



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1554/3
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Western Areas NL

1.3. Property details

Property: Miscellaneous Licence L77/104
Mining Lease 77/574
Mining Lease 74/91
Miscellaneous Licence 77/141
Miscellaneous Licence 74/25
Mining Lease 74/58
Local Government Area: Shire of Kondinin
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
18.5		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	Clearing Description	Vegetation Condition	Comment
<p>The vegetation associations present within the area were mapped at a very large scale and the information interpreted to produce a dataset of Pre European vegetations associations called Beard's Vegetation Associations. According to that information 2 vegetation associations are located within the areas proposed to clear.</p> <p>Beard vegetation association 511: Medium woodland; Salmon Gum & Morrel;</p> <p>Beard Vegetation Association 519: Shrublands; mallee scrub, <i>Eucalyptus eremophila</i>; and</p> <p>Beard vegetation association 1413: Shrublands: Acacia, casuarina and melaleuca thicket.</p> <p>The vegetation of the area proposed to be cleared was surveyed in more detail by Jim Seeds and Weeds (2006) and</p>	<p>The proposed clearing if for the construction of a dewatering pipeline between the Cosmic Boy camp and the Diggers Rock open pit. The proposed clearing corridor was used historically for a freshwater supply pipeline to the Cosmic Boy Camp. Since the closure of the Camp in the late 1990's the pipeline corridor has been rehabilitated and native vegetation has begun to re-establish itself. The proposed clearing involves the clearing of regrowth approximately 5 to 6 years old currently growing within the old 6 metre wide pipeline corridor and adjacent uncleared native vegetation to form a new pipeline corridor up to 15 metres wide to the east of a gazetted road. The proposed pipeline will be buried in a trench. Once the pipeline is buried the topsoil will be pushed back on top of the trench and a small mound formed on top of the pipeline to minimise the risk of gully erosion forming as a result of subsidence along sloping</p>	<p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p> <p>To</p> <p>Pristine: pristine or nearly so, no obvious signs of disturbance. (Keighery 1994)</p>	<p>The vegetation condition within the proposed corridor has been described as disturbed with the definition of 'degraded' (Keighery 1994) given in the flora survey report (Jim's Seed Weed & Trees 2006). The adjoining vegetation is in excellent to pristine condition according to Western Areas NL (2006).</p> <p>The permit was initially advertised for 9 hectares. In view of difficulties complying with a previous permit approval for a similar pipeline the proponent requested an amendment to the application to increase the possible width of the pipeline corridor to up to 15 metres wide resulting in an application to clear up to 18.5 hectares. The Native Vegetation Assessor visited the site on the 22 and 23 of November 2006 to inspect the proposed pipeline route and inspect areas cleared for the previous pipeline approval.</p> <p>Clearing Permit CPS 1554/1 was granted to Western Areas NL on 29 December 2006, authorising the clearing of 18.5 hectares of native vegetation for the purposes of pipeline construction. On 19 February 2009 Western Areas NL were granted an amendment to Clearing Permit CPS 1554/1 to install sumps at strategic locations adjacent to the pipeline route. The sumps were a contingency plan to allow for the temporary storage of hypersaline water in the event that there was a failure of a section of the dewatering pipeline. A maximum of seven scour point sumps were to be constructed, requiring clearing of up to 700 square metres of native vegetation per sump (0.49 hectares in total). No addition was sought to the 18.5 hectares of native vegetation clearing authorised under the original permit, however the sumps were to be constructed outside of the purpose permit boundary approved under CPS 1554/1.</p> <p>The Assessing Officer noted that the flora and vegetation</p>

mapped at a scale of 1:10000.

Five vegetation communities were mapped by Jim Seeds Weeds and Trees as occurring within the proposed pipeline route (Jim Seeds Weeds and Trees 2006). Those vegetation communities were defined as: Eucalyptus woodlands, *Leptospermum erubescens* shrubland, *Eucalyptus leptophylla* shrubland, South Ironcap vegetation community and *Eucalyptus olivina* & *E calycogona* ssp *calycogona* woodland.

ground. Part of the cleared area will remain open to form an access track to allow daily inspections of the pipeline for leaks.

survey undertaken by Jim's Seeds, Weeds and Trees (2006) covered the proposed sump locations sought to clear under CPS 1554/2. No significant environmental impacts were expected as a result of the proposed amendment.

On 21 October 2009 Western Areas NL applied to change the boundary of Clearing Permit CPS 1554/2. The application sought the removal of approximately 4.8 kilometres of the northern end of the application area and 200 metres at the southern end of the application area. This was due to these areas being able to be cleared under exemptions. The remaining area has been extended in width by five metres to allow greater flexibility to stockpile soil and vegetation. The area approved to clear (18.5 hectares) will remain the same.

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 proposed clearing is located within the Western Mallee IBRA (Interim Bioregionalisation of Australia) subregion codenamed Mallee 2 (GIS database). It is also located immediately south of the Southern Cross IBRA subregion, codenamed Coolgardie 2.

An assessment of the biodiversity values of the Western Mallee IBRA subregion was given by Beecham and Danks (2001). In particular they noted the high floristic diversity of the Eucalyptus Woodlands of the subregion with a high proportion of Declared Rare Flora (DRF). Those characteristics were also noted by Jim Seeds and Weeds (2006) in the discussion of the results of the flora survey they conducted in the proposed pipeline route. Jim Seeds and Weeds stated that the flora survey revealed diverse flora that are not restricted to the project area but occurs across the region (Jim Seeds and Weeds, 2006).

The South Iron Cap vegetation community was mapped as occurring within part of the proposal. This community occurs specifically on banded ironstone and is part of the Iron Cap Hills Complexes comprised of Mt Holland, Mid, North and South Ironcap Hills and Hatters Hill. The vegetation associated with those banded ironstones has been recognised as being markedly different from other Banded ironstone formation vegetation types and is much richer in local endemic species than the vegetation of other ranges in the goldfields (Gibson 2004). Whilst not currently listed as an endorsed Threatened Ecological Community the vegetation complexes occurring on the Iron Cap Hills have been classified as ecosystems at risk in the assessment of the biodiversity values of the Coolgardie 2 IBRA subregion (Cowan et al 2001). The specific threats in relation to those vegetation types are listed as mining, changed fire regimes, feral animals (rabbit) and potentially exotic weeds (Cowan et al 2001). Gibson (2004) in a description of the flora and vegetation of the Middle, South Ironcap, Digger Rocks and Hatter Hill noted that mining and exploration has been and continues to be extremely active in the study area and rehabilitation has generally been poor.

Following a site visit on the 22 and 23 November 2006 to specifically look at this clearing permit application the DoIR Native Vegetation Assessor noted that part of the proposed pipeline route is located near the base of the South Ironcap Hill and its associated specific vegetation community. The boundary between the South Ironcap community and the surrounding Mallee woodland is not clear cut and is characterised by a mix of species belonging to both vegetation types. The proposed route is located in the ecotone between the South Ironcap community and the surrounding mallee woodlands; as such some of the plant species that are typically associated with the South Ironcap community including the Declared Rare Flora (DRF) *Banksia sphaerocarpa* var *dolichostyla* are located within or near the proposed clearing permit area. Moving the pipeline route to totally avoid the ecotone between the two vegetation communities and further away from the South Ironcap Hill would result in increased vegetation disturbance overall because the proposed route is already located within existing exploration tracks and access roads whereas a new route would not. Based on the site visit the assessor estimates that up to one hectare of mostly native vegetation regrowth within the existing historical pipeline and existing access tracks is proposed to be cleared within the South Ironcap Vegetation community and Mallee Woodland ecotone zone. It is apparent from the aerial photographs provided as well as from the site visit that the vegetation in that area has been impacted by previous exploration tracks with many gridlines visible. While the proponent have indicated that they do not intend to remove any DRF as a result of the proposal they have obtained a permit to take up to 10 *Banksia sphaerocarpa* var *dolichostyla* from the Department of Environment and Conservation.

In its advice dated 21 December 2006 the Department of Environment and Conservation stated that: given the level of previous disturbance within the pipeline corridor it is unlikely that the native vegetation represents a higher level of biodiversity than other vegetation in the local area (DEC 2006b).

It is possible that the proposed clearing activity will result in the introduction of exotic weeds which has been listed as a threatening process to the South Ironcap vegetation community by Cowan et al (2001).

Appropriate weed management procedures will have to be implemented by the proponent to minimise the risks of exotic weed introductions to the South Ironcap Community. Such procedures will have to incorporate appropriate hygiene procedures, conducting regular inspections for new weed outbreaks and committing to managing and eradicating weeds as part of the operation and subsequent closure of the pipeline.

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

Methodology Beecham and Danks (2001)
Cowan et al (2001)
DEC (2006b)
Gibson (2004)
GIS database:
Interim Bioregionalisation of Australia (subregions) EA 18/10/00
Jim Seeds Weeds and Trees (2006)

(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 may be at variance to this Principle

Fauna surveys were carried by Biota as part of environmental approvals for the Forrestania Nickel Project in February and November 2005 as well as May 2006 (Biota 2006a and 2006b). These surveys targeted a range of habitat types present in the Lake Cronin Red Book Area located approximately 16 kilometres to the north of the proposed pipeline route. Western Areas stated that the habitat types surveyed during the above fauna surveys are similar to the ones occurring within the proposed pipeline route (Western Areas 2006).

Five species of conservation significance listed on the Wildlife Conservation (Specially Protected Fauna) Notice 2005 have been recorded in previous recent fauna surveys in the area and are likely to occur within the project area. Those species are: Carnaby's Black Cockatoo *Calyptrorhynchus latirostris* (Schedule 1, fauna that is rare or is likely to become extinct), Malleefowl *Leipoa ocellata* (Schedule 1) Chuditch *Dasysercus geoffroyi* (Schedule 1), Western Rosella *Platycercus icterotis xanthogenys* (Schedule 1) and Carpet Python *Morelia spilota imbricata* (Schedule 4, other specially protected fauna)

Another four species listed on the Department of Environment and Conservation (DEC) own priority fauna list are also likely to be present within the project area. Those priority listed species are: Western Brush Wallaby *Macropus irma* (Priority 4), White Browed Babbler *Pomatostomus superciliosus ashbyi* (Priority 4), Crested Bellbird *Oreoica gutturalis* (Priority 4) and Shy Groundwren *Hylacola cauta whitlocki* (Priority 4).

Nineteen Salmon Gums *Eucalyptus salmonophloia* which are known to produce hollows that can be used by Carnaby's Black Cockatoo were recorded as occurring along the proposed pipeline route. Such trees can also provide hollows that forms significant habitat to other fauna in the area. The proponent has indicated that none of those trees will be removed during the pipeline construction (Western Areas 2006).

A Malleefowl was sighted near the proposed clearing area by the Native Vegetation Assessor on 22 November 2006 and a recently active mound was recorded by Biota (2006b) near an injection bore subject of another Western Areas Clearing Permit Application about 10 kilometres to the north. No active mounds were recorded by the botanical consultants along the proposed clearing area. It is unlikely that the nature of the clearing would be detrimental to that species in the area given the linear nature of the disturbance created. Negative impacts are more likely to result from increased traffic along access roads and increased risk of fires from the proposed mining operations than from the clearing of native vegetation itself.

Based on the nature of the proposal, known habitat preferences and known threats to the species listed above it is unlikely that the proposed clearing of a narrow strip of previously disturbed native vegetation within a relatively intact surrounding environment could be considered significant habitat to those species.

DEC in its advice, dated 21 December 2006 stated that: the proposal may be at variance to this principle because it may result in the removal of Salmon Gums *Eucalyptus salmonophloia* which above a certain size and age may provide significant habitat to Carnaby's Black Cockatoo and other fauna in the area (DEC 2006b). Rose (1993) has noted that significant hollows are more likely to occur in that tree species in the eastern part of its range once the trees exceed 40 to 50 centimetres in diameter at breast height (equivalent to an age of 130 to 150 years). Whilst the assessor notes that the proponent has given a written commitment to avoid clearing those trees such a commitment may not be practical given the size of the machinery operated and the difficulty in creating sharp bends in a substantial pipeline.

A permit condition has been set to ensure that Salmon Gums larger than a diameter at breast height equal to or larger than 40 centimetres at breast height are marked with flagging tape within the proposed clearing areas and avoided where possible.

Based on the above, the proposal may be at variance to this principle.

Methodology Biota (2006a)
Biota (2006b)
DEC (2006b)
Rose (1993)
Western Areas (2006)

(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 flora survey of the proposed pipeline corridor on the eastern side of the existing haul road was conducted by Jim Seeds Weeds and Trees on the 8- 10 May 2006 (Jim Seeds Weeds and Trees 2006). The botanical survey covered a width of 30 metres which covers the maximum width of the proposed clearing area (up to 15 metres). Priority flora and Declared Rare Flora (DRF) located on the western side of the haul road was also noted. Following that initial survey a subsequent flora survey of a small diversion to avoid an area rich in Priority and Declared Rare Flora (DRF) was carried out on the 7 June 2006 (Jim Seeds Weeds and Trees 2006). The diversion at the southern end of the proposed clearing area follows an existing historic track. Flora 15 metres either side of that track was surveyed. Whilst the surveys were not carried out in spring the consultant stated that early summer rains in January, March and April 2006 resulted in significant rainfall. The consultant estimated that 95% of the flora species in the surveyed area were recorded.

As a result of both surveys conducted in May and June 2006 ten specimens of the DRF species *Banksia sphaerocarpa* var *dolichostyla* DRF were located within 50 metres of the proposed pipeline route. Jim Seeds Weeds and Trees (2006) states that based on existing DEC records approximately 900 specimens of *Banksia sphaerocarpa* var *dolichostyla* are present around the South Ironcap Hill in the vicinity of this proposal. The proposed clearing is not expected to result in the removal of those specimens as they are all located at least 10 metres from the edge of the road (Western Areas 2006). To avoid being in breach of the *Wildlife Conservation Act 1950* in case of inadvertent damage to those plants the proponent applied for a Permit to take ten specimen of *Banksia sphaerocarpa* var *dolichostyla* (Western Areas 2006).

An application to take Declared Rare Flora (up to ten *Banksia sphaerocarpa* var *dolichostyla* and an indeterminate number of juvenile *Eucalyptus steedmanii*) was lodged with the Department of Conservation and Land Management by Western Areas in July 2006. The request was granted in the form of a Permit to take Declared Rare Flora on the 11 September 2006 (DEC 2006a). The permit is subject to 12 conditions including reporting and monitoring conditions.

Four priority species were located during the flora surveys conducted by Jim Seeds Weeds and Trees (2006).

This clearing is expected to result in the removal of:

169 *Stenanthemum liberum* individual plants (Priority One),

75 *Acacia singula* individual plants (Priority Three),

100 *Banksia viscida* individual plants (Priority three) and

164 *Grevillea insignis* ssp *elliottii* individual plants (Priority Three). No specimens were located outside of the proposed pipeline corridor during the flora surveys conducted for this project.

The former Department of Conservation and Land Management (now DEC) in a letter dated 18 July 2006 have stated that they have no objections to the removal of the priority flora species listed above, and have also suggested that a flora survey of the disturbed areas be conducted at 2 and 5 years post disturbance to identify the response of the priority flora species present in the area (CALM 2006). DEC advice received on December 21 2006 in relation to this principle stated that: BCS in consultation with the DEC Yilgarn district and Species and Communities Branch has reviewed the amended information and has no objection to the removal of the priority species presented in the correspondence from the proponent in November 2006 (DEC 2006b).

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

Methodology CALM (2006)
DEC (2006a)
DEC (2006b)
Jim Seeds Weeds and Trees (2006)
Western Areas (2006)

(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**

No known Threatened Ecological Communities (TEC) are located in the proposed pipeline corridor route (GIS Database).

Five vegetation communities were mapped by Jim Seeds Weeds and Trees in May 2006 as occurring within the proposed pipeline route (Jim Seeds Weeds and Trees 2006). Those vegetation communities were defined as: Eucalyptus woodlands, *Leptospermum erubescens* shrubland, *Eucalyptus leptophylla* shrubland, South

Ironcap vegetation community and *Eucalyptus olivina* & *E calycogona* ssp *calycogona* woodland. Of those five communities the South Ironcap vegetation community has been recognised by Cowan et al (2001) as being an ecosystem at risk. The potential threats to that ecosystem, which does not have the legal protection that applies to endorsed TEC's, have been discussed in principle a.

Following a site visit by the Native Vegetation Assessor on the 22 and 23 November 2006 it appears that the proposal is going to impact vegetation located at the boundary of the South Ironcap Hill vegetation community and the surrounding Mallee Woodland community. The proposal is located downhill from the South Ironcap Hill and potential detrimental impacts due to soil erosion on the vegetation community associated with that feature are unlikely as a result. It is unlikely that the proposal would result in the introduction of Jarrah Dieback *Phytophthora cinnamoni* to the South Ironcap community or surrounding native vegetation because there are no records of dieback affected areas of less than 400 mm annual rainfall (Dieback Working Group 2000). The mean annual rainfall at Hyden is approximately 330mm per year (Western areas 2006).

In its advice, dated 21 December 2006, in relation to this principle the DEC stated: the proposed clearing is in close proximity to several occurrences of Forrestania Priority Ecological Communities South Iron Cap and Forrestania greenstone belt. The vegetation complexes of the Greenstone/banded ironstone ranges of the Goldfields are subject to threats associated with iron ore mining. These communities are not listed under the *Commonwealth EPBC Act 1999* and do not have any status as a threatened ecological community. While the community is of very high conservation significance, the clearing proposed is of a linear nature, within a previously disturbed corridor and is likely to have a minimal impact on the community. In view of this, the proposal is not likely to be at variance to this Principle (DEC 2006b).

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

Methodology Cowan et al. (2001)
DEC (2006b)
Dieback Working Group (2000)
GIS Database:
Threatened Ecological Communities CALM 12/04/05
Jim Seeds Weeds and Trees (2006)

(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 likely to be at variance to this Principle

The application area falls within the Mallee Interim Biogeographic Regionalisation of Australia (IBRA) bioregion within which approximately 54.63% of the Pre-European vegetation remains (see table) (GIS Database; Shepherd, 2007).

The vegetation of the application area has been mapped as:

- Beard Vegetation Association 511: Medium woodland; Salmon Gum & Morrel;
- Beard Vegetation Association 519: Shrublands; mallee scrub, *Eucalyptus eremophila*; and
- Beard vegetation association 1413: Shrublands: Acacia, casuarina and melaleuca thicket.

According to Shepherd (2007) all Beard Vegetation Associations have greater than 50% remaining at state level and 519 and 1413 have greater than 50% remaining at a bioregional level. Beard Vegetation Association 511 has 33.5% remaining at a bioregional level (Shepherd, 2007). This is classified as being depleted (Department of Natural Resources and Environment, 2002).

Whilst a large percentage of the vegetation types within the Mallee bioregion are adequately protected within conservation reserves, the bioregion has had large areas cleared (see table). Beard Vegetation Association 511 has been classified as being 'depleted', however, it appears to adequately protected within conservation reserves and the proposed clearing will only impact a small amount (less than 1 hectare) (GIS Database).

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves (and post clearing %)*
IBRA Bioregion – Mallee	7,395,897	4,040,546	54.63	Least Concern	17.97 (31.22)
Beard veg assoc. – State					
511	700,410	494,148	70.6	Least Concern	14.1 (18.8)
519	2,333,414	1,399,943	60	Least Concern	10.5 (17.2)
1413	1,679,917	1,247,101	74.2	Least Concern	11.4 (15.3)
Beard veg assoc. – Bioregion					
511	139,594	46,825	33.5	Depleted	10.5 (19.3)
519	2,100,314	1,210,402	57.6	Least Concern	10.8 (18.5)
1413	42,068	40,299	95.8	Least Concern	4.7 (4.9)

* Shepherd (2007)

** Department of Natural Resources and Environment (2002)

Options to select from: Bioregional Conservation Status of Ecological Vegetation Classes (Department of Natural Resources and Environment 2002)

Presumed extinct Probably no longer present in the bioregion

Endangered* <10% of pre-European extent remains

Vulnerable* 10-30% of pre-European extent exists

Depleted* >30% and up to 50% of pre-European extent exists

Least concern >50% pre-European extent exists and subject to little or no degradation over a majority of this area

* or a combination of depletion, loss of quality, current threats and rarity gives a comparable status

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2007)
GIS Database
- Interim Biogeographic Regionalisation of Australia
- 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 not likely to be at variance to this Principle

The flora survey of the area proposed to be cleared conducted in May 2006 stated that no vegetation associated with riparian systems was located within the clearing permit application (Jim Seeds Weeds and Trees 2006). The closest non perennial drainage line is located approximately 350 metres west of the proposed clearing (GIS Database).

Based on the lack of riparian vegetation in the project area, the distance from the nearest creekline and the scale of the proposal it is unlikely that the proposed clearing will result in clearing of riparian vegetation or affect the water table.

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

Methodology GIS Database:
Hydrography Linear DoE 1/2/04
Jim Seeds Weeds and Trees 2006

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

Comments Proposal may be at variance to this Principle

The area is characterised by low gradients with the steepest gradient along the proposed pipeline route being estimated at approximately 2% (Western Areas NL 2006).

The area is characterised by relatively low rainfall with the mean annual rainfall at Hyden 80 kilometres to the west being 336 millimetres (Gibson 2004) and high evaporation rates (GIS database).

The proposal is not located within areas that are typically associated with acid sulphate soil issues nor is water

logging likely to increase as a result of the proposed clearing. The relatively small amount of clearing in an area that has not been extensively cleared is unlikely to result in increased salinisation on or off site.

Advice received from the Department of Agriculture and Food Western Australia (DAFWA) stated that: apart from relatively small areas of heath vegetation, the soils along the pipeline corridor are predominantly sandy duplex soils that support a range of Eucalypt species. These soils are vulnerable to soil erosion where surface run off is concentrated, slope length is long and grades exceed several percent. These conditions are only likely to be encountered at the southern end of the proposed pipeline corridor. Therefore the proposed pipeline and service track in this corridor ought to incorporate short bunds and or cut off drains to minimise the soil erosion risk. DAFWA concluded that the proposed clearing may be at variance with principle (g) for soil erosion (DAFWA 2006).

Based on the above, the proposal may be at variance to this principle.

Methodology DAFWA (2006)
Gibson (2004)
GIS Database:
Hydrography Linear DoE 1/2/04
Jim Seeds Weeds and Trees (2006)
Western Areas NL (2006)

(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

The Department of Environment and Conservation in its advice dated 21st December 2006 stated that: the closest conservation area to the proposed pipeline is Jackson Nature Reserve number 34523 which is approximately 10 kilometres south south-west. Due to the distance from the application area, the environmental values of the nature reserve are unlikely to be impacted by the proposal. The proposal is not likely to be at variance to this principle (DEC 2006b).

Other areas of conservation significance in the local area are the Lake Cronin Nature Reserve and the associated surrounding Environmentally Sensitive Area, listed on the Register of the National Estate for its natural values. Those areas are respectively located 25 and 16 kilometres north of the proposed clearing (GIS Database).

Based on the large distance between the Nature Reserves and the proposal it is unlikely that the proposed clearing will be detrimental to the environmental values of those areas.

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

Methodology DEC (2006b)
GIS Database:
CALM Managed Land and Waters CALM 1/7/05
Clearing Regulations ESA DoE 30/05/05

(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 proposal is not located within a Public Drinking Water Supply Area (GIS Database). The flora survey of the area proposed to be cleared stated that no vegetation associated with riparian systems was located within the clearing permit application (Jim Seeds Weeds and Trees 2006). The closest non perennial drainage line is located approximately 350 metres west of the proposed clearing (GIS Database).

Based on the lack of riparian vegetation in the project area, the distance from the nearest creekline, the scale of the proposal and intact surrounding natural vegetation it is unlikely that the proposed clearing will affect the quality of surface or underground water in the area.

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

Methodology GIS Database:
Linear Hydrography DoE 1/2/04
Public Drinking Water Source Areas (PDWSA) DoE 07/02/06
Jim Seeds Weeds and Trees (2006)

(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 flora survey of the area proposed to be cleared conducted in May 2006 stated that no vegetation associated with riparian systems was located within the clearing permit application (Jim Seeds Weeds and

Trees 2006). The closest non perennial drainage line is located approximately 350 metres west of the proposed clearing (GIS Database).
Based on the lack of riparian vegetation in the project area, the distance from the nearest creekline and the scale and nature of the proposal it is unlikely that the proposed clearing will result in an increase in flood peak or duration of watercourses nearby.

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

Methodology GIS Database:
Hydrography Linear DoE 1/2/04
Jim Seeds Weeds and Trees (2006)

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

Comments

A public submission on the clearing application was received by the Department of Industry and Resources on the 30 November 2006. The submission expressed concerns that Aboriginal sites or areas of significance may be adversely affected.

There are no registered native title claims over the area (GIS Database). There are no known Aboriginal Sites of Significance located within the clearing permit area (GIS Database). It is the proponent's responsibility to ensure compliance with the *Aboriginal Heritage Act 1975* and to ensure that no Aboriginal Sites of Significance are disturbed as a result of the clearing process.

It is the proponent's responsibility to liaise with the Department of Environment and Conservation (DEC) 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 proposal was referred to the Department of Environment and Heritage (DEH) as a potential controlled action under the *Environmental Protection Biodiversity Conservation (EPBC) Act (1999)* in July 2006 due to the potential removal of *Banksia sphaerocarpa* var. *dolichostyla* which is listed as vulnerable under the *EPBC Act 1999* (DEH 2006b). That proposal was assessed by the DEH and in a letter dated 25 July 2006 was deemed not to be a controlled action (DEH 2006a).

A permit to take rare flora under the *Wildlife Conservation Act 1950* was granted to Western Areas NL by the Department of Environment and Conservation on the 11 September 2006 (DEC 2006).

Clearing Permit CPS 1554/1 was granted to Western Areas NL on 29 December 2006, authorising the clearing of 18.5 hectares of native vegetation for the purposes of pipeline construction. On 19 February 2009 Western Areas NL were granted an amendment to Clearing Permit CPS 1554/1 to install sumps at strategic locations adjacent to the pipeline route. The sumps were a contingency plan to allow for the temporary storage of hypersaline water in the event that there was a failure of a section of the dewatering pipeline. A maximum of seven scour point sumps were to be constructed, requiring clearing of up to 700 square metres of native vegetation per sump (0.49 hectares in total). No addition was sought to the 18.5 hectares of native vegetation clearing authorised under the original permit, however the sumps were to be constructed outside of the purpose permit boundary approved under CPS 1554/1.

The Assessing Officer noted that the flora and vegetation survey undertaken by Jim's Seeds, Weeds and Trees (2006) covered the proposed sump locations sought to clear under CPS 1554/2. No significant environmental impacts were expected as a result of the proposed amendment.

On 21 October 2009 Western Areas NL applied to change the boundary of Clearing Permit CPS 1554/2. The application sought the removal of approximately 4.8 kilometres of the northern end of the application area and 200 metres at the southern end of the application area. This was due to these areas being able to be cleared under exemptions. The remaining area has been extended in width by five metres to allow greater flexibility to stockpile soil and vegetation. The area approved to clear (18.5 hectares) will remain the same.

Methodology DEC (2006)
DEH (2006b)
Jim's Seeds, Weeds and Trees (2006)
GIS Database:
Aboriginal Sites of Significance DIA.
Native Title Claims DLI 7/11/05

4. Assessor's comments

Comment

The amended proposal has been assessed against the Clearing Principles, and the proposed clearing is not likely to be at variance to Principles (a), (c), (d), (e), (f), (h), (i) and (j). The proposal may be at variance to Principle (b) and (g).

Should an amended clearing permit be granted, it is recommended that conditions be imposed on the permit for the purposes of weed management, vegetation management, surface water management, record keeping 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.
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
DoE	Department of Environment, Western Australia.
DoIR	Department of Industry and Resources, Western Australia.
DOLA	Department of Land Administration, Western Australia.
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.