-----SO--	Grey-black sand, moist.	GDE	A/C/W/D	Myara: 10 - 20 km O'Neil: 10 - 20 km Arundel: >20 km Larego: >20 km	Myara: Yes O'Neil: No Arundel: No Larego: No	Distribution almost exclusively SCP. Some small populations adjacent to historic operational areas	Moderate	Moderate	Low	Low
Eleocharis keigheryi	VU	VU	Perennial Sedge	Any Time	-----ASON-	Clay, sandy loam.	GDE	A/C/W/D	Myara: >20 km O'Neil: 0 - 10 km Arundel: 0 - 10 km Larego: 10 - 20 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution overlapping Huntly and Willowdale mining areas (Including future areas).	Moderate	High	High	Moderate
Grevillea curviloba	CR	EN	Perennial Shrub	Any Time	-----ASO--	Grey sand, sandy loam.	GDE	A/C/W/D	Myara: 10 - 20 km O'Neil: 10 - 20 km Arundel: >20 km Larego: >20 km	Myara: No O'Neil: No Arundel: No Larego: No	Almost exclusively SCP, with only one location south of Perth. distribution does not intersect current, future, or historic areas	Moderate	Moderate	Low	Low
Grevillea flexuosa	VU	VU	Perennial Shrub	Any Time	-----JASO--	Ridgetop plateau & associated breakaways Red-brown sand with laterite & gravel, sand over granite.	Upland Forest (Loam)	S/T	Myara: 0 - 10 km O'Neil: >20 km Arundel: >20 km Larego: >20 km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Distribution almost exclusively North East of Perth. One outlier population adjacent to future operational areas	High	Moderate	Low	Low
Grevillea rara	EN	EN	Perennial Shrub	Any Time	-----O--	Lateritic loam.	GDE	A/C/W/D	Myara: >20 km O'Neil: >20 km Arundel: >20 km Larego: 10 - 20 km	Myara: No O'Neil: No Arundel: No Larego: No	Restricted to the southern edge of the Northern Jarrah Forest. Distribution is 20km from future areas	Low	Low	Low	Moderate
Grevillea thelemanniana	CR	CR	Perennial Shrub	Any Time	----MJASON-	Sand, sandy clay.	GDE	A/C/W/D	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: >20 km Larego: >20 km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Almost exclusive to Perth surrounds, a few scattered populations around historic and future operational areas	High	High	Low	Low
Jacksonia velveta	EN	EN	Perennial Shrub	Any Time	-----D	Slight hillslopes, ridges. Brown gravelly loam, dry grey sand, ironstone.	Upland Forest (Loam)	S/T	Myara: >20 km O'Neil: >20 km Arundel: >20 km Larego: >20 km	Myara: No O'Neil: No Arundel: No Larego: Yes	Broad distribution that is near future operational areas	Low	Low	Low	Moderate

Species	SCC	FCC	Lifeform Habit	Critical Timeframe	Optimal Timeframe	Landform Soil Type Outcropping	SubType Category	Associated Havel Site Types	Historic Records	Distribution	Distribution Context	MYARA	O'NEIL	ARUNDEL	LAREGO
Lasiopetalum pterocarpum	CR	EN	Perennial Shrub	Any Time	-----ASOND	Dark red-brown loam or clayey sand over granite.	GDE	A/C/W/D	Myara: 0 - 10 km O'Neil: >20 km Arundel: >20 km Larego: >20 km	Myara: Yes O'Neil: No Arundel: No Larego: No	Distribution within Huntly mine. Records adjacent to current and future operations	High	Low	Low	Low
Morelotia australiensis	VU	VU	Perennial Sedge	Any Time	UNKNOWN	Flats, well-drained areas. Sand, sandy loam.	Upland Forest (Sand)	P	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: 0 - 10 km Larego: 0 - 10 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Distribution is almost exclusively Swan Coastal Plain. Historic records to the far east of Alcoa's lease.	High	High	High	High
Tribonanthes purpurea	VU	VU	Perennial Herb	-----A---	-----A---	herbfields among granite rocks. soils in moss swards. Granite outcrops	Granite / GDE	A/C/W/D/G/R	Myara: >20 km O'Neil: >20 km Arundel: >20 km Larego: >20 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution across wheatbelt and eastern NJF. No historic locations near historic, current, or future operations, however records are sparse within its range, and it's likely its found futher west of its current known records.	Moderate	Moderate	Moderate	Moderate
Verticordia fimbrilepis subsp. fimbrilepis	VU	EN	Perennial Shrub	Any Time	J-----OND	Flats, road verges Gravelly sandy or clayey soils.	Upland Forest (Loam)	S/T	Myara: 10 - 20 km O'Neil: 10 - 20 km Arundel: >20 km Larego: >20 km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Broad population to the East of Huntly mine. Historic recrods not adjacent to future operational areas	Moderat	Moderat	Low	Low
Calytrix simplex subsp. Simplex	P1	-	Perennial Shrub	Any Time	Oct-Nov	Flats and slopes on laterite Grey clay loam soil, red-brown gravelly loam.	Upland Forest (Loam) / Upland Forest (Sand) / GDE	P/S/T/A/C/W/D	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distributions covers Huntly and Willowdale mine. Records adjacent to historic and future mining	Moderate	Moderate	Moderate	Moderate
Darwinia hortiorum	P1	-	Perennial Shrub	Any Time		Shallow granitic soils, loam or loam/clay associated with laterite. Granite outcrops	Upland Forest (Loam) / GDE / Granite	S/T/A/C/W/D/G/R	Myara: 0 - 10 km O'Neil: Inside Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Restricted distribtion intersects Huntly mine. Records adjacent to historic and future operations	High	High	Low	Low
Deyeuxia inaequalis	P1	-	Annual Grass	-----O--	-----O--	Loam	Upland Forest (Loam)	S/T	Myara: >20km O'Neil: >20km Arundel: 0 - 10 km Larego: 10 - 20 km	Myara: No O'Neil: No Arundel: No Larego: No	Disribution is near exclusively southern sandplains. One outlier individual recorded in Orion	Low	Low	High	Moderate
Hibbertia acrotoma	P1	-	Perennial Shrub	Any Time		Steep hillsides and Slopes Brown Loam Granite outcrops	Granite	G/R	Myara: Inside O'Neil: 10 - 20 km Arundel: 0 - 10 km Larego: 10 - 20 km	Myara: Yes O'Neil: No Arundel: Yes Larego: Yes	Restricted to the scarp areas on the extreme west of the Northern Jarrah Forest. Impact would be from clearing in these western zones.	High	Low	High	High
Hibbertia ambita	P1	-	Perennial Shrub	Any Time		Flats and Slopes Loam with lateritic gravel. Lateritic Outcropping	Upland Forest (Loam)	S/T	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: No O'Neil: No Arundel: No Larego: Yes	Restricted to lower rainfall zones to the east, but on the same deeply incised river systems that pass through the east of Keats and Larego	Low	Low	Low	Moderate
Hibbertia hortiorum	P1	-	Perennial Shrub	Any Time		Slopes Brown sandy gravels	Upland Forest (Sand)	P	Myara: Inside O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Population passes through Huntly	High	High	Low	Low

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Hibbertia polyancistra	P1	-	Perennial Shrub	Any Time		Shallow soil over granite. Granite outcrops	Granite	G/R	Myara: 10 - 20 km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: No O'Neil: No Arundel: No Larego: No	Distribution passes to the North of operations, but could include northern parts of Myara North	Moderat	Moderat	Low	Low
Netrostylis sp. Nannup (P.A. Jurjevich 1133)	P1	-	Perennial Sedge	Any Time		Clay loam	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: 0 - 10 km Larego: Inside	Myara: No O'Neil: No Arundel: No Larego: No	Distribution is almost exclusively Geograph region. One outlier record in current operation area	Low	Low	High	High
Paracaleana gracilicordata	P1	-	Perennial Herb	-----ON-	-----ON-	Growing on moss mats Granite outcrops	Granite	G/R	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Distribution intersects Myara North. Historic records within Myara North	High	High	Low	Low
Paracaleana granitica	P1	-	Perennial Herb	-----OND	-----OND	rowing on moss mats Granite outcrops	Granite	G/R	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Distribution intersects Myara North. Historic records within Myara North	High	High	Low	Low
Thysanotus formosus	P1	-	Perennial Herb	J-----ND	J-----ND	Clayey sand, sandy loam.	GDE / Upland Forest (Sand)	P/A/C/W/D	Myara: 10 - 20 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: No O'Neil: No Arundel: No Larego: No	Northern populations outliers. Distribution exclusively geograph otherwise	Low	Moderat	Low	Low
Banksia recurvistyliis	P2	-	Perennial Shrub	Any Time		Shallow, lateritic soils Granite outcrops	Granite	G/R	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Distribution overlaps Myara North. Historic records adjacent to Myara North	High	High	Low	Low
Bossiaea modesta	P2	-	Perennial Shrub	Any Time		Soils derived from granite.	Granite / GDE	A/C/W/D/G/R	Myara: 0 - 10 km O'Neil: 10 - 20 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Popoulation almost exclusively Kalamunda. Some locations within future operational areas (Myara North, Holy Oake)	Moderat	Moderat	Low	Low
Gonocarpus keigheryi	P2	-	Perennial Shrub	Any Time		Brown Clayey Sand	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: >20km Larego: 10 - 20 km	Myara: No O'Neil: No Arundel: No Larego: Yes	Distribution is broad but exclusively south of operations. It's possible it pushes further north into Larego	Low	Low	Low	Moderat e
Grevillea ornithopoda	P2	-	Perennial Shrub	Any Time	-----SOND	Dune Loam, loam over clay, sand, clay. ,	GDE	A/C/W/D	Myara: 0 - 10 km O'Neil: 10 - 20 km Arundel: 10 - 20 km Larego: 10 - 20 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution covering Huntly and Willowdale Mine. Records are within historic and future mining operations	Moderat	Low	Moderat	Moderat e
Lepyrodia curvescens	P2	-	Perennial Rush	Any Time		Sand, laterite.	GDE	A/C/W/D	Myara: 0 - 10 km O'Neil: Inside Arundel: 10 - 20 km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Southern portion of distribution intercepts Huntly mine. Historic records near historical mining. This is mostly a coastal sandplains species, the population inside O'neil is a clear outlier, however the database records for this specimen confirm its locality (Despite the landform being atypical of the species), and the ID was accompanied by a specimen to the herbarium. On this basis, we have to assume the distribution is broader than the SCP, and therefore extends of much of the lease area.	High	High	Low	Low

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Leucopogon extremus	P2	-	Perennial Shrub	Any Time		Unknown	Unknown	Unknown	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: No O'Neil: No Arundel: No Larego: Yes	Distribution possibly intersects Larego (But at a stretch). Otherwise restricted further South	Low	Low	Low	Moderate
Logania sylvicola	P2	-	Perennial	Any Time	UNKNOWN	Unknown	Unknown	Unknown	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: No O'Neil: No Arundel: No Larego: Yes	Distribution is broad, with northern aspect reaching southern willowdale	Low	Low	Low	Moderate
Melaleuca viminalis	P2	-	Perennial Shrub / Tree	Any Time		Red-brown clay loam	GDE	A/C/W/D	Myara: 10 - 20 km O'Neil: 10 - 20 km Arundel: 0 - 10 km Larego: 10 - 20 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Distribution is Australia wide, specifically coastal areas in Northern Australia, but also the South West of WA including SCP, NFJ and SJF. On this basis, its distribution is inclusive of all Alcoa areas.	Moderate	High	High	Moderate
Millotia tenuifolia var. laevis	P2	-	Annual Herb	-----SO--	-----SO--	Granite or laterite soils.	Upland Forest (Loam) / Upland Forest (Sand) / Granite	P/S/T/G/R	Myara: 10 - 20 km O'Neil: >20km Arundel: 0 - 10 km Larego: 10 - 20 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution across south west. Records adjacent to historic mining operations	Moderate	Moderate	High	Moderate
Schizaea rupestris	P2	-	Perennial Fern	Any Time		rock faces. Sand.	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: 0 - 10 km Larego: Inside	Myara: No O'Neil: No Arundel: Yes Larego: Yes	Distribution intercepts Willowdale mine. Historic records are within future operational areas. Ignoring the populations on the south coast as part of the distribution makes distribution	Low	Low	High	High
Stylidium acuminatum subsp. acuminatum	P2	-	Perennial Herb	-----ON-	-----ON-	Unknown	Unknown	Unknown	Myara: >20km O'Neil: >20km Arundel: >20km Larego: 10 - 20 km	Myara: No O'Neil: No Arundel: No Larego: Yes	Distribution to the South, but intersects southern Larego	Low	Low	Low	Moderate
Tetrateca phoenix	P2	-	Perennial Shrub	Any Time		mid-upper slopes Brown gravelly loam over granite. often near large rock outcrops.	Upland Forest (Loam) / Granite	S/T/G/R	Myara: Inside O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Restricted distribution near Huntly Mine. Historic records in current operational areas, and adjacent to future operational areas	High	High	Low	Low
Thysanotus sp. Badgingarra (E.A. Griffin 2511)	P2	-	Perennial Herb	-----D	-----D	Grey sand with lateritic gravel	Upland Forest (Sand)	P	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Completely throughout the southwest of WA. Not found in West of NJF, likely due to the low presence of deep grey sands.	Moderate	Moderate	Moderate	Moderate
Acacia drummondii subsp. affinis	P3	-	Perennial Shrub	Any Time		Lateritic gravelly soils.	Upland Forest (Loam)	S/T	Myara: Inside O'Neil: 10 - 20 km Arundel: >20km Larego: >20km	Myara: No O'Neil: No Arundel: No Larego: No	Almost exclusively North of Perth. One location within Operational areas (Myara)	High	High	Low	Low
Acacia horridula	P3	-	Perennial Shrub	Any Time		often near large rock outcrops. Gravelly soils over granite, sand. often near large rock outcrops.	Granite	G/R	Myara: 0 - 10 km O'Neil: 10 - 20 km Arundel: 10 - 20 km Larego: 10 - 20 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Population heavily overlaps Huntly mine. Several locations recorded either side of Future Operational areas (Myara North)	High	High	Moderate	Low

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Acacia oncinophylla subsp. oncinophylla	P3	-	Perennial Shrub	Any Time		Granitic soils.	Granite	G/R	Myara: 0 - 10 km O'Neil: 10 - 20 km Arundel: 10 - 20 km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad population distribution, overlapping all operational areas. Historic records within furue and historic operational areas (Myara / Myara North / orion)	High	High	High	High
Actinotus repens	P3	-	Perennial Herb	Any Time		Roadside ditches Sandy clay, mud	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: 0 - 10 km Larego: Inside	Myara: No O'Neil: No Arundel: Yes Larego: Yes	Broad population distribution (Mostly South Coast), overlapping Willowdale. Several locations within operational areas (Larego, Orion)	Low	Low	High	High
Adenanthos cygnorum subsp. chamaephyton	P3	-	Perennial Shrub	Any Time		Grey sand, lateritic gravel	Upland Forest (Sand)	P	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad population distribution (Mostly Perth and further North). Assuming the collie populations aren't outliers	Moderat	Moderat	Moderat	Moderat e
Andersonia sp. Audax (F. Hort, B. Hort & J. Hort 3179)	P3	-	Perennial Shrub	Any Time		Granite, slopes Loam, clay, sand, gravel. granite outcrops	Granite / GDE	A/C/W/D/G/R	Myara: 0 - 10 km O'Neil: Inside Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Population overlaps Huntly. Locations are within future operational areas (Myara North).	High	High	Low	Low
Asteridea gracilis	P3	-	Annual Herb	-----SOND	-----SOND	clay, gravelly soils.	Unknown	Unknown	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: Yes	Broad distribution across the south west, but very sparsely. Possibly due to annual nature	Moderat	Moderat	Low	Moderat e
Byblis gigantea	P3	-	Perennial Herb	J-----SOND	J-----SOND	Sandy-peat swamps	GDE	A/C/W/D	Myara: 10 - 20 km O'Neil: 0 - 10 km Arundel: >20km Larego: 10 - 20 km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Population overlaps Huntly. Known locations are near future and current mining operations	Moderat	High	Low	Low
Chordifex gracilior	P3	-	Perennial Rush	Any Time		Peaty sand.	GDE	A/C/W/D	Myara: >20km O'Neil: 10 - 20 km Arundel: >20km Larego: >20km	Myara: No O'Neil: No Arundel: No Larego: No	Near exclusively SCP (Geograph area). One recorded location to the East of future operations	Low	Moderat	Low	Low
Cyathochaeta teretifolia	P3	-	Perennial Herb	Any Time		Grey sand, sandy clay.	GDE	A/C/W/D	Myara: Inside O'Neil: 10 - 20 km Arundel: 0 - 10 km Larego: Inside	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution that overlaps entirety of Huntly and Willowdale mine. Records are thoroughout historic, current, and future operational areas.	High	High	High	High
Dicrastylis reticulata	P3	-	Perennial Shrub	Any Time		hills, flats Sandy soils, often over granite. Amongst granite rock granite outcrops	Granite	G/R	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Distribution is large and sparse. Huntly sits at the South-Western edge of the distribution and may well intersect it	Moderate	Moderate	Low	Low
Gastrolobium sp. Asperum (F. Hort 2864)	P3	-	Perennial Shrub	Any Time		Gentle slopes, ridges, breakaways, along graded tracks. Yellow/brown loam, red-brown clay loam, gravel, laterite. Lateritic Outcropping	Upland Forest (Loam)	S/T	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Sparsley distributed to the East and North. Distribution intersects Huntly	Moderate	High	Low	Low

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Grevillea dissectifolia	P3	-	Perennial Shrub	Any Time		Roadsides Gravelly loam,	Upland Forest (Sand) / Upland Forest (Loam) / GDE	P/S/T/A/C/W/D	Myara: 0 - 10 km O'Neil: Inside Arundel: 10 - 20 km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution covering Huntly Mine. Records are within historic mining, and adjacent to future mining operations	Moderate	High	Moderate	Low
Grevillea prominens	P3	-	Perennial Shrub	Any Time		Gravelly loam.	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: Inside Larego: Inside	Myara: No O'Neil: No Arundel: Yes Larego: Yes	Distribution intercepts Willowdale mine. Historic records within future operations (Larego)	Low	Low	High	High
Hakea oldfieldii	P3	-	Perennial Shrub	Any Time		Red clay or sand over laterite	GDE	A/C/W/D	Myara: 10 - 20 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: No O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution throughout the lower south west covering Huntly and Willowdale mine. Historic records within future operational areas (Holy Oake)	Low	High	Moderate	Moderate
Halgania corymbosa	P3	-	Perennial Shrub	Any Time		Gravelly soils, soils over granite	Upland Forest (Loam) / Granite	S/T/G/R	Myara: 0 - 10 km O'Neil: 10 - 20 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Broad distribution, mostly North, marginally covering Huntly mine. Historic records within current operational areas (Myara)	High	Moderate	Low	Low
Hemigenia microphylla	P3	-	Perennial Shrub	Any Time		granite Sandy clay, peaty clay granite outcrops	Granite / GDE	A/C/W/D/G/R	Myara: >20km O'Neil: 10 - 20 km Arundel: 0 - 10 km Larego: 0 - 10 km	Myara: No O'Neil: No Arundel: Yes Larego: Yes	Broad distribution, mostly SCP or SJF. Some historic records in NJF, adjacent to future mining (Holy Oake & Larego)	Low	Low	High	Moderate
Isopogon autumnalis	P3	-	Perennial Shrub	Any Time		White, grey or yellow sand, often over laterite.	Upland Forest (Sand)	P	Myara: 0 - 10 km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: No Arundel: No Larego: No	Restricted to the sharp edge of scarp hills, mostly to the North	Moderate	Low	Low	Low
Juncus meianthus	P3	-	Perennial Sedge	Any Time		Black sand, sandy clay.	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Despite all historic records being quite far from operations, the distribution is sparse throughout the entire south west of WA	Moderate	Moderate	Moderate	Moderate
Lasiopetalum glutinosum subsp. glutinosum	P3	-	Perennial Shrub	Any Time		Lateritic & granitic soils	Upland Forest (Loam) / Upland Forest (Sand) / Granite	P/S/T/G/R	Myara: 0 - 10 km O'Neil: 10 - 20 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: No Arundel: No Larego: No	Southern portion of distribution intercepts Huntly mine. Historic records near future operational areas, and adjacent to current operational areas. Mostly in scarp locations	High	Low	Low	Low
Lepyrodia heleocharoides	P3	-	Perennial Rush	Any Time		Dry or seasonally inundated heath or woodland Moist peaty sand. ,	GDE	A/C/W/D	Myara: Inside O'Neil: 10 - 20 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution across high rainfall areas of the South West. Historic records within current mining region	High	Moderate	Moderate	Moderate
Meionectes tenuifolia	P3	-	Annual Herb	-----SOND	-----SOND	Grey sand, clay.	GDE	A/C/W/D	Myara: Inside O'Neil: 10 - 20 km Arundel: 10 - 20 km Larego: 10 - 20 km	Myara: Yes O'Neil: Yes Arundel: Yes Larego: Yes	Broad distribution across south west. Records within current mining regions	Moderate	Moderate	Moderate	Moderate
Netrostylis sp. Blackwood River (A.R. Annels 3043)	P3	-	Perennial Sedge	Any Time		dark peaty clay loam.	GDE	A/C/W/D	Myara: >20km O'Neil: >20km Arundel: >20km Larego: 10 - 20 km	Myara: No O'Neil: No Arundel: Yes Larego: Yes	Broad southern distribution, intersecting the southern regions	Low	Low	High	High

Species	SCC	FCC	Lifeform Habit	Critical Timeframe	Optimal Timeframe	Landform Soil Type Outcropping	SubType Category	Associated Havel Site Types	Historic Records	Distribution	Distribution Context	MYARA	O'NEIL	ARUNDEL	LAREGO
Petrophile filifolia subsp. laxa	P3	-	Perennial Shrub	Any Time		flats, slopes White gritty sand, brown, red, yellow, white or grey sand, brown-yellow sandy clay.	Upland Forest (Sand)	P	Myara: 10 - 20 km O'Neil: 0 - 10 km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: Yes Arundel: No Larego: No	Distribution marginally overlaps future mining regions. Nearby historic records to the drier North-East of Alcoa's operations	Moderate	Moderate	Low	Low
Pithocarpa corymbulosa	P3	-	Perennial Herb	JFMA-----	JFMA-----	Gravelly or sandy loam. granite outcrops	Granite	G/R	Myara: 10 - 20 km O'Neil: >20km Arundel: >20km Larego: >20km	Myara: Yes O'Neil: No Arundel: No Larego: No	Scarp restricted. Southern extent of distribution intersects historic operational areas, and may intersect future area. Historic records within historic operational areas	Moderate	Low	Low	Low
Tetratheca parvifolia	P3	-	Perennial Shrub	Any Time		Dry gravelly red soil with granite	Upland Forest (Loam) / Granite	S/T/G/R	Myara: >20km O'Neil: >20km Arundel: 10 - 20 km Larego: Inside		Distribution only marginally intercepts Willowdale mine (To the south). Records within current mining operations	Low	.	.	High
Tetratheca pilifera	P3	-	Perennial Shrub	Any Time		Gravelly soils	Upland Forest (Loam) / Upland Forest (Sand)	P/S/T	Myara: >20km O'Neil: 10 - 20 km Arundel: 10 - 20 km Larego: >20km		Distribution exclusively north of Perth. Historic records scattered around Huntly and Willowdale mines	Moderate	.	.	.
Thysanotus anceps	P3	-	Perennial Herb	-----OND	-----OND	White or grey sand, lateritic gravel, laterite.	Upland Forest (Sand)	P	Myara: 0 - 10 km O'Neil: 10 - 20 km Arundel: >20km Larego: >20km		Broad distribution intercept Huntly Mine. Historic records adjacent to current operational areas and within future operational areas.	Moderate	.	.	Low
Drosera occidentalis	P4	-	Perennial Herb	J-----OND	J-----OND	White/black sand over yellow clay, yellow sand, moist brown/grey clay/sand, peaty sand, sandy clay.	GDE	A/C/W/D	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: 10 - 20 km Larego: >20km		Broad distribution that overlaps entirety of Huntly and Willowdale mine. Records are adjacent to historic, current, and future operational areas	Moderate	.	.	Moderate
Eucalyptus x graniticola	P4	-	Perennial Tree	Any Time		Exposed granite slopes. granite outcrops	Granite	G/R	Myara: 10 - 20 km O'Neil: >20km Arundel: Inside Larego: 0 - 10 km		Distribution overlaps historic areas. Historic records adjacent to historic areas	Low	.	.	Moderate
Pimelea rara	P4	-	Perennial Shrub	Any Time		Lateritic soils.	Upland Forest (Loam) / Upland Forest (Sand)	P/S/T	Myara: Inside O'Neil: 0 - 10 km Arundel: 0 - 10 km Larego: 10 - 20 km		Broad distribution that intercepts Huntly mine. Records within future, current and historic operational areas.	High	.	.	High
Senecio leucoglossus	P4	-	Annual Herb	-----ASOND	-----ASOND	slopes. Gravelly lateritic or granitic soils. Granite outcrops,	Granite / Upland Forest (Sand) / Upland Foest (Loam)	P/S/T/G/R	Myara: 0 - 10 km O'Neil: 0 - 10 km Arundel: Inside Larego: Inside		Broadly distributed throughout southwest, fully intercepting both mines. Records within current, historic and future operational areas	High	.	.	High

Species	SCC	FCC	Lifeform Habit	Critical Timeframe	Optimal Timeframe	Landform Soil Type Outcropping	SubType Category	Associated Havel Site Types	Historic Records	Distribution	Distribution Context	MYARA	O'NEIL	ARUNDEL	LAREGO
Stylidium ireneae	P4	-	Perennial Herb	-----OND	-----OND	Sandy loam.	GDE / Upland Forest (Sand) / Upland Forest (Loam)	P/S/T/A/C/W/D	Myara: Inside O'Neil: 0 - 10 km Arundel: 0 - 10 km Larego: 0 - 10 km		Broadly distributed throughout southwest, fully intercepting both mines. Records within historic and future operational areas	High	.	.	High