



1. Application details

1.1. Permit application details

Permit application No.: 1560/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: The Montessori School

1.3. Property details

Property: LOT 2 ON PLAN 7453
 Local Government Area: City Of Joondalup
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.14		Mechanical Removal	Recreation

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
Hedde Vegetation Complex - Karrakatta Complex Central and South; Open Forest and Woodland (Hedde et al. 1980)	The area under application is located within the 2ha property of The Montessori School, which is surrounded by an established residential area. The native vegetation applied to be cleared is in a degraded condition and comprises of a low level of biological diversity. The native vegetation is sparse with a few scattered Eucalyptus marginata, Xanthorrhoea preissii and Macrozamia riedlii. The understorey is dominated by weeds with few native species (Site visit 27/10/2006).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation within the area under application was determined during a site inspection (27/10/2006. TRIM ref DOC10307)
Beard Vegetation Association 998; Medium woodland, tuart and Jarrah (Shepherd et al. 2001, Hopkins et al. 2001).			

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 native vegetation applied to be cleared is located within a school ground and has been, and continues to be, subject to disturbance and extensive weed invasion.

 The native vegetation applied to be cleared comprises of a low level of biological diversity, being made up of a few scattered Eucalyptus marginata, Xanthorrhoea preissii and Macrozamia riedlii. The understorey is dominated by weeds with few native species (Site inspection 27/10/2006).
 Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Site inspection 27/10/2006 (TRIM Ref. DOC10307)
 GIS database:
 - Swan Coastal Plain North 40cm Orthomosaic - DLI 05

(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**
 The area applied to be cleared is located within a school ground and has been, and continues to be, subject to disturbance. No indigenous mammals were observed on the school site, and no hollows or significant habitat were evident during the site inspection (27/10/2006).

Given this and the degraded state and small size of the area applied to be cleared (0.14ha), the vegetation is considered not likely to be a significant habitat for fauna indigenous to Western Australia.

Methodology Site inspection 27/10/2006 (TRIM Ref. DOC10307)
GIS database:
- Swan Coastal Plain North 40cm Orthomosaic - DLI 05

(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**
There are no Declared Rare and Priority Flora recorded in the area under application. There are three populations of a Priority 4 species (*Jacksonia sericea*) within a 5km radius. The closest population is approx. 500m east of the area under application.

Jacksonia sericea was not identified during the site inspection. Given the distance to the known populations of this priority species, the clearing is considered not likely to impact on the species.

Methodology Site inspection 27/10/2006 (TRIM Ref. DOC10307)
GIS database,
- Declared Rare and Priority Flora List - CALM 01/04/05

(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 are 11 Threatened Ecological Communities (TEC) within a 5km radius of the area under application. Nine of these are endangered TEC 20a (*Banksia attenuata* woodland over species rich dense shrublands, Endangered status) located within Bush Forever sites 328, 199 and 493.

Two of the TECs are outside the Bush Forever sites. Based on the vegetation, landform and floristic community (Supergroup 4) of the area, these TECs are likely to be TEC 26a (*Melaleuca huegelii* - *Melaleuca acerosa* shrublands on Limestone ridges) which have been classified as endangered (Bush Forever Vol. 2, December 2000).

Observations made during a site inspection (27/10/2006), and comparisons made with detailed description of vegetation communities Gibson (1994), indicated that the area under application is unlikely to be representative of the TECs, based on the vegetation condition and limited diversity of species. Therefore, the vegetation under application is not likely to comprise the whole or part of, or is necessary for the maintenance of a TEC.

Further, given the distance to the known populations and degraded nature of the vegetation subject of this proposal, the clearing is considered not likely to impact on the local TECs.

Methodology Gibson (1994)
Site inspection 27/10/2006 (TRIM Ref. DOC10307)
GIS database:
- Threatened Ecological Communities, CALM 12/04/05

(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 likely to be at variance to this Principle**
The vegetation under application is a component of Beard Vegetation Association 998 (Hopkins et al. 2001) and Heddle: Karrakatta Complex Central and South (Heddle et al. 1980) of which 34.6% and 27% of Pre European extent remain respectively (Shepherd et al. 2001).

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

	Pre-European	Current extent	Remaining	Conservation**	% In
reserves/CALM	(ha)*	(ha)*	(%)*	status	managed land
IBRA Bioregions					
Swan Coastal Plain	1 498 297	626 512	41.8	Depleted	
City of Joondalup	10,332	1,605	15.5	Vulnerable	

Vegetation type:

Beard: Unit 998	39767.644	13740.487	34.6	Depleted	15.6
Heddle Karrakatta Central/South	87477	23624	27	Vulnerable	2

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

The Heddle vegetation complex associated with the area under application (Karrakatta Complex Central and South) is below the Government's biodiversity conservation target of 30% (Department of Natural Resources and Environment 2002, EPA 2000). Furthermore, the City of Joondalup has only 15.5% remaining vegetation, totalling 1650ha.

Notwithstanding, given the degraded condition of the vegetation and its relatively small size, the area applied to be cleared is not considered significant as remnant of native vegetation.

Methodology Site inspection 27/10/2006 (TRIM Ref. DOC10307)
GIS databases:
- Pre-European Vegetation - DA 01/01.
- Heddle Vegetation Complexes - DEP 21/06/95.
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
- Shepherd et al. 2001)
- Hopkins et al (2001)
- Department of Natural Resources and Environment (2002)

(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 water courses or Conservation Category Wetlands within the area under application. There are five Conservation Category Wetlands situated within 5km from the area under application. These include:

Lake Goolelal; approx. 332m east of the site, Wallubuenup Swamp (Yellagonga Regional Park); approx. 1.423km north of the site, Lake Joondalup; approx. 3.806km NNW of the site, Little Carine Swamp; approx. 4.090km SW of the site, Big Carine Swamp; approx. 4.612km SW of the site.

There is one EPP lake approx. 223m to the east of the site.

The nearest water course is the Swan River, which is approx. 15kms south of the area under application.

Given the distance to the nearest watercourse and wetlands it is considered unlikely the proposed clearing would impact on any watercourses or wetlands. Furthermore, the vegetation applied to be cleared is not growing in, or in association with, an environment associated with a watercourse or wetland.

Methodology Site inspection 27/10/2006 (TRIM Ref. DOC10307)
GIS databases:
- Geomorphic Wetlands (Mgt Categories) Swan Coastal Plain DEC
- Hydrography, Linear DoE 1/2/04 (Hyd_type)

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

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

The soils within the area under application are associated with a dune landscape with brown and siliceous sands and underlying deep aeolianite deposits. Leached sands also occur within this soil complex.

The area under application has no known risk of Acid Sulphate Soils. However, there is a high to moderate Acid Sulphate Soils risk 200m east of the area under application. Given the location of the site on a ridge, it is unlikely that ASS would be a risk within the area under application.

These soils can be prone to wind erosion. However, it is considered that the removal of 0.14ha of scattered native vegetation is unlikely to lead to appreciable land degradation on or off site. Therefore the proposed clearing is not considered likely to be at variance to this principle.

Methodology Site inspection 27/10/2006 (TRIM Ref. DOC10307)
GIS Databases:
- Soils, Statewide - DA 11/99
- Acid Sulphate Soil risk map, SCP - DOE 01/02/04

(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

Lake Joondalup Nature Reserve is located approx. 4.7km north from the area under application. Due to the small (0.14ha), fragmented nature of the area under application and surrounding established residential area, the clearing as proposed is unlikely to significantly impact upon the conservation or ecological linkage values of the conservation reserve.

The following Bush Forever sites are within a 5km radius of the area under application:
BF299 - Yellagonga Regional Park, Wanneroo/Woodvale/Kingsley; approx. 222m east of the site.
BF 39 - Shepherds Bush Reserve Kingsley; approx. 1.097km WNW of the site.
BF328 - Decourcey Way Bushland, Marangaroo; approx. 2.879km SE of the site.
BF199 - Landsdale Road Bushland, Landsdale; approx. 3.721km ESE of the site.
BF493 - Errina Road Bushland, Alexander Heights; approx. 4.848km SE of the site.

Due to the distance of the area under application to the Bush Forever sites, the proposed clearing is not likely to have impact on the environmental values of these reserves.

Methodology GIS databases:
- CALM Managed Lands and Waters, CALM 1/07/05
- Bush Forever, MfP 07/01

(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 is not likely to be at variance to this Principle

The groundwater table is located 23m below the surface.

Given the degraded nature of the vegetation the clearing is considered not likely to cause deterioration in the quality of surface or underground water. Therefore proposed clearing is not considered likely to be at variance to this principle.

Methodology Site inspection 27/10/2006 (TRIM Ref. DOC10307)
Department of Environment (2004) Perth Groundwater Atlas 2nd Edition

(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

Given that the vegetation under application comprises of a small area (0.14ha), and given the distance to major watercourses (>300m), it is not considered likely that the proposed clearing would have an impact on peak flood height or duration. It is also considered that the incidence of localised flooding is unlikely, due to the porous nature of the soils under application, the existing native vegetation on the remainder of the property and the limited extent of the proposed clearing.

The proposed clearing is therefore not considered likely to be at variance to this principle.

Methodology GIS database:
- Geomorphic Wetlands (Mgt Categories) Swan Coastal Plain - DEC

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

Comments

There are no known Aboriginal Sites of Significance within the area under application.

Lot 2 Montessori Place, Kingsley is not part of a Native Title Claim therefore the clearing as proposed does not fall under the future acts process of the Native Title Act 1993.

There is no RIWA Act Licence or EP Act Licence that will affect the area that has been applied to be cleared.

Development Approval (DA) is required for this activity. The applicant has advised the assessing officer that DA has not yet been sought from the City of Joondalup for this activity.

Methodology GIS Database:
- Aboriginal Sites of Significance - DIA
- Native Title Claims - DLA 7/11/05
- RIWI Act, Areas - WRC 05/04/02

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Recreation	Mechanical Removal	0.14	Grant	The application has been assessed and the clearing as proposed is not likely to be at variance to the clearing principles. Therefore the assessing officer recommends that the permit be granted. As Development Approval (DA) is required for the planned activity, an Approval in Principle is recommended until such time as DA is issued.

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.
- 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.
- Gibson et al. (1994). A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management.
- Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.
- Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Perth Groundwater Atlas, Second Edition, 2004.
- 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.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAWA	Department of Agriculture
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)

