Department of Industry and Resources

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 961/2
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **St Ives Gold Mining Company Pty Ltd**

1.3. Property details

Property: Mining lease 15/1540
Mining lease 15/1564
Mining lease 15/1565
Local Government Area: Shire Of Coolgardie

1.4. Application

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

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Beard vegetation association 936: Medium woodland; Salmon Gum. (Hopkins et al., 2001; Shepherd et al., 2001). A spring flora survey of the project area was conducted in October 2005 by Jim's Seeds, Weeds & Trees (Jim's Seeds, Weeds & Trees, 2005). The area proposed to be cleared falls within the Coolgardie Botanical District, which is broadly described as being Eucalypt woodland, becoming open towards the more calcareous soils, where a cover of saltbush-bluebush understorey is evident (Jim's Seeds, Weeds & Trees, 2005). Six vegetation units were recorded within the proposed area for clearing (Jim's Seeds, Weeds & Trees, 2005). The vegetation within four of these was considered to be in 'good' condition, whilst the vegetation condition of the other two units was described as 'degraded'. The following units comprise vegetation that is in 'good' condition: Area 1 - Open Eucalyptus woodland with a Spinifex understorey. The dominant species are *Eucalyptus griffithsii* over an understorey of *Triodia scariosa, Olearia muelleri, Eremophila caperata* and *Westringia rigida*; Area 2 - Regrowth Eucalyptus woodland dominated by *Eucalyptus griffithsii* and *E. lesouefii* over *Triodia scariosa, Senna artemisioides* subsp *filifolia*, *Eremophila caperata* and *Westringia rigida*; Area 4 - Eucalyptus woodland; dominated by *Eucalyptus griffithsii* and *E. lesouefii* over *Triodia scariosa, Scavola spinesens* and *Westringia rigida*; Area 5 - Broombush thicket dominated by *Melaleuca hamata, Allocasuarina campestris* and *Acacia acuminata* with *Eucalyptus lesouefii* and *E. salmonophloia* fringing on the south-eastern edge. Understorey comprised of *Triodia scariosa, Eragrostis dielsii, Eremophila clarkei* and *Eremophila granitica*.
Clearing Description	The proposal is for the clearing of 103 hectares of native vegetation for the expansion of the St Ives heap leach facility.
Vegetation Condition	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994). to Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994)
Comment	The vegetation surveyed and immediately surrounding the proposed heap leach expansion area has been disturbed through extensive exploration activities, mining practices and grazing pressures (Jim's Seeds, Weeds

	&Trees, 2005). A large part of the area under application was previously cleared between 1996-97 and much of the vegetation has recolonised naturally (Jim's Seeds, Weeds & Tress, 2005). The plants across this area are juvenile and representative of species from the surrounding vegetation type. There were six species of weeds identified in the survey area. The following five species were recorded in Area 6 only: Carthamus *lanatus; Centaurea melitensis; Oncosiphon suffruticosum; Sisymbrium orientale* and *Anagallis arvensis nematophylla* spp (Jim's Seeds, Weeds &Trees, 2005). The species *Solanum hystrix* was recorded in Areas 3, 4 and 6. Conditions relating to weed management have been imposed on the permit to ensure that weeds are managed effectively, and the further spread of weeds throughout the project area is avoided. Clearing permit CPS 961/1 was granted by the Department of Industry and Resources on 30 March 2006, and is valid from 29 April 2006 to 30 April 2008. The clearing permit authorised the clearing of 103 hectares of native vegetation. An application for an amendment to clearing permit CPS 961/1 was submitted by St Ives Gold Mining Company Pty Ltd on 10 April 2008. The proponent has applied for an amendment to clearing permit CPS 961/1 due to delays in project design and mining proposal application which has resulted in delaying the project schedule. The proponent has requested an extension to the expiration of clearing permit CPS 961/1 to 30 September 2008. The size of the area and clearing area boundary that was approved to clear under clearing permit CPS 961/1 remains unchanged.

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 area proposed to be cleared is largely comprised of Eucalytpus woodland, a well represented vegetation unit within the Coolgardie Botanical District of the South Western Interzone (Beard, 1990 as cited in Jim's Seeds, Weeds & Trees, 2005).

The vegetation proposed to be cleared has been previously disturbed as a result of extensive mineral exploration activity, combined with historic mining practices and grazing pressures, and as such is in a 'good to degraded' condition (Jim's Seeds, Weeds & Trees, 2005). Aerial photography shows much of the project area to be sparsely vegetated and dissected by numerous tracks, haul roads and exploration gridlines (GIS Database).

A large part of the area under application was previously cleared between 1996-97 and much of the vegetation has recolonised naturally (Jim's Seeds, Weeds & Trees, 2005). The plants across this area are juvenile and representative of species from the surrounding vegetation types.

No Declared Rare or Priority flora species are known to occur within the area under application (GIS Database), and none were recorded during the recent spring flora survey conducted in October 2005 across the heap leach expansion project area (Jim's Seeds, Weeds & Trees, 2005). It is unlikely that the biodiversity at the site of this proposal would be considered outstanding, or of a higher diversity than in the Coolgardie bioregion, the Shire of Coolgardie or the local area.

Although the vegetation units across the area under application may provide habitat for Threatened or Priority listed fauna, due to the wide distribution of these vegetation units both locally and regionally, it is unlikely that the vegetation to be cleared is significant habitat for any fauna species of conservation significance.

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

Methodology

Jim's Seeds, Weeds & Trees (2005)
GIS Databases:
- Declared Rare and Priority Flora List - CALM 01/07/05
- Lake Lefroy 1.4m Orthomosaic - DLI 02
- Pre-European Vegetation - DA 01/01

(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

According to the Department of Conservation and Land Management's (CALM) Threatened and Priority fauna database, several species listed on the Wildlife Conservation (Specially Protected Fauna) Notice 2008, or on CALM's own priority list may be present within the area under application (CALM, 2005).

Several fauna surveys have previously been conducted across areas covered by St Ives Gold Mine (SIGM) tenements (HGM, 1998; Ninox, 2004; Western Wildlife, 2006). In November 2005, Western Wildlife conducted a spring fauna survey of twenty sites, comprising nine habitat types as part of a baseline fauna study of the SIGM tenements in the Kambalda area.

The six vegetation types described within the clearing permit area by Jim's Seeds, Weeds & Trees were correlated by Jim's Seeds, Weeds & Trees with the nine fauna habitats types surveyed by Western Wildlife. Following a site visit on 16 March 2006, and discussions with Jim's Seeds, Weeds & Trees, St Ives and staff from the CALM Goldfields region, the DoIR assessor is satisfied that the habitat types surveyed by Western Wildlife in 2005 can be used to determine the likely impacts of the clearing on the fauna within the clearing permit application area.

During the fauna survey by Western Wildlife, it was generally noted that the abundance of mammals was low due to poor winter rains in 2005 (Western Wildlife, 2006).

Species of conservation significance identified by Western Wildlife as potentially occurring within the project area are: Schedule 1 (Fauna that is rare or likely to become extinct) - Chuditch (*Dasyurus geoffroii*); Malleefowl (*Leipoa occellata*), Schedule 4 (other specially protected fauna) - Peregrine Falcon (*Falco peregrinus*); Major Mitchell Cockatoo (*Cacatua leadbeteri*); Carpet Python (*Morelia spilota imbricata*, Priority 4 (Taxa in need of monitoring) - Shy Heathwren {western ssp} (*Hylacola cauta whitlocki*) and Crested Bellbird {southern} (*Oreoica gutteralis gutteralis*). It is also considered that the Rainbow Bee-eater (*Merops ornatus*), listed under the Japan Australia Migratory Bird Agreement (JAMBA) may also be found within the area proposed to be cleared.

No Chuditch were trapped or sighted during spot-lighting in the spring 2005 survey (Western Wildlife, 2006). Although the occurrence of this species is unlikely, there is a recent confirmed record of the Chuditch from the general Widgiemooltha area within the last 18 months (CALM, 2006), however, given the extensive areas of suitable habitat in the region it is unlikely that the proposed clearing will be significant to that species.

There are no CALM or WA Museum records of Malleefowl within the area under application, however, an extremely old, degraded mound was found on Delta Island during a fauna survey conducted by Ninox Wildlife Consulting in January 2004 (Ninox, 2004). Although this would possibly indicate historical Malleefowl presence within the area under application, none of the previous fauna surveys carried out across SIGM tenements have recorded this species (Western Wildlife, 2006; HGM, 1998; Ninox, 2004). If present the Malleefowl is likely to occur at a low density. Given that no mounds were located within the clearing permit area, the proposal is unlikely to impact that species locally.

The Peregrine Falcon is likely to occur within the clearing permit area and has been recorded nearby (Western Wildlife, 2006). This wide-ranging species is unlikely to be impacted upon by the scale and nature of the proposed clearing.

The Major Mitchell Cockatoo was not recorded by Western Wildlife in 2005 but is known to occur in the area (Western Wildlife, 2006). Major Mitchell's are known to use large Salmon Gum hollows for nesting. Large hollows (entrance size around 25 centimetres) suitable for Major Mitchell Cockatoos are likely to start occurring in Salmon Gum trees between 160 and 180 years of age, with most large hollows formed in trees more than 200 years old (Rose, 1993). Salmon Gums in the eastern part of their range with a diameter at breast height of more than 48 cm are estimated to be 180 years old by Rose (1993). Due to the previous cutting of trees in the goldfields for use in mines, few large old Salmon Gums remain. No Salmon Gums of that diameter or above were noticed by Jim's Seeds, Weeds & Trees during the botanical survey of the proposed clearing area (Williams pers. comm. 2006). Due to the previous clearing that has occurred within the permit application area it is unlikely that such large trees would be present. The proposed clearing is unlikely to impact on the nesting of Major Mitchell Cockatoos that may occur in the area.

During the spring 2005 survey, the Carpet Python was recorded amongst the rocks on the shore of Lake Cowan, located approximately 40 kilometres south of the area under application (Western Wildlife, 2006). Given the extensive areas of suitable habitat that exists in the region it is unlikely that the proposal will be significant to that species.

The Crested Bellbird was recorded at over half the study sites within the SIGM tenement boundary (Western Wildlife, 2006). The Crested Bellbird's favoured habitat includes the shrub-layer of Eucalypt woodlands and Acacia shrublands, and these are well represented both locally and regionally (Jim's Seeds, Weeds & Trees, 2005). Garnett & Crowley (2000) list the main threat to this species as woodland fragmentation. On both a local and regional level, the vegetation structure is largely intact and the clearing of the area under application would not constitute a fragmentation of this habitat type. Due to the widespread nature of the vegetation type it is unlikely that the proposed clearing represents a significant threat to this species.

The Shy Heathwren was not recorded in the spring survey conducted by Western Wildlife in November 2005 (Western Wildlife, 2006). The study area is on the north-eastern edge of the range of this species, and it generally uncommon and patchily distributed in this area (Johnstone & Storr as cited in Western Wildlife, 2006).This bird was not recorded in any of the previous surveys conducted over SIGM tenements (HGM, 1998; Ninox, 2004).

The Rainbow Bee-eater was recorded by Western Wildlife within a variety of habitat types across the SIGM tenements (Western Wildlife, 2006). This bird is a migratory species that moves southwards during spring to breed in southern Australia. Whilst it may utilise the habitat of the project area as a potential nesting site, the clearing of vegetation associated with this proposal will occur after its breeding season and is not likely to

impact upon this species.

It is unlikely that the proposal will lead to the clearing of habitat that is significant to species of conservation significance. CALM advises that the proposal is not likely to be at variance to this principle (CALM, 2006a).

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

Methodology

CALM (2005)
CALM (2006)
CALM (2006a)
Garnett & Crowley (2000)
HGM (1998)
Jim's Seeds, Weeds & Trees (2005)
Ninox (2004)
Rose (1993)
Western Wildlife (2006)
Jim Williams, Botanical Consultant, Jim's Seeds, Weeds & Trees (pers comm. 16/03/2006)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Lake Lefroy 1.4M Orthomosaic - DLI 02

(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

According to the available CALM datasets, no Priority or Declared Rare Flora (DRF) species are known to occur within the area under application (GIS Database).

Jim's Seeds, Weeds and Trees conducted a spring flora survey in October 2005 across the area proposed to be cleared. A search of CALM's Declared Rare and Priority flora database, as well as the Western Australian Herbarium Specimen (WAHERB) database was conducted prior to field survey, to identify rare and priority species that may exist within the project area (Jim's Seeds, Weeds & Trees, 2005). No DRF or Priority Flora species were recorded in the survey area.

Species of DRF known to occur within the Eastern Goldfields IBRA subregion are *Gastrolobium graniticum, Pityrodia scabra, Daviesia microcarpa* and *Eucalyptus platydisca* (Cowan, 2001). Previous surveys of the St Ives Gold Mine (SIGM) tenements have recorded the presence of *Pityrodia scabra*, however, these records are known from outside the area under application and this species was not identified during the recent spring survey (Jim's Seeds, Weeds & Trees, 2005). Furthermore, this species is currently under taxonomical review, as studies have suggested that the *Pityrodia scabra* previously identified on the SIGM tenements is *Pityrodia sp. Yilgarn*, a Priority 3 species (Jim's Seeds, Weeds & Trees, 2005a).

In order to manage any populations of *Pityrodia scabra* that may be present, St Ives have a DRF monitoring plan in place for this species which is carried out on an annual basis (Jim's Seeds, Weeds & Trees, 2005a). This monitoring program has been in place since 1998.

Based on the above considerations and the fact that the vegetation associations present across the survey area have both extensive local and regional coverage, it is unlikely that the vegetation proposed to be cleared is necessary for the continued in-situ existence of significant flora species.

The proposal is not likely to be at variance to this Principle.

Methodology

Cowan (2001)
Jims Seeds, Weeds & Trees (2005)
Jims Seeds, Weeds & Trees (2005a)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Declared Rare and Priority Flora List - CALM 01/07/05

(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

There have been no known Threatened Ecological Communities (TECs) identified within the area subject to be cleared (GIS Database). The nearest known TEC is approximately 80 kilometres south-east of the proposed area. Furthermore, no known TECs are listed in the Coolgardie 3 - Eastern Goldfields IBRA subregion (Cowan, 2001).

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

Methodology Cowan (2001)
GIS Databases:
- Threatened Ecological Community Database - CALM 12/4/05

(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 State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment, 2002; EPA, 2000).

While the benchmark of 15% representation in conservation reserves (JANIS Forests Criteria, 1997) has not been met for Beard vegetation association 936, approximately 96.7% of the pre-European extent remains for this association and it is therefore of 'Least Concern' for biodiversity conservation (Department of Natural Resources and Environment, 2002).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-european % in IUCN Class I-IV Reserves
IBRA Bioregion – Coolgardie	12,912,208	12,707,623	~98.4	Least Concern	9.7
Beard veg assoc. – State					
936	698,754	675,658	~96.7	Least Concern	2.1
Beard veg assoc. – Bioregion					
936	586,793	586,793	~100	Least Concern	1.2

* Shepherd et al. (2001)
** Department of Natural Resources and Environment (2002)

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

Methodology Department of Natural Resources and Environment (2002)
EPA (2000)
Hopkins et al. (2001).
JANIS Forests Criteria (1997)
Shepherd et al. (2001)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(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 not likely to be at variance to this Principle**
There are no watercourses or wetlands present within the proposed clearing area (GIS Database). Lake Lefroy is situated approximately 1 kilometre north of the application area, however, the vegetation to be cleared does not form a buffer for this lake system.

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

Methodology GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Lakes 250K - GA
- Topographic Contours, Statewide - DOLA 12/09/02
- Lake Lefroy 1.4m Orthomosaic - DLI 02

(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

According to the Department of Agriculture's unpublished Kambalda inventory survey (July 1998), the area to be cleared for the proposed heap leach pad has been mapped as Moriarty land system (DAWA, 2006). Based on the interpretation of available imagery, the Department of Agriculture advise that the loamy plain land unit is proposed to be cleared, and this land unit is described as gently inclined plains with red loamy earth soils that support eucalypt woodland with chenopod and non-halophytic understorey. In consideration of the above, the proposed clearing is not likely to be at variance with principle (g) for soil erosion (DAWA, 2006).

The St Ives Gold Mine operations are located in a semi-arid environment with an average rainfall of 248 millimetres per year (Bureau of Meteorology, 2005 as cited in URS, 2006). In contrast, the average annual pan evaporation for the project area is calculated at 2,342 millmetres (URS, 2006). Based on these figures, rainfall recharge to groundwater would likely be low across the project area. Subsequently, any clearing is unlikely to increase land salinisation, either on-site or off-site, as recharge would be minimal and saline and subsaline soils are common throughout the region (HGM, 1998). Wind roses for Kalgoorlie indicate low wind speeds which would also minimise the risk of wind erosion should the vegetation be cleared.

There were six species of weeds identified in the survey area: *Carthamus lanatus; Centaurea melitensis; Oncosiphon suffruticosum; Sisymbrium orientale; Anagallis arvensis nematophylla ssp* and *Solanum hystrix* (Jim's Seeds, Weeds &Trees, 2005). In order to minimise the risk of spreading weed species outside of the application area and to minimise the risk of introducing additional weed species into the application area, the Assessing Officer recommends should the permit be granted, that conditions be imposed on the permit for the purposes of weed management.

In consideration of the above factors and St Ives commitment to environmental management and site rehabilitation, the proposal is not likely to be at variance to this Principle.

Methodology

DAWA (2006)
HGM (1998)
Jim's Seeds, Weeds & Trees (2005)
URS (2006)
GIS Database:
- Topographic Contours, Statewide - DOLA 12/09/02
- Lake Lefroy 1.4m Orthomosaic DLI 02

(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 at variance to this Principle

The Kambalda Timber and Nature Reserves, situated alongside one another, are the nearest Department of Environment and Conservation managed conservation areas to the proposal (GIS Database). Located approximately 14 kilometres north-west of the application area, it is not considered that the vegetation within the project area would provide a significant ecological linkage to these conservation areas. Furthermore, the vegetation associations present within the area under application are also well represented within the Kambalda Timber and Nature Reserves.

Based on the separating distance between the project area and the nearest CALM managed reserves, the proposal is not at variance to this Principle.

Methodology

GIS Databases:
- Pre-European Vegetation - DA 01/01
- CALM Managed Lands and Water - CALM 1/07/05
- Lake Lefroy 1.4m Orthomosaic DLI 02

(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

There are no watercourses or wetlands within the area proposed to be cleared (GIS Database), consequently, the mining developments associated with this proposal will not have any impact upon surface water quality.

The area to be cleared does not fall within a Public Drinking Water Source Area (PDWSA) or PDWSA Protection Zone (GIS Database).

The pH of the groundwater in the existing heap leach area is mostly in the range of 5.2 to 7.3, fluctuating on roughly annual cycles, possibly in response to rainfall recharge (URS, 2006). The size of the clearing associated with this proposal is not likely to significantly increase rainfall recharge so as to impact on the pH of the groundwater. The natural salinity of the groundwater in the project area varies from about 50,000 to 320,000 milligrams per litre of Total Dissolved Solids (TDS) (URS, 2006) and is considered hypersaline. The quality of groundwater will not be impacted upon by the clearing activity.

The area of native vegetation to be cleared is unlikely to have an impact on regional groundwater levels considering the magnitude of the regional Yilgarn-Goldfields groundwater province (>296,000 square kilometres) and the extent of native vegetation remaining in the Coolgardie Bioregion, which is approximately 98.5% (Shepherd et al, 2001).

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

Methodology

Shepherd et al. (2001)
URS (2006)
GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Lakes 250K – GA
- River 250K - GA
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Groundwater Provinces - WRC 98
- Public Drinking Water Supply Areas (PDWSAs) - DOE 28/4/05
- PDWSA Protection Zones -DOE 7/1/04

(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 site of the planned heap leach site is located within a Salinaland physiographic province, characterised by extensive sheet-wash plains that shed runoff to salt lakes and broad evaporation basins (URS, 2006).

With an average annual rainfall of 248 millimetres and pan evaporation rate of 2,342 millimetres, there is little surface flow during normal seasonal rains which primarily occur during the winter months (URS, 2006). Rainfall associated with the passage of cyclonic or rain-bearing depressions (ex-cyclonic) systems from the north-west may also be experienced across the project area, however, such events are less frequent and reliable. Cyclonic rainfall events have the potential to significantly affect the hydrology of Lake Lefroy and the mining operations within it.

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

Methodology

URS (2006)
GIS Databases:
- Topographic Contours, Statewide - DOLA 12/09/02
- Hydrography, linear - DOE 01/02/04
- Lakes 250K - GA
- River 250K - GA

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

Comments

Clearing permit CPS 961/1 was granted by the Department of Industry and Resources on 30 March 2006, and is valid from 29 April 2006 to 30 April 2008. The clearing permit authorised the clearing of 103 hectares of native vegetation. An application for an amendment to clearing permit CPS 961/1 was submitted by St Ives Gold Mining Company Pty Ltd on 10 April 2008. The proponent has applied for an amendment to clearing permit CPS 961/1 due to delays in project design and mining proposal application which has resulted in delaying the project schedule. The proponent has requested an extension to the expiration of clearing permit CPS 961/1 to 30 September 2008. The size of the area and clearing area boundary that was approved to clear under clearing permit CPS 961/1 will remain unchanged.

There are two Native Title Claims over the area under application; WC98_027 and WC99_002. These claims have been registered with the National Native Title Tribunal on behalf of the Widji and Ngadju claimant groups respectively. However, the mining tenements have 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.*

There are no Aboriginal sites of significance within the area under application. 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.

The proponent has a current EP Licence (4570/9) valid until 6 October 2007 (DoE, 2005).

The proponent also holds an 'inforce' water licence (GWL62505) across Mining lease 15/1540 for the purpose of dewatering which expires on 1 April 2010 (DoE, 2005).

The proponent, St Ives Gold Mining Pty Ltd, referred the project to the Environmental Protection Authority (EPA) for assessment against the potential environmental impacts associated with the proposed heap leach facility expansion project. The level of assessment set by the EPA was 'Not assessed - Public advice given and managed under Part V of the Environmental Protection Act {Works Approval & Clearing}' (EPA, 2006).

Methodology

DoE (2005)
EPA (2006)
GIS Databases:
- Aboriginal Sites of Significance - DIA 04/07/02
- Native Title Claims - DLI 19/12/04

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Mineral Production	Mechanical Removal	103	The amended proposal is not likely to be at variance with principles (a), (b), (c), (d), (f), (g), (i) and (j) and is not at variance to Principle (e) and (h). Should the permit be granted, it is recommended that conditions be imposed on the permit for the purposes of weed management and permit reporting.

5. References

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6. 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.
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.