



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2799/4
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Regis Resources Limited

1.3. Property details

Property: Mining Lease 38/303
Mining Lease 38/316
Mining Lease 38/317
Mining Lease 38/354
Mining Lease 38/407
Mining Lease 38/498
Mining Lease 38/499
Mining Lease 38/500
Mining Lease 38/589
Mining Lease 38/939
Mining Lease 38/1092
Miscellaneous Licence 38/47

Local Government Area:

Shire of Laverton

Colloquial name:

Duketon Gold Project – Moolart Well, Dogbolter and Eristoun Project Areas

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1,220		Mechanical Removal	Mineral Production

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 21 March 2013

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. One Beard vegetation association has been mapped within the application area (GIS Database; Government of Western Australia, 2011):

18: Low woodland; mulga (*Acacia aneura*); and

Outback Ecology Services were commissioned by Regis Resources Limited to undertake a desktop study and a botanical field survey of the vegetation and flora of the Moolart Well, Dogbolter and Eristoun project areas, which included the vegetation within the application areas, in September 2006. In September 2007, a second round of surveying was undertaken across the proposed borefield to the north and east of the Moolart Well project area, along proposed haul road locations and across proposed disturbance footprints at each of the three project areas (Outback Ecology Services, 2007).

A total of 26 vegetation associations were identified across the Moolart Well and Dogbolter project areas (Outback Ecology Services, 2007). A total of eight vegetation associations were identified across the Eristoun project area (Outback Ecology Services, 2007; HGM, 1999).

Moolart Well and Dogbolter Project Application Areas

1. Claypan/Drainage Areas

C1 - *Maireana pyramidata* and *Cratystylis subspinescens* Heath B over *Frankenia ?pauciflora* and *Halosarcia pergranulata* Dwarf Scrub D; and

C2 - *Muehlenbeckia florulenta* Heath to Low Scrub A: *Muehlenbeckia florulenta* dominates the vegetation with *Rhagodia* sp. also featuring prominently.

2. Undulating Plains

- P1 - Mulga Low Forest A: *Acacia aneura* var. *aneura* and *A. aneura* var. *intermedia* were present in groves with an understorey limited to occasional plants including *Psydrax latifolia*, *Eremophila latrobei* ssp. *latrobei*, *E. forrestii* ssp. *forrestii*, *Dianella revoluta* and *Cheilanthes austrotenuifolia*.
- P2 - Mulga Open Scrub to Low Forest B over *Eremophila spectabilis* ssp. *brevis* Low Scrub B over *Eragrostis eriopoda* Open Low Grass: Sparse to mid-dense cover of *Acacia aneura* var. *aneura*, *A. aneura* var. *argentea* and *A. aneura* var. *intermedia*. Other shrub species present at lower densities included *Eremophila forrestii* ssp. *forrestii*, *E. youngii* ssp. *youngii* and *Senna artemisioides* ssp. *filifolia*. *Eragrostis eriopoda* dominated the mid-dense to sparse grass layer with *Monachather paradoxus*, *Aristida contorta* and *Thyridolepis multiculmis* also recorded.
- P3 - Mulga Open Scrub to Low Forest A over *Eremophila youngii* ssp. *youngii* Dwarf Scrub C over *Eragrostis eriopoda* Open Low Grass: Very sparse to mid-dense cover of tall shrubs to low trees of *Acacia aneura*. Other shrub species present included *Eremophila spectabilis* ssp. *brevis* and *Senna artemisioides* ssp. *filifolia*. A sparse to mid-dense grass layer was present with *Eragrostis eriopoda* dominant. Other grass species included *Aristida contorta*, *Monachather paradoxus* and *Thyridolepis multiculmis*.
- P4 - Mulga Open Scrub to Low Forest B over *Eremophila forrestii* ssp. *forrestii* Low Scrub B over *Eragrostis eriopoda* Open Low Grass: *Acacia aneura* var. *aneura* and *A. aneura* var. *intermedia* formed a sparse to mid-dense overstorey with a sparse shrub layer dominated by *Eremophila forrestii* ssp. *forrestii* present. Other shrub species included *Eremophila latrobei* ssp. *latrobei*, *E. spectabilis* ssp. *brevis* and *Ptilotus obovatus*. A sparse grass layer was dominated by *Eragrostis eriopoda* with *Aristida contorta* and *Monachather paradoxus* also present at low densities.
- P5 - Mulga Low Woodland B over Mixed Open Low Scrub C over *Eragrostis eriopoda* Low Grass: Sparse overstorey was comprised of *Acacia aneura* variants (*aneura*, *intermedia* and *argentea*) over tall shrubs to low trees of *Acacia ramulosa* var. *linophylla* and *Grevillea nematophylla* ssp. *supraplana*. A very sparse shrub layer was dominated by *Sida calyxhymentia*, *Ptilotus obovatus* and *Eremophila pungens*. Other shrub species recorded included *Solanum lasiophyllum*, *Eremophila ramiflora* and *Maireana georgei*.
- P6 - Mulga Open Scrub over *Maireana triptera* Open Dwarf Scrub D over *Sclerolaena* Very Open Herbs: Areas contained a sparse to dense cover of ironstone gravel (with some quartz in the roadside plots). The very sparse (to absent) overstorey contained tall shrubs of *Acacia aneura* var. *aneura* over a very sparse low shrub layer of *Maireana triptera*.
- P7 - Mulga Thicket to Low Woodland A over *Triodia basedowii* Mid-dense Hummock Grass: *Acacia aneura* var. *aneura*, *A. aneura* var. *argentea* and *A. aneura* var. *intermedia* dominated the sparse to mid-dense upper storey. Other less common upper storey species included *Eucalyptus* sp. Mulga Rock (K.D. Hill & L.A.S. Johnson KH 2668) and *Grevillea nematophylla* ssp. *supraplana*. A very sparse shrub layer was present at some sites with species including *Eremophila forrestii* ssp. *forrestii*, *E. glabra*, *E. youngii* ssp. *youngii* and *Grevillea sarissa* recorded.
- P8 - *Senna artemisioides* ssp. *filifolia* Open Low Scrub B over *Prostanthera wilkieana* Low Heath C: The shrub species *Prostanthera wilkieana* dominated the mid-dense vegetation with *Senna artemisioides* ssp. *filifolia* providing a very sparse upper storey.
- P9 - *Melaleuca xerophila* and Mulga Low Woodland to Forest A over *Melaleuca interioris* Heath B: *Melaleuca xerophila*, *Acacia aneura* var. *argentea* and *A. aneura* var. *intermedia* dominated the sparse to mid-dense upper storey with *Melaleuca interioris* providing a mid-dense middle storey (to 1.5m in height). *Eragrostis eriopoda* and *Triodia basedowii* were present at very low densities.
- P10 - *Eucalyptus eremicola* Open Tree Mallee over Mulga Open Low Woodland B over *Eragrostis eriopoda* Very Open Low Grass: The sparse upper storey of this vegetation was dominated by the mallee species *Eucalyptus eremicola* and *Acacia aneura* var. *argentea*, *A. aneura* var. *intermedia* and *A. aneura* var. *microcarpa*. A sparse mid storey was provided by *Senna artemisioides* ssp. *filifolia* over *Ptilotus obovatus* with a very sparse under storey of *Eragrostis eriopoda*. *Triodia basedowii* was present at a low density as were the shrub species *Halganina cyanea* and *Eremophila youngii* ssp. *youngii*.
- P11 - Mulga Low Woodland B over *Senna* spp Low Scrub B over *Ptilotus obovatus* Open Dwarf Scrub C: Very sparse to sparse upper storey was provided by *Acacia aneura* var. *aneura* and *A. aneura* var. *argentea*. *Ptilotus obovatus* dominated the mid storey, ranging from mid-dense to very sparse in cover. Other shrub species present included *Scaevola spinescens*, *Senna artemisioides* ssp. *x artemisioides*, *Senna* sp. Meekatharra and *Eremophila spectabilis* ssp. *brevis*. *Eragrostis eriopoda* and *Aristida contorta* were present at low densities at some sites.
- P12 - Mulga Open Scrub to Low Woodland B over *Eragrostis eriopoda* Low Grass: This association was located on undulating plains with a very sparse to mid-dense cover of ironstone gravel. *Acacia aneura* var. *aneura* and *A. aneura* var. *intermedia* provide a very sparse to mid-dense upper storey. A very sparse shrub layer was present at some sites with species including *Scaevola spinescens*, *Ptilotus obovatus*, *Eremophila latrobei* ssp. *latrobei*, *Solanum lasiophyllum* and *Eremophila pungens* recorded. *Eragrostis eriopoda* cover ranged from mid-dense to dense.
- P13 - Mulga Low Woodland B over *Aristida contorta* Open Low Grass: *Acacia aneura* var. *aneura* and *A. aneura* var. *intermedia* provided a sparse upper storey while a mid storey was either absent or very sparse and contained *Sida calyxhymentia* and *Ptilotus obovatus*. *Aristida contorta* dominated the lower storey, ranging from very sparse to sparse in cover.

3. Sandplain

S1 - *Eucalyptus kingsmillii* ssp. *kingsmillii* Open Tree Mallee over *Triodia basedowii* Mid-dense Hummock Grass: *Eucalyptus kingsmillii* ssp. *kingsmillii* dominates the sparse upper storey with *Acacia aneura* variants also occurring in some areas as tall shrubs with a very sparse cover. The lower storey was dominated by *Triodia basedowii* (mid dense cover) with *Leptosema chambersii* also featuring at the majority of sites. Sections of this vegetation association appear to have been burnt within the last two to three years.

S2 - *Eucalyptus gongylocarpa* Open Low Woodland A over *Triodia basedowii* Mid-dense Hummock Grass: A very sparse upper storey of *Eucalyptus gongylocarpa* was present with some areas containing this species at a sparse to mid-dense cover. A sparse to very sparse mid storey of *Acacia* species, including *Acacia prairii*, *A. abrupta*, *A. kempeana* and *A. jennerae* was present across all sites. Other shrub species included *Grevillea juncifolia*, *Aluta maisonneuvei* ssp. *auriculata*, *Newxastelia hexarrhena*, *Olearia incana* and *Leptosema chambersii*. *Triodia basedowii* dominated the mid-dense lower storey.

S3 - *Eucalyptus eremicola* Open Tree Mallee over Mixed Low Scrub B over *Triodia basedowii* Mid-dense Hummock Grass: A sparse upper storey cover was provided by the mallee species *Eucalyptus eremicola*. A sparse mid storey quite distinct from other surrounding vegetation was present with species including *Hakea minima*, *Acacia* sp. (BJ143), *Aluta maisonneuvei* ssp. *auriculata*, *Halgania erecta* and *Enekbatus eremaus*. *Triodia basedowii* dominated the mid-dense lower storey. Sections of this association had been burnt within the last two to three years.

S4 - *Eucalyptus eremicola* and *Eucalyptus* sp. Mulga Rock (K.D. Hill & L.A.S. Johnson KH 2668) Open Tree Mallee over *Triodia basedowii* Mid-dense Hummock Grass. A sparse upper storey is dominated by the mallee species *Eucalyptus eremicola* and *Eucalyptus* sp. Mulga Rock (K.D. Hill & L.A.S. Johnson KH 2668) while a sparse mid storey is provided by *Acacia prairii*, *Grevillea nematophylla* ssp. *supraplana* and *Senna artemisioides* ssp. *filifolia*. *Triodia basedowii* dominates the dense lower storey.

4. Drainage lines

D1 - Mulga Low Forest A over Mixed Open Scrub to Dwarf Scrub over Mixed Open Low Grasses: This association occurred across drainage lines in the survey area and displayed a mid-dense upper storey of *Acacia aneura* var. *aneura* and *A. aneura* var. *intermedia*. Other less common *Acacia* species included *A. craspedocarpa* and *A. ramulosa* var. *linophylla*. Mid-storey shrub species varied in density and diversity across the sites with cover generally being very sparse to sparse. Dominant species included *Eremophila punctata*, *E. spectabilis* ssp. *brevis*, *E. forrestii* ssp. *forrestii*, *E. pungens* (P4) and *Sida calyxhymenia*. A very sparse to mid-dense cover of grasses was recorded with dominant species including *Eragrostis eriopoda*, *Aristida contorta*, *Eriachne pulchella* and *E. flaccida*, the latter occurring in the larger drainage lines.

5. Low Hills

H1 - Mulga Low Woodland B over *Eremophila* and *Hakea* Scrub over *Ptilotus obovatus* Open Dwarf Scrub C: This vegetation association occurred on an area of quartz along the low ridgeline/hill running north-south between the proposed pit and TSF sites at Moolart Well. A sparse cover of *Acacia aneura* var. *intermedia*, *A. aneura* var. *aneura* and *A. aneura* var. *conifera* was recorded over a sparse cover of tall shrubs of *Eremophila scoparia*, *E. oldfieldii* ssp. *angustifolia*, *Hakea preissii* and *Scaevola spinescens*. A very sparse understorey of *Ptilotus obovatus* and *Maireana georgei* was present over a very sparse cover of the grass species *Aristida contorta*, *Eriachne pulchella* and *Enneapogon caerulescens*.

H2 - Mulga Low Woodland B over Mixed Low Scrub A: The sparse over storey was dominated by *Acacia aneura* var. *aneura* and *A. aneura* var. *argentea* while tall shrub species of *Eremophila ramiflora*, *Dodonaea rigida* and *Sida calyxhymenia* provided a sparse mid storey. The Priority Flora species *Baeckea* sp. Melita Station and *Eremophila pungens* were both present at low densities.

H3 - *Senna* species Open Scrub over *Ptilotus obovatus* Low Heath C over *Enneapogon caerulescens* Low Grass: A sparse cover of *Acacia aneura* var. *aneura* and var. *argentea* was recorded over a very sparse cover of *Senna* species. A sparse lower shrub layer was dominated by *Ptilotus obovatus* with *Solanum lasiophyllum* and *Maireana georgei* also present. *Enneapogon caerulescens* cover ranged from mid-dense to sparse with other grass species present at lower densities including *Aristida contorta* and *Eragrostis dielsii*.

H4 - Mulga Open Scrub to Low Woodland B over *Eriachne mucronata* Open Low Grass to Low Grass: This association was present on low hills with a mid-dense to dense cover of ironstone gravel (and granite in some areas). A sparse over storey was provided by *Acacia aneura* var. *aneura* and *A. aneura* var. *intermedia* with *A. craspedocarpa*, *A. ramulosa* var. *linophylla* and *A. quadrimarginea* occurring in some areas. A very sparse mid storey was present with occasional shrubs of *Eremophila latrobei* ssp. *latrobei*, *E. punctata* and *Senna* sp. Meekatharra. *Baeckea* sp. Melita Station occurred in a number of sites but was not common. *Eriachne mucronata* dominated the lower storey ranging from very sparse to mid-dense in cover.

H5 - Mulga Low Woodland B over *Eremophila punctata* Low Scrub B: This association occurred on low hills with a dense cover of ironstone gravel. *Acacia aneura* var. *aneura* dominated the sparse over storey with other *Acacia* species including *A. craspedocarpa* and *A. ramulosa* var. *linophylla* also present in patches. A sparse to mid-dense shrub layer of *Eremophila punctata* was evident. Other shrub species present at lower densities included; *Eremophila latrobei* ssp. *latrobei*, *E. pungens* and *Sida excedentifolia*. The grass layer varied from a very sparse to sparse cover of *Eragrostis eriopoda*, *Eriachne mucronata* or *Aristida contorta*.

H6 - Mulga and *Acacia craspedocarpa* Scrub over *Baeckea* sp. Melita Station Low Scrub A: The defining feature of this association was the tall sparse shrub layer of *Baeckea* sp. Melita Station. Fifty plants were recorded in the plot with hundreds of plants surrounding. The population was in good health with seedlings present. A sparse over storey of tall shrubs of *Acacia aneura* var. *aneura*, *A. aneura* var. *intermedia* and *A. craspedocarpa* was present with a very sparse to absent grass layer dominated by *Neurachne minor*, *Eragrostis eriopoda* and *Eriachne mucronata*.

Erlistoun Project Application Area

For the Erlistoun project application area the majority of the survey area had previously been mapped by HGM (1999), therefore, the same vegetation association descriptions were utilised by Outback Ecology Services (2007).

1. Mixed Acacia tall shrublands in drainage lines

Association 1 - Mixed *Acacia* Low Woodland/Tall Shrubland: Moderately dense low woodland/tall shrubland was dominated by *Acacia aneura* with a mixture of *A. burkittii*, *A. craspedocarpa*, *A. tetragonophylla* and *A. victoriae*. Other tree and tall shrub species included *Hakea lorea* ssp. *lorea*, *H. preissii*, *Santalum acuminatum*, *S. spicatum*, *Eucalyptus oleosa* and *E. lucasii*. The sparse to open cover of low shrubs typically included *Atriplex vesicaria*, *Cratystylis subspinescens*, *Eremophila youngii* ssp. *youngii*, *Ptilotus obovatus*, *Rhagodia drummondii*, *Senna artemisioides* ssp. *filifolia* and *Solanum lasiophyllum*. An open cover of grasses was provided by *Eriachne flaccida* and *E. helmsii* (HGM, 1999).

2. Mixed halophytic low shrublands on depositional plains

Association 2 - *Maireana pyramidata*/*Cratystylis subspinescens* low shrubland: This association occurred on saline sands within flat areas. The sparse cover of tall shrubs was generally dominated by *Hakea preissii*, various *Acacia* species including *A. aneura* and *A. tetragonophylla*, and *Eremophila youngii* ssp. *youngii*. The open to moderately dense cover of low shrubs was dominated by *Cratystylis subspinescens* and *Maireana pyramidata* above a layer of shorter shrubs dominated by halophytic species including *Frankenia fecunda*, *F. setosa* and *Halosarcia doleiformis* (HGM, 1999).

Association 4 - Sparse *Casuarina* and *Acacia* tall shrubs over open *Lawrenzia helmsii*: Sparse trees of *Casuarina pauper* occurred above a sparse cover of tall shrubs including *Acacia burkittii*, *A. aneura* var. *aneura*, *A. oswaldii*, *A. stowardii*, *Eremophila oppositifolia* and *Grevillea acuaria*. The relatively open cover of low shrubs was dominated by *Lawrenzia helmsii*. Other low shrub species including *Atriplex amnicola*, *Maireana appressa*, *Olearia calcarea*, *Scaevola spinescens* and *Senna artemisioides* ssp. *filifolia* were also present (HGM, 1999).

Association 5 - Low mixed halophytic shrubland: This association occurred on shallow red earths. A shrub layer less than 0.5 m in height was comprised of *Roycea divaricata* with *Frankenia fecunda* and *Halosarcia doleiformis*. Occasional patches of tall shrubs included *Acacia aneura*, *A. tetragonophylla*, *Eremophila youngii* ssp. *Youngie* and *Hakea preissii* over *Cratystylis subspinescens* and *Maireana pyramidata* (HGM, 1999).

Association 6 - Low shrubland dominated by *Halosarcia*: This association occurred on shallow red earths usually with a layer of ironstone gravel on the surface. A sparse cover of tall shrubs included *Acacia aneura*, *A. tetragonophylla* and *Hakea preissii*. Patches of open tall shrubs occurred in drainage areas and included *Acacia burkittii*, *A. oswaldii* and occasional trees of *Pittosporum phylliraeoides*. *Halosarcia* species (*H. doleiformis*, *H. pergranulata* and *H. halocnemoides*) dominated the open cover of low shrubs. Other low shrubs present included species of *Atriplex* and *Frankenia*, *Maireana appressa*, *M. pyramidata*, *Ptilotus obovatus* and *Solanum lasiophyllum* (HGM, 1999).

Association 7 - Sparse Mulga/*Hakea preissii* tall shrubs over open chenopods and *Aristida contorta*: The sparse tall shrub layer was dominated by *Acacia aneura* and *Hakea preissii* and various other *Acacia* species including *A. craspedocarpa* and *A. tetragonophylla* were present at lesser densities. The sparse to open cover of low shrubs was dominated by *Maireana pyramidata* above *Maireana triptera*. Other species within this layer included *Atriplex vesicaria*, *Cratystylis subspinescens*, *Eremophila platycalyx*, *Maireana georgei*, *Ptilotus obovatus* and *Solanum lasiophyllum*. Soft grasses were sparse to moderately dense and were dominated by *Aristida contorta* and *Enneapogon caeruleus* (HGM, 1999).

3. Mulga shrublands on undulating plains

Association 8 - Open Mulga tall shrubs over mixed low *Maireana*/*Senna*/*Ptilotus obovatus* and open *Aristida contorta*: *Acacia aneura* dominated the open cover of tall shrubs with *A. burkittii*, *A. craspedocarpa*, *A. tetragonophylla*, *Eremophila oldfieldii*, *Hakea preissii*, *Rhagodia drummondii* and *Santalum acuminatum* also present. The sparse to open low shrub layer included species of *Senna* above lower shrubs of *Maireana georgei*, *M. triptera*, *Ptilotus obovatus* and *Solanum lasiophyllum*. An open cover of soft grasses was provided by *Aristida contorta* with *Enneapogon caeruleus* and *Eragrostis eriopoda* also present (HGM, 1999).

Association 9: Sparse to open *Acacia*/*Hakea preissii* tall shrubs over mixed low shrubs: This association occurred on a variety of landforms from undulating plains to low hills and rocky outcrops with a surface layer of ironstone gravel, and sometimes quartz. *Acacia aneura* dominated the sparse to open cover of tall shrubs with lesser amounts of *Hakea preissii*, *Acacia burkittii* and *A. craspedocarpa*. The open cover of low shrubs included species such as *Cratystylis subspinescens*, *Eremophila latrobei*, *E. platycalyx* and a variety of *Maireana* species (including *M. pyramidata*) in addition to *Senna* sp. *Meekatharra* (particularly on the hills) and *S. artemisioides* ssp. *filifolia*. Grasses were generally sparse and included *Aristida contorta*, *Eriachne helmsii* and *Eragrostis eriopoda* (HGM, 1999).

Association 13 - Open Mulga tall shrubs over mixed low shrubs

Clearing Description

Regis Resources Limited is proposing to clear up to 1,220 hectares of native vegetation within a 2,519 hectare boundary for the purpose of mineral production. The proposed clearing will enable the development of the Duketon Gold Project which comprises of three disjunct project areas: Moolart Well, Dogbolter and Erlistoun. Vegetation will be cleared for open pits, waste dumps, access roads, topsoil stockpiles, processing plants, accommodation camp, airstrip, borefield and other related infrastructure (Coffey Natural Systems, 2008).

Topsoil and vegetation from cleared areas will be stockpiled for use in later rehabilitation (Coffey Natural Systems, 2008).

Vegetation Condition Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994);
To

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Comment Clearing permit CPS 2799/3 was granted by the Department of Mines and Petroleum on 7 June 2012 and allowed for the clearing of 1,220 hectares of native vegetation within a 2,386 hectare permit boundary. An application to amend clearing permit CPS 2799/3 was received by the Department of Mines and Petroleum on 24 January 2013. The application requested a 133 hectare increase to the permit boundary with no increase to the permitted clearing.

The proposed increase to the boundary will allow for the construction of safer access to the site offices and tailing storage facility.

3. Assessment of application against clearing principles

Comments

Regis Resources Limited has applied to increase the permit boundary of clearing permit CPS 2799/3 by 133 hectares to 2,519 hectares.

The additional application area includes five additional known locations of the Priority 4 flora species *Eremophila pungens* (Outback Ecology, 2007). These populations contain approximately 530 individuals of this species (Outback Ecology, 2007). Outback Ecology (2007) state that the number of plants of this species is estimated to be in the thousands within the surrounding area outside of the proposed mine site disturbance footprint. Given that the proposed clearing is to improve access and there is no addition to the amount of clearing permitted, it is considered unlikely that the proposed amendment will significantly impact upon the conservation of this species.

According to available databases, there are no conservation significant flora, fauna or ecological communities within the additional area (GIS Database).

Current environmental information has been assessed and the assessment of all clearing principles is consistent with the assessment in clearing permit decision report CPS 2799/3.

Methodology

Outback Ecology (2007)
GIS Database:
- DEC Tenure
- Hydrographic Catchments - Catchments
- Hydrography, linear
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation
- Public Drinking Water Source Areas (PDWSAs)
- Rangeland Land System Mapping
- Threatened Ecological Sites Buffered
- Threatened and Priority Flora

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

There are no native title claims over the area under application (GIS Database). The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are several registered Aboriginal Sites of Significance within the application area (GIS Database). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal sites of significance are damaged through the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation and the Department of Water to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit application was advertised on 11 February 2013 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

Methodology

GIS Database:
- Aboriginal Sites of Significance

4. References

- Coffey Natural Systems (2008a) Vegetation Clearing Permit Application: Duketon Gold Project (Granted Tenements), Prepared for Regis Resources Limited, Prepared by Coffey Natural Systems, September 2008.
- Government of Western Australia (2011) 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- HGM (1999) Halpern Glick Maunsell. Rosemount Gold Project Biological Assessment Survey – Phases 1 & 2. Report for: Johnson's Well Mining NL.
- Outback Ecology Services (2007) Vegetation and Flora Survey: Moolart Well, Dogbolter and Eristoun Gold Projects, Prepared for Regis Resources Limited, Prepared by Outback Ecology Services, December 2007.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P2** **Priority Two - Poorly Known taxa:** taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
- P3** **Priority Three - Poorly Known taxa:** taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
- P4** **Priority Four – Rare taxa:** taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
- R** **Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable):** taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
- X** **Declared Rare Flora - Presumed Extinct taxa:** taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.