



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3560/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Paddington Gold Pty Ltd**

1.3. Property details

Property: Mining Lease 24/170
Local Government Area: City of Kalgoorlie - Boulder
Colloquial name: Enterprise Project

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 13 October 2011

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
<p>The vegetation of the application area is broadly mapped as Beard vegetation association:</p> <p>2901: mosaic: medium woodland; <i>Allocasuarina cristata</i> & goldfields blackbutt Shrublands; <i>Acacia quadrimarginea</i> thicket (GIS Database).</p> <p>GHD Pty Ltd (2009) conducted a flora and vegetation survey of the application area and consider the vegetation to be dominated by Eucalypt – Casuarina woodlands, interspersed with Acacia shrublands. The vegetation of the application area was classified into 10 broad vegetation types:</p> <ul style="list-style-type: none"> • Very Open Woodland; • Open Low Woodland; • Open Low Woodland 2; • Low Mixed Eucalypt Woodland; • Open Low Woodland 3; • Open Shrubland; • Low Woodland; • Woodland of <i>Casuarina pauper</i> and mixed Eucalypts; • Shrubland on Rehabilitation area; and • Cleared Degraded areas. 	<p>Paddington Gold Pty Ltd (Paddington) have applied for a purpose permit to clear up to 100 hectares of native vegetation. The proposed clearing is for the purposes of mineral production consisting of 50 hectares for pit construction, 40 hectares for waste dumps and 10 hectares for infrastructure (Paddington, 2009).</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).</p> <p>To</p> <p>Completely Degraded: no longer intact; completely/almost completely without native species (Keighery, 1994).</p>	<p>The vegetation condition was derived from a description by GHD Pty Ltd (2009). Vegetation was altered due to obvious signs of disturbance such as historic mining and exploration drilling (GHD Pty Ltd, 2009).</p> <p>Clearing permit CPS 3560/1 was granted by the Department of Mines and Petroleum on 25 March 2010 and was valid from 24 April 2010 to 24 April 2015. The clearing permit authorised the clearing of 100 hectares within an area of approximately 713 hectares. The proponent has requested an amendment to increase the area authorised to clear from 100 to 200 hectares. This is due to a design in the mine plan changing the project from an underground mine to an open pit mine. The permit boundary will remain the same.</p> <p>Given that the vegetation and habitats present within the application area are considered widespread within the Coolgardie bioregion, the additional clearing is not expected to have significant environmental impacts. However, the additional clearing is a significant increase to that which was originally approved and will result in additional impacts to ephemeral watercourses and further fragmentation of the landscape. The additional clearing can be</p>

3. Assessment of application against Clearing Principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal is not likely to be at variance to this Principle**

The application area is located within the Eastern Goldfields subregion of the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). The Eastern Goldfields subregion is characterised by Mallees, Acacia thickets and shrubheaths on sandplains (CALM, 2002). Diverse Eucalyptus woodlands occur around salt lakes, on ranges and in valleys, and salt lakes support dwarf shrublands of samphire (CALM, 2002). The area is rich in endemic Acacias (CALM, 2002).

The application area is considered to be dominated by Eucalypt – Casuarina woodlands, interspaced by Acacia shrublands. Ten broad vegetation groups were identified within the survey area (GHD Pty Ltd, 2009).

The vegetation of the application area is considered to be moderately diverse. A total of 148 flora taxa from 41 families were recorded from within the application area (GHD Pty Ltd, 2009).

One Priority Flora species was recorded during the flora and vegetation survey: *Gnephosis intonsa* (Priority 1 – Declared Rare and Priority Flora Database, Department of Environment and Conservation) (GHD Pty Ltd, 2009). This population has since been excised from the application area to ensure its preservation.

Approximately 50 individuals of the Priority 1 flora species *Gnephosis intonsa* were recorded during the flora and vegetation survey (GHD Pty Ltd, 2009). This taxon was recorded growing on colluvial flats approximately 900 metres north-east of the existing pit area (GHD Pty Ltd, 2009). Paddington Gold has agreed to avoid this population and subsequently this area was excised from the original application area.

A total of 11 weed species were recorded within the application area, comprising approximately 7% of the total number of plant species recorded within the application area (GHD Pty Ltd, 2009). This included one Declared Plant taxa listed under the *Agriculture and Related Resources Protection Act 1976*; *Carthamus lanatus* (Saffron Thistle) (GHD Pty Ltd, 2009).

A total of 29 bird species, five mammal species and three reptile species were recorded within the application area during a reconnaissance survey (GHD Pty Ltd, 2009). No threatened or significant fauna species or habitats of significance were recorded from the application area (GHD Pty Ltd, 2009).

Disturbance from mining, exploration and pastoral activities are evident across much of the application area; however, the majority of vegetation was considered to be in 'Excellent' condition to 'Very Good' condition (Keighery, 1994). The most noticeable areas of disturbance are the two previously mined open pit sites and associated operational areas. Both areas are considered to be 'Completely Degraded'. All formed roads within the application area are also considered to be 'Completely Degraded' (GHD Pty Ltd, 2009).

Based on the above, the proposed clearing is not likely to be at variance with this Principle.

Methodology CALM (2002)
GHD Pty Ltd (2009)
GIS Database:
- IBRA WA (Regions - Subregions)
- Pre-European Vegetation

(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.

Comments **Proposal is not likely to be at variance to this Principle**

GHD Pty Ltd (2009) conducted a fauna assessment of the application area in September 2009, including desktop research and reconnaissance work. No fauna trapping was undertaken (GHD Pty Ltd, 2009).

The mixed woodland over mixed shrubs habitat is considered to provide a medium level of habitat value for fauna. The vegetation has good structural diversity with medium sized Eucalypts, Mallees and a healthy understory of smaller and larger shrubs present. Such heterogeneity within the habitat provides a range of ecological niches for vertebrate and invertebrate fauna. Occasionally hollows present in the larger Salmon Gums (*Eucalyptus salmonophloia*) across the site proved good habitat for a range of fauna (GHD Pty Ltd, 2009).

The Acacia dominated shrubland is likely to support lower fauna diversity than the mixed woodland habitat. The vegetation was in 'Very Good' to 'Excellent' condition and is also considered to provide a medium level of habitat for fauna (Keighery, 1994). The dominant fauna are likely to be the highly mobile passerine bird community, particularly Thornbills. Ground dwelling reptile species are likely to be less prevalent, given the

typically sparse understory and litter layer within this habitat (GHD Pty Ltd, 2009).

The pits and cleared areas (operational areas, haul roads, roads, etc.) are highly disturbed, devoid of vegetation and offer little habitat value for fauna. The species diversity for all taxonomic groups is likely to be very limited in this habitat type (GHD Pty Ltd, 2009).

None of the fauna habitats recorded with the application area are considered to be significant. All habitats recorded are widespread within the region (GHD Pty Ltd, 2009).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GHD Pty Ltd (2009)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments Proposal is not likely to be at variance to this Principle

A search of the Department of Environment and Conservation's Rare and Priority Flora Database revealed no records of Declared Rare Flora (DRF) in proximity to the application area (GHD Pty Ltd, 2009).

GHD Pty Ltd conducted a flora and vegetation survey over the application area in September 2009 (GHD Pty Ltd, 2009). No DRF species were recorded within the application area during the flora survey (GHD Pty Ltd, 2009).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GHD Pty Ltd (2009)

(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.

Comments Proposal is not likely to be at variance to this Principle

According to available databases there are no Threatened Ecological Communities within 100 kilometres of the application area (GIS Database).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Threatened Ecological Sites Buffered

(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.

Comments Proposal is not at variance to this Principle

The application area is located within the Coolgardie Interim Biogeographic Regionalisation of Australia (IBRA) bioregion (GIS Database). Shepherd (2009) reports that approximately 98.4% of the pre-European vegetation still exists in the Coolgardie bioregion.

The vegetation in the application area is broadly mapped as Beard vegetation association:

- 2901: mosaic: medium woodland; *Allocasuarina cristata* & goldfields blackbutt Shrublands; *Acacia quadrimarginea* thicket (GIS Database).

According to Shepherd (2009) there is approximately 100% of this Beard vegetation association remaining within the Coolgardie bioregion.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA bioregion – Coolgardie	12,912,204	12,707,619	~ 98.4	Least Concern	10.87
Beard veg assoc. – State					
2901	36,012	36,012	~ 100	Least Concern	0
Beard veg assoc. – bioregion					
2901	35,470	35,470	~ 100	Least Concern	0

- * Shepherd (2009)
- ** Department of Natural Resources and Environment (2002)

Although several large scale mining operations are located within a 50 kilometre radius of the application area (GIS Database), on a broader scale the Coolgardie bioregion has not been extensively cleared. Hence the application area is not considered to represent a significant remnant of native vegetation in an area that has been extensively cleared.

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)
GHD Pty Ltd (2009)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Subregions)
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments Proposal is at variance to this Principle

According to available databases, there are no known Directory of Important Wetlands or Ramsar wetlands within the application area (GIS Database).

Other than man-made pit voids, there are no permanent watercourses or wetlands within the application area, however, the application area crosses a number of ephemeral drainage lines (GIS Database).

GHD Pty Ltd (2009) conducted a flora and vegetation survey over the application area and did not identify any riparian vegetation. However, the vegetation unit Woodland of *Casuarina pauper* and mixed Eucalyptus was associated with drainage lines within the application area (GHD, 2009).

Based on the above, the proposed clearing is at variance to this Principle.

The drainage lines present within the application area are dry for most of the year, only flowing briefly immediately following significant rainfall (GHD Pty Ltd, 2009). Vegetation, including vegetation growing in the drainage lines of the application area is typical of vegetation previously described for the Goldfields (GHD Pty Ltd, 2009). Therefore, the loss of a small percentage of vegetation associated with drainage lines is not expected to have a significant environmental impact.

Methodology GHD Pty Ltd (2009)
GIS Database:
- Hydrology, Linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal is not likely to be at variance to this Principle

The proposed clearing is for mining purposes and includes expanding an open pit, waste rock stockpile and associated infrastructure (Paddington, 2009). Therefore, most of the clearing will not be susceptible to wind erosion. To mitigate potential land degradation as a result of the proposed clearing, a staged clearing condition may be placed on the permit. This will reduce the potential for cleared areas to be left open for lengthy periods without appropriate use.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Paddington (2009)

(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.

Comments Proposal is not likely to be at variance to this Principle

There are no conservation areas within the application area (GIS Database). The nearest Department of Environment and Conservation managed land is the former pastoral lease Credo Station, which lies approximately eight kilometres west (GIS Database). Given the distance between the proposed clearing and the conservation estate, it is unlikely the proposed clearing will impact on the environmental values of this estate. Additionally, there is not expected to be an impact on the environmental values of the Clear and Muddy Waters Nature Reserve, located approximately 20 kilometres west of the application area (GIS Database).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- DEC Tenure

(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.

Comments **Proposal is not likely to be at variance to this Principle**

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).

There are no permanent watercourses or water bodies within the application area other than old mine voids. Therefore impacts to surface water would be considered unlikely. Additionally, the area receives an average rainfall of approximately 300 millimetres per year (GIS Database) and experiences a pan evaporation rate of approximately 3,600 millimetres per year resulting in little surface water flow during normal seasonal rains.

Groundwater in the application area is generally saline, with between 14,000 to 45,000 milligrams per litre of Total Dissolved Solids (GIS Database). It is unlikely the proposed clearing will result in all incremental increase in groundwater salinity.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database
- Groundwater salinity, State wide
- Hydrography, linear
- Mean Annual Rainfall Isohyets
- Public Drinking Water Source Area

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments **Proposal is not likely to be at variance to this Principle**

The proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding for the following reasons:

- low annual rainfall of approximately 300 millimetres per year (GIS Database);
- high evaporation rates of approximately 3,600 millimetres per year (GIS Database);
- gently undulating topography (GIS Database); and
- lack of standing waterbodies or watercourses (GIS Database).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Hydrography, linear
- Topographic Contours, Statewide

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

Clearing permit CPS 3560/1 was granted by the Department of Mines and Petroleum on 25 March 2010 and was valid from 24 April 2010 to 24 April 2015. The clearing permit authorised the clearing of 100 hectares within an area of approximately 713 hectares. The proponent has requested an amendment to increase the area authorised to clear from 100 to 200 hectares. This is due to a design in the mine plan changing the project from an underground mine to an open pit mine. The permit boundary will remain the same.

Given that the vegetation and habitats present within the application area are considered widespread within the Coolgardie bioregion, the additional clearing is not expected to have significant environmental impacts. However, the additional clearing is a significant increase to that which was originally approved and will result in additional impacts to ephemeral watercourses and further fragmentation of the landscape. The additional clearing can be adequately managed by the conditions imposed on the original permit.

The amendment application was advertised on 15 August 2011 by the Department of Mines and Petroleum inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the application area. This claim (WC98-027) has been registered with the National Native Title Tribunal on behalf of the claimant group. However, 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 (ie. 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*.

According to available databases there are no 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 Sites of Aboriginal 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.

Methodology

GIS Databases:

- Aboriginal Sites of Significance
- Native Title Claims

4. References

- CALM (2002) A biodiversity audit of Western Australia's 53 Biogeographical subregions in 2002. Department of Conservation and Land Management, Western Australia.
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- GHD Pty Ltd (2009) Paddington Gold Pty Ltd, Enterprise Development Activities Flora and Fauna Assessment. Unpublished report for Paddington Gold Pty Ltd.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Paddington (2009) Supporting documentation for clearing permit application CPS 3581/1.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government.
CALM	Department of Conservation and Land Management, Western Australia.
DAFWA	Department of Agriculture and Food, Western Australia.
DA	Department of Agriculture, Western Australia.
DEC	Department of Environment and Conservation
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DoE), 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, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
DoW	Department of Water
EP Act	Environment Protection Act 1986, Western Australia.
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System.
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	Rights in Water and Irrigation Act 1914, Western Australia.
s.17	Section 17 of the Environment Protection Act 1986, Western Australia.
TECs	Threatened Ecological Communities.

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.