



1. Application details

1.1. Permit application details

Permit application No.: 1402/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Frances & Giuseppe Lembo

1.3. Property details

Property: LOT 157 ON PLAN 28987 (House No. 71 FRENCHMAN BAY MOUNT ELPHINSTONE 6330)
Local Government Area: City Of Albany
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.6		Mechanical Removal	To facilitate tourist/residential development.

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>Sandiford (2006) -</p> <p>The vegetation has been classified as belonging to the Tornidirrup Vegetation System within the warren Sub-district of the darling Botanical District.</p> <p>Wetland vegetation: <i>Melaleuca cuticularis</i> Low Closed Woodland over <i>Samolus repens</i> Herbland and <i>Sarcocornia quinqueflora</i> (restricted to lowest lying areas in survey area) with small areas of <i>Juncus kraussii</i> Sedgeland present in between the vegetation types.</p> <p>Elsewhere on the property the vegetation has been parkland cleared. The commonly occurring trees included <i>Eucalyptus cornuta</i> and <i>Agonis flexuosa</i>. These areas were originally dominated by <i>Eucalyptus cornuta</i> Tall Open Woodland and <i>Agonis flexuosa</i> Low Open Woodland over Shrubland.</p>	<p>The purpose of the clearing is for the development of tourism or residential development in Lot 157, Frenchman Bay Road, Albany. The total area proposed to be cleared is 0.6ha of native vegetation comprising fringing estuarine vegetation. Aerial photography and the consultant's report suggests that the wetland vegetation is in very good to excellent condition (Keighery 1994, Sandiford 2006). The subject area falls within two categories of Environmentally Sensitive Areas; estuaries and wetlands, as defined in the Draft Country Sewerage Policy 2002 (Policy). The balance of the property which is not subject to the clearing application has been parkland cleared, and is considered to be in very degraded condition (Sandiford 2006). The photography also suggests that the vegetation of the wetland area under application occurs in a landscape which has been previously cleared and is fragmented, but it does connect to the coastal strip of native vegetation to the south and may act as an ecological linkage.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)</p>	<p>The intact vegetation is considered to be in very good condition to excellent condition from aerial photographs and consultants report. The parkland cleared areas are considered to be in Very Degraded condition (Albany 1m orthomosaic - DOLA Jan 01, Keighery 1994, Sandiford 2006)</p> <p>DoW (2006)</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 may be at variance to this Principle**

The proposed clearing of 0.6ha of native vegetation is to allow for the construction of a residential/tourist development. The vegetation is a remnant of a continuous strip of wetland/riparian vegetation situated along the fringes of Princess Royal Harbour, and was found to be in very good to excellent condition (Site Visit Report 2006). The remnant abuts a significant area of similar native bushland that collectively acts as a buffer and corridor along the shore of Princess Royal Harbour. Vegetation occurring at the site has been identified by the Department of Environment and Conservation as a wetland containing a saltwater paperbark vegetation community restricted to three sites around Princess Royal Harbour. 27 indigenous native species were recorded within the survey area. The understorey in the southern areas is more diverse both structurally and floristically ranging from *Samolus repens* Herbland to Open Shrubland over Open Sedgeland and Herbland (Sandiford 2006).

Aerial mapping indicates that the area under application appears to form part of an ecological linkage (from Mount Elphinstone to Princess Royal Harbour). Given this information, the proposed clearing may be at variance to this Principle.

Methodology Sandiford, E. M. (2006).
DPI/WAPC (2007).
Site Visit Report (2006).
GIS datasets:
- Albany 1m Orthomosaic - DOLA Jan 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 may be at variance to this Principle**

There are 11 recorded occurrences of fauna of conservation significance within a 2.5km radius of the area under application. The surrounding landscape has been altered by previous land clearing and urbanisation, as a result vegetation within the local area (2.5km radius) has become highly fragmented and within a 10km radius, approximately 30% of native vegetation remains.

There are 8 recorded occurrences of Quenda (*Isodon obesulus fusciventer*) in the local area, closest being 897m south east, one recording of Western Ringtail Possum (*Pseudocheirus occidentalis*), located 955m south east, one occurrence of loggerhead turtle (*Caretta caretta*), located 2.2km south east and one occurrence of a Water-Rat (*Hydromys chrysogaster*), located 2.5km from the area under application. Quenda are found in the wetter part of the south-west in a variety of habitats. They favour areas where the understorey is quite dense, particularly near watercourses and wetlands. (CALM 2003) Given that the understorey in the southern areas under application is more diverse both structurally and floristically (Sandiford 2006), and the number of quenda (8) in the local area (2.5km radius), this increases the likelihood of the area under application providing important fauna habitat.

Western Ringtail Possums occur predominately near coastal areas where Peppermint trees *Agonis flexuosa* occur. They spend most of their time in the canopy, moving from one tree to another where the branches overlap (CALM 2003). Considering that the commonly occurring trees on the property include *Agonis flexuosa* (peppermint), the Western Ringtail Possums may utilise the area under application for habitat and other purposes

The Water-rat *Hydromys chrysogaster*, favour permanent fresh or brackish water bodies that flow all year (CALM 2003), containing diverse water and bank life. They live in a nest at the end of a tunnel in the waterbody, or sometimes in a hollow log. Given this information, the water-rat may utilise the area under application for feeding and habitat.

The intact wetland area under application is considered to be in very good to excellent condition (Keighery 1994, Sandiford 2006) and may represent significant habitat for fauna occurring in the local area, given the likelihood of the area supporting local fauna and that the area under application appears to form part of an ecological linkage (from Mount Elphinstone to Princess Royal Harbour) the proposed clearing may be at variance to this Principle.

Methodology Keighery, B. (1994)
SAC Bio datasets 080607
Sandiford, E.M. (2006)
CALM 2003
GIS datasets:
- Albany 1m Orthomosaic - DOLA Jan 01

(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 undertaken by Sandiford (2006) indicated that no DRF or Priority species were located or are known to occur within or near the survey site. However, a database search indicated that there are 66 recorded occurrences of 27 DRF and Priority flora species within 10km radius the area under application. The closest species known to occur to the subject area, being DRF, *Banksia verticillata*, is located 785m south west of the area under application, a Priority 3 Species, *Thysanotus isantherus*, is located 1.5km north east, and Priority 2 Species, *Degelia flabellata*, is located 1.8km north east, of the subject area. None of these three flora species are associated with wetland vegetation. However, within a 2.5km radius, there are 5 recorded occurrences of Priority 3 species *Boronia crassipes*, one recorded occurrence of Priority 3 species, *Sphenotoma parviflorum*, and 2 occurrences of *Prasophyllum paulineae*, both located 2.4km north west of the subject area. Given that these species occur on sandy, peaty soils in damp areas, and in association with *Agonis* species (CALM 2003) (commonly occurring trees on the property), they may occur in the area under application. Other species which may occur in the area under application include: Priority 2 species, *Gyrostemon thesiodes*, which occurs on consolidated coastal dunes (CALM 2003), Priority 4 species, *Adenanthos cunninghamii*, occurs on sandy soil and in association with *Agonis* species (CALM 2003) and *Isopogon uncinatus* occurs on sandy, peaty soils in damp areas (CALM 2003). There are 5 recordings of these species 2.1km south east of the area under application.

Based on the results of the Sandiford (2006) survey this proposal is not likely to be at variance to this Principle.

Methodology CALM 2003
Keighery, B. (1994).
SAC Bio datasets 080607
GIS datasets:
- Albany 1m Orthomosaic - DOLA Jan 01
- southcoast_albany_waherbshape
- Pre-European Vegetation - DA 01/01
Sandiford, E.M. (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

There are 3 known threatened ecological communities (TECs) located 8.5km NE from the subject area. These are separated from the area under application by cleared land and development, and also form a component of a different vegetation association to that of the subject land. Sandiford (2006) indicates that no TECs exist in the local area. Given this information, the proposal is not likely to be at variance to this Principle.

Methodology GIS datasets:
- Albany 1m Orthomosaic - DOLA Jan 01
- Pre-European Vegetation - DA 01/01
- SAC Bio datasets 110607
Sandiford, E.M. (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 may be at variance to this Principle

The area under application is for the purpose of residential/tourist development and is zoned tourist residential under the City of Albany Town Planning Scheme. The land use is for shop residence. The area is within Beard Vegetation Association 27 (Shepherd 2001). The extent remaining is detailed below:

	Pre-European extent (ha)	Current extent(ha)	Remaining extent(%)	Current extent Cons Res%	Status**
IBRA Bioregion-Warren: 834054**		657114 **	78.8**	56.8	Least Concern
Veg Assoc 27:	70232*	54152*	77.1*	81.6*	Least Concern
Total extent of vegetation					
Within City of Albany:	383843***	149341***	38.9***		Depleted

* Shepherd (2006)

** Department of Natural Resources and Environment (2002)

*** Shepherd (2002)

A flora survey undertaken by Sandiford (2006) indicates that the area of intact vegetation under application is a component of: *Melaleuca cuticularis* Low Closed Woodland over *Samolus repens* Herbland and *Sarcocornia quinqueflora* (restricted to lowest lying areas in survey area), with small areas of *Juncus kraussii* Sedgeland present

in between the vegetation types. No assessment has been made of the relative areas of *Sarcocornia quinqueflora* Closed hermland and *Juncus kraussii* Sedgeland. The closest comparable quantitative data for assessment of *Melaleuca cuticularis* Low Closed Woodland is Beard vegetation association 27, Low Woodland; paperbark (*Melaleuca* sp.) but may not include, *Sarcocornia quinqueflora* Closed hermland or *Juncus kraussii* Sedgeland. The area of *M. cuticularis* Closed woodland within the survey area occupies less than 20% of the current extent of this vegetation type around Princess Royal Harbour (Sandiford 2006).

Although the area under application is not within a depleted vegetation complex (77.1% remaining), there is approximately 30% vegetation remaining within a 10km radius of the area under application and therefore, the area may be considered to be within an extensively cleared area. Further, the area may have ecological linkage values and therefore, the proposed clearing may be considered a significant remnant within an extensively cleared area.

Methodology Sandiford, E.M.(2006).
Department of Natural Resources and Environment (2002).
Shepherd (2001).
Shepherd (2006).
GIS datasets:
- Pre-European Vegetation - DA 01/01
- EPA Position Paper No 2 Agriculture Region - DEP 12/00
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Cadastre for labelling - DLI
- Town Planning Scheme Zones - MFP 8/98

(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**
The area under application is a remnant of a continuous strip of wetland/riparian vegetation along the fringes of Princess Royal Harbour, considered to be in very good to excellent condition (Keighery 1994, Sandiford 2006).

Vegetation over the site has been identified by the Department of Environment and Conservation as a wetland containing a saltwater paperbark vegetation community restricted to three sites around Princess Royal Harbour (Sandiford 2006).

The site is approximately 50m north of Princess Royal Harbour and 1.2km south east of a significant stream. The remnant abuts a significant area of similar native bushland that acts as a buffer and corridor along the shore of Princess Royal Harbour (Sandiford 2006). The Department of Water has advised that the proposed clearing is within the buffer zone of Princess Royal Harbour and that the area should be protected through the creation of a foreshore reserve. The EPA policy guidelines for estuaries recommend incorporation of the fringing vegetation of the estuary, its associated wetlands and immediate dry land surrounding it within a foreshore buffer (DoW 2005).

Given this information, this proposal is considered to be at variance to this proposal.

Methodology DoW (2005)
DoW (2007)
Sandiford, E.M. (2006).
GIS datasets:
- Albany 1m Orthomosaic - DOLA Jan 01
- Hydrography, linear (hierarchy) - DOW
WAPC Refusal (2005).

(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**
Soil type of area under application is Cb41; Low-lying wet plains with swamps and lakes, some estuarine areas: chief soils are leached sands (Uc2.33), some of which have thin peaty surface horizons (Northcote et al 1960 - 1968). The presence of *Sarcocornia quinqueflora* Closed Hermland on the site is indicative of highly saline soils, (Sandiford 2006). Groundwater salinity has been identified as: 500-1000 TDS mg/L.

There is an acid-sulphate soils risk in the area under application: high - moderate risk; Risk class 1. The area is within a zone identified by the DPI as either possessing actual acid sulphate soils or potential acid sulphate soils within 3m of the surface (DPI/WAPC 2007).

Given the high risk of acid-sulphate soils, the proposal may cause appreciable land degradation.

Methodology GIS datasets:
- Soils, Statewide - DA 11/99

- Acid Sulphate Soil Risk Map, Albany-Torbay - DEC
- Hydrography, linear (hierarchy) - DOW
- Groundwater Salinity, Statewide - DOW
- Topographic Contours, Statewide - DOLA 12/09/02
- Rainfall, Mean Annual - BOM 30/09/01
- Albany 1m Orthomosaic - DOLA Jan 01

Northcote et al (1960 - 1968).
DPI/WAPC (2007).
Sandiford, E.M. (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

There are 6 DEC managed reserves within 10km radius, the closest being Gledhow Nature Reserve, Class A Reserve No 5205, located 2.6km north west and Tornidirrup National Park, Class A Reserve No 24258, located 3.24km south west of the area under application. There are 5 reserves on the Register of the National Estate, and 2 WRC Estate areas within 10km radius of the subject area, which are within different Beard Vegetation Associations to that of the subject area. These are separated by various roads, developments and cleared land, from the subject area. Due to distance and fragmentation of the landscape due to previous clearing of the surrounding land, and the relatively small size of the proposed clearing, this proposal is considered not likely to be at variance to this Principle.

Methodology GIS datasets:
 - CALM Managed Lands and Waters - CALM 1/07/05
 - WRC Estate - DOW
 - Register of National Estate - EA 28/01/03
 - Albany 1m Orthomosaic - DOLA Jan 01

(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 may be at variance to this Principle

The area under application forms part of the Princess Royal Harbour catchment and is in a Public Drinking Water Source Area: South Coast Water Reserve. It is located 50m west of Princess Royal Harbour in an acid-sulphate soils risk area: high - moderate risk; Risk class 1. The area is within a zone identified by the Department of Planning and Infrastructure (DPI) as either possessing actual acid sulphate soils or potential acid sulphate soils within 3m of the surface (DPI/WAPC 2007).

The area lies within the Racecourse Groundwater Sub-area (a proclaimed area). However, no water is currently being extracted (DoW 2007).

The Water and Rivers Commission produced a Hydrogeology report, which established that within the vicinity of the subject site, the groundwater discharge is high and the nutrient loading is one of the highest out of ten investigated around the harbour (DoW 2006). The proposal to remove native vegetation may increase nutrient levels due to increased recharge.

Given the distance to the Princess Royal Harbour from the subject area, its location within a public drinking water source area, and the high risk of acid-sulphate soils and potential for increased nutrient loading, the proposal may cause deterioration in the quality of surface water.

Methodology DoW (2006)
 DoW (2007)
 DPI/WAPC (2007).
 GIS datasets:
 - Acid Sulphate Soil Risk Map, Albany-Torbay - DEC
 - Hydrography, linear (hierarchy) - DOW
 - Public Drinking Water Source Areas (PDWSAs) - DOW

(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 may be at variance to this Principle

The area under application is in a high rainfall (900mm/year), high evaporation (1400mm/year) area, the topography is 0m AHD, and is 180m from nearest contour (10m AHD), in an area of low topographical relief. Given this information, the close proximity of Princess Royal Harbour to the area under application (50m), and bordered by a landscape that has been mostly previously cleared, the incidence and intensity of flooding in this low lying area, may be exacerbated. The proposal may be at variance to this Principle.

Methodology GIS datasets:

- Hydrography, linear (hierarchy) - DOW
- Topographic Contours, Statewide - DOLA 12/09/02
- Rainfall, Mean Annual - BOM 30/09/01
- Albany 1m Orthomosaic - DOLA Jan 01
- Pre-European Vegetation - DA 01/01

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

Comments

Western Australian Planning Commission (WAPC) has refused a subdivision application by the landowners, who have proposed a tourist/residential development on the property. The area under application has previously been refused subdivision approval, in part on the basis of:

Vegetation over the eastern extent of the site has been identified by the Department of Environment and Conservation as a wetland containing a saltwater paperbark vegetation community which is restricted to three sites around Princess Royal Harbour. The proposed subdivision will require extensive clearing of the native vegetation and filling in the wetland. This would result in unacceptable impacts on the wetland area which is in direct contravention to objectives of Statement of Planning Policy No.2 Environment and Natural Resources Policy (WAPC Refusal 2005).

Department of Water has advised that they would not support the clearing. They also advised that development, as proposed, will lead to significant loss of wetland and estuarine fringing vegetation and it is proposed that this area be protected through the creation of a foreshore reserve (DoW 2006). The subdivision as proposed also illustrates a density of development that is unacceptable without sewer or an alternative treatment unit (DoW 2007).

There is one Native Title claim over the area under application, as the property is privately owned the granting of the clearing permit is a secondary approval and does not constitute a future act under the Native Title Act 1993.

Methodology DPI/WAPC (2007)
DoW (2006)
DoW (2007)

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
To facilitate tourist/residential development.	Mechanical Removal	0.6	The assessment has demonstrated that the proposal is at variance with clearing Principle (f); may be at variance with (a),(b), (e), (g), (i) and (j) and not likely to be at variance with (c), (d) and (h).

5. References

- 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.
- Department of Planning and Infrastructure (DPI)/ Western Australia Planning Commission (WAPC) (May 2007) Planning Bulletin No 64
- Department of Water (2005) Email Regarding Princess Royal Harbour. TRIM ref: DOC27874
- Department of Water (2006) Email Regarding Princess Royal Harbour. TRIM ref: DOC27876
- Department of Water (2007) Email Regarding Princess Royal Harbour. TRIM ref: DOC27740
- E.M. Sandiford (March 2006) Vegetation and Flora Survey. Lots 156 & 157 Frenchman Bay Road, Albany. TRIM ref: CRN219742.
- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shepherd, D.P. (2006). Adapted from: Shepherd, D.P., Beeston, G.R., and 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001a) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2005).
- Western Australia Planning Commission (2005) Refusal. Free Hold (Green Title) Subdivision. Reconsideration of Decision. Application No. 129471

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)

