



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1844/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Shire of Wyndham East Kimberley

### 1.3. Property details

Property: WATER FEATURE ( KUNUNURRA 6743)  
LOT 959 ON PLAN 31611 ( KUNUNURRA 6743)  
LOT 3000 ON PLAN 46759 ( KUNUNURRA 6743)  
LOT 3002 ON PLAN 46759 ( KUNUNURRA 6743)  
LOT 3003 ON PLAN 46759 ( KUNUNURRA 6743)  
LOT 3004 ON PLAN 46759 ( KUNUNURRA 6743)  
LOT 2371 ON PLAN 189289 ( KUNUNURRA 6743)  
UNALLOCATED CROWN LAND ( KUNUNURRA 6743)  
LOT 2466 ON PLAN 33378 ( KUNUNURRA 6743)  
LOT 668 ON PLAN 217491 ( KUNUNURRA 6743)  
PART OLD DARWIN ROAD

Colloquial name:

### 1.4. Application

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

## 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
Lake Kununurra is a man made wetland where, due to constantly maintained water levels, native aquatic vegetation has become well established.  Native aquatic vegetation types found within the waterbody of Lake Kununurra include <i>Typha domingensis</i> (cumbungi) and <i>Nymphaea</i> spp., <i>Ipomea aquatica</i> .	The proposal is for the purpose of eradicating <i>Salvinia molesta</i> within Lake Kununurra and surrounding foreshore areas. The proposed clearing will occur in small quantities over time when there is an outbreak of <i>Salvinia molesta</i> within Lake Kununurra and surrounding foreshore areas. Currently an infestation of <i>Salvinia molesta</i> is present within Lily Creek Lagoon, located within stands of <i>Typha</i> . The Shire intends on removing the <i>Typha</i> that contains <i>Salvinia</i> via mechanical means, with localised chemical methods being employed as a secondary control manner. The <i>Typha</i> will be excavated to a depth of two feet.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description of the vegetation under application was obtained from the application (DEC TRIM Ref: DOC22276).

## 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 at variance to this Principle

Lake Kununurra is a man made wetland. Native vegetation has become established in the lake as a result of stable water levels.

The lake is recognised as having a high level of biological diversity. Allowing *Salvinia* to become established in the lake would deleteriously affect the biodiversity of the wetland,.

Actions to control *Salvinia* are aimed at protecting the ecological values of the Lake Kununurra from the potentially devastating impact of a listed Weed of National Significance.

Therefore, the proposal is not at variance to this principle.

Methodology DEC (2007)

**(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 at variance to this Principle**

A desktop survey found two priority species within Lake Kununurra:

- \* Freshwater Crocodile (*Crocodylus johnstonii*)
- \* Little Bittern (*Ixobrychus minutus*)

A range of fauna species utilise the lake. The establishment and spread of *Salvinia* through the lake has the potential to destroy the habitat of fauna species with the associated loss of these species from the wetland system, including the loss of fish and other aquatic fauna assemblages.

However, the removal of 5 hectares of aquatic vegetation in a discontinuous manner from Lake Kununurra in order to control *Salvinia* will have an insignificant impact on the total habitat value of the lake.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
SAC Bio Datasets (230507):  
- Fauna

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

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

There are no known occurrences of declared rare or priority flora within Lake Kununurra.

The removal of 5 hectares of aquatic vegetation in a discontinuous manner from Lake Kununurra in order to control *Salvinia* will have an insignificant impact on endemic flora within the lake.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
SAC Bio Datasets (230507):  
- Declared Endangered Flora  
- WA Herbarium - Kimberley

**(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 at variance to this Principle**

There are no known threatened or priority ecological communities within Lake Kununurra.

The removal of 5 hectares of aquatic vegetation in a discontinuous manner from Lake Kununurra in order to control *Salvinia* will have an insignificant deleterious impact on ecological communities within the lake.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
SAC Bio Datasets (230507):  
- Threatened Ecological Communities  
- Priority Ecological Communities

**(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 and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with a current extent below 30% of the pre-European settlement extent (Department of Natural Resources and Environment, 2002).

Native aquatic vegetation has become established throughout Lake Kununurra due to the maintenance of stable water level conditions in this man made wetland. Clearing of 5 hectares of vegetation in a discontinuous manner will not significantly reduce the remaining extent of the vegetation within Lake Kununurra.

Therefore the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
GIS Database:  
- Pre-European Vegetation - DA 01/01

**(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 at variance to this Principle**

Lake Kununurra and Lake Argyle are a Ramsar listed wetland. Allowing *Salvinia* to become established and spread through the lake has the potential to affect the ecological character of the site and thus have a significant impact on the Ramsar values.

However, when considered in a local context the removal of 5 hectares of vegetation within Lake Kununurra to control *Salvinia* is unlikely to yield a negative impact on the natural values of the wetland.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
GIS Database:  
- RAMSAR, Wetlands - CALM 14/02/03

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

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

The proposed clearing will occur within the water body of Lake Kununurra. The removal of 5 hectares of aquatic vegetation in a discontinuous manner from the lake will not increase wind or water erosion, pH, water logging or salinisation.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007)

**(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**

Mirima National Park is adjacent to the Lake near the town of Kununurra. However, the park is upstream of the lake so will not be affected by any clearing activities within the lake.

Lake Kununurra is part of a Ramsar site. Packsaddle Swamp, linked to Lake Kununurra, is a proposed conservation reserve.

The establishment and spread of *Salvinia* has the potential to have a significant deleterious impact on the environmental values of the Ramsar site and the proposed Packsaddle Swamp conservation area.

However, the removal of 5 hectares of aquatic vegetation in a discontinuous manner from Lake Kununurra in order to control *Salvinia* will have a negligible impact on the Ramsar values or the proposed conservation estate.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
GIS Databases:  
- CALM Managed Lands and Waters - CALM 1/07/05  
- RAMSAR, Wetlands - CALM 14/02/03

**(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 at variance to this Principle**

The proposed clearing will occur within the water body of Lake Kununurra. The Public Drinking Water Source Area for Kununurra is located adjacent to Lake Kununurra in the north. The establishment and spread of *Salvinia* in Lake Kununurra has the potential to significantly affect water quality by de-oxygenation of the water column.

However, The removal of 5 hectares of aquatic vegetation in a discontinuous manner from Lake Kununurra in order to control *Salvinia* will not change the quality of surface or ground water. The large volume of water stored in Lake Kununurra would render any water quality changes insignificant.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
 GIS Databases:  
 - Hydrography, linear - DOE 1/2/04  
 - 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 is not at variance to this Principle**

The proposed clearing will occur within the water body of Lake Kununurra. Flood waters drain from the town and surrounding irrigation areas into Lake Kununurra and the Ord River. During flood events, the capacity of the lake and the river to divert flood waters off land is limited, due to the high level of flood waters entering the system in a short period of time.

The proposed clearing of 5 hectares in a discontinuous manner from Lake Kununurra is not likely to influence the incidence or intensity of any flooding in the lake.

Therefore, the proposal is not at variance to this principle.

**Methodology** DEC (2007);  
 GIS Database:  
 - Rainfall, Mean Annual - BOM 30/09/01  
 - Hydrography, linear - DOE 1/2/04

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

**Comments**

Much of the lake is Unallocated Crown Land for which the Department of Planning and Infrastructure (DPI) has responsibility. The Department has shown support for this work.

The Department of Water is the co-vestee of Reserve 41812, in conjunction with the Shire of Wyndham-East Kimberley, surrounding much of Lake Kununurra. The Department has shown support for this work.

Native Title has been determined for the Mirriuwung Gajerrong peoples, who have expressed support for this work.

The proposed works require a Bed and Banks permit from the Department of Water. The proponent has lodged an application with the Department.

No submissions were received for this proposal.

The area under assessment has been subject to six previous referrals to the Environmental Protection Authority. None of these referrals relate directly to the proposal. Three of these referrals relate to the Town Planning Scheme for Kununurra, however the proposal is not at variance to this scheme.

The proposed works are not listed as Prescribed Premises under the Environmental Protection Regulations 1987, therefore no licences or works approvals are required.

There are 14 sites of Aboriginal significance within the area proposed to clear. It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

**Methodology** GIS Databases:  
 - Native Title Claims - DLI  
 - Aboriginal Sites of Significance - DIA  
 - Environmental Impact Assessments

**4. Assessor's recommendations**

Purpose	Method Applied	area (ha)/ trees	Decision	Comment / recommendation
Miscellaneous	Mechanical Removal	5	<b>Grant</b>	Assessable criteria have been addressed and no objections were received. The proposal was found not at variance to all of the principles.  The Assessing Officer recommends that the permit should be granted.

## 5. References

- Department of Environment and Conservation (2007) Description of Land Clearing Application Area. (DEC TRIM Ref: DOC22931)
- 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.
- 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.
- 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)
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 DoW)

