



1. Application details

1.1. Permit application details

Permit application No.: 757/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Water Corporation

1.3. Property details

Property:

LOT 4769 ON PLAN 31407 (Lot No. 4769 HARDINGE ORANGE GROVE 6109)
 LOT 14346 ON PLAN 29948 (SAWYERS VALLEY 6074)
 LOT 515 ON PLAN 214539 (KUNUNURRA 6743)
 STATE FOREST 22 (CANNING MILLS 6111)
 LOT 48 ON PLAN 226011 (Lot No. 48 ADMIRAL BEDFORDALE 6112)
 LOT 0 ON DIAGRAM 7132 (Lot No. 0 ADMIRAL BEDFORDALE 6112)
 LOT 542 ON PLAN 123603 (Lot No. 542 ADMIRAL BEDFORDALE 6112)
 CANNING LOCATION 140 (Lot No. 140 NORTH BEDFORDALE 6112)
 LOT 618 ON PLAN 101045 (Lot No. 618 NORTH BEDFORDALE 6112)
 LOT 387 ON PLAN 101045 (Lot No. 387 SPRINGFIELD BEDFORDALE 6112)
 UNALLOCATED CROWN LAND (BEDFORDALE 6112)
 CLOSED ROAD (BEDFORDALE 6112)
 LOT 124 ON PLAN 226043 (Lot No. 124 NORTH BEDFORDALE 6112)
 UNALLOCATED CROWN LAND (KUNUNURRA 6743)
 WATER FEATURE (KUNUNURRA 6743)
 LOT 667 ON PLAN 37632 (KUNUNURRA 6743)
 LOT 28 ON PLAN 219581 (PORONGURUP 6324)
 LOT 50 ON PLAN 4670 (BEDFORDALE 6112)
 LOT 1 ON DIAGRAM 74738 (Lot No. 1 WHEATLEY COAST QUINNINUP 6258)
 LOT 187 ON PLAN 17422 (Lot No. 187 KARRI QUINNINUP 6258)
 LOT 880 ON PLAN 29638 (Lot No. 880 LAKE ARGYLE LAKE ARGYLE 6743)
 NELSON LOCATION 13542 (Lot No. 285 PUMP HILL PEMBERTON 6260)
 LOT 348 ON PLAN 254944 (ILLAWARRA 6111)
 LOT 786 ON PLAN 218527 (LAKE ARGYLE 6743)

Local Government Area: City Of Armadale & City Of Gosnells & Shire Of Kalamunda & Shire Of Manjimup & Shire Of Mundaring & Shire Of Plantagenet & Shire Of Wyndham-East Kimberley

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
		Mechanical Removal	Dam construction or maintenance
		Mechanical Removal	Dam construction or maintenance
		Mechanical Removal	Dam construction or maintenance
		Mechanical Removal	Dam construction or maintenance
		Mechanical Removal	Dam construction or maintenance
		Mechanical Removal	Dam construction or maintenance

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
Mundaring Weir Mattiske: Helena 2 (He2) Mosaic of open forest of Eucalyptus marginata subsp. thalassica-	Aerial photography shows the area to be degraded with minimal understorey.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery)	The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety. The clearing is to be done by hand-held brush-hook, axe

<p>Corymbia calophylla and woodland of Eucalyptus wandoo with some Eucalyptus accedens and Eucalyptus rudis on the deeper soils ranging to closed heaths and lithic complex on shallow soils associated with granite on steep slopes of valleys in semiarid and arid zones.</p>		1994)	or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.
<p>Quininup Dam Mattiske: Wheatley (WH1) Tall open forest of Eucalyptus diversicolor-Corymbia calophylla on slopes and tall open forest of Eucalyptus patens on valley floor in perhumid and humid zones.</p>	<p>The area to be cleared appears from aerial photography to have been cleared for the dam and associated infrastructure surrounded by native vegetation.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>Manjimup Dam Mattiske: Pemberton (PM1) Tall open forest of Eucalyptus diversicolor with mixtures of Corymbia calophylla on valley slopes and low forest of Agonis juniperina-Banksia seminuda-Callistachys lanceolata on valley floors in the perhumid zone.</p>	<p>Aerial photography shows that the vegetation under application appears to be in excellent. There has been some clearing in the area for the creation of the dam wall.</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>Pemberton Pipehead Dam Mattiske: Lefroy (LF) Tall open forest of Eucalyptus diversicolor-Corymbia calophylla on slopes and low woodland of Agonis juniperina-Callistachys lanceolata on lower slopes in hyperhumid and perhumid zones.</p>	<p>The area to be cleared appears to be in excellent condition (Aerial photography).</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>Bolganup Beard Vegetation Association 1 - Tall forest; karri (Eucalyptus diversicolour) Beard Vegetation Association 3 - Medium Forest; jarrah-marri.</p>	<p>The area under application has had been clear for the creation of the dam wall. The native vegetation surrounding appears to be in excellent condition (aerial photography).</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>Ord Dam Beard Vegetation association 812 - Grassland, high grass savanna woodland; bloodwood & woollybutt over upland tall grass & curly spinefix. Beard Vegetation Association 126 - Bare areas; freshwater lakes.</p>	<p>Ord Dam - Aerial photography shows the area to be cleared has mostly been affected by the construction of the dam wall.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>Kununurra Diversion Dam Vegetation Association 59 - Grasslands, high grass savanna sparse tree; bauhinia & coolabah over Mitchell, blue & tall upland grasses.</p>	<p>Aerial photography for the area to be cleared shows the area to be disturbed by grazing and by the construction of the dam wall. The area to the east appears to be in very good condition.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>Canning Dam</p>	<p>Aerial photography shows</p>	<p>Good: Structure</p>	<p>The clearing is for up to 1 ha for the Water Corporation to</p>

<p>Mattiske: My1 (Murray 1) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on valley slopes to woodland of fs24 Eucalyptus rudis-Melaleuca raphiophylla on the valley floors in humid and subhumid zones.</p>	<p>the area to be cleared contains several tracks and has been disturbed for the construction of the dam wall</p>	<p>significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>He1 (Helena 1) - Mosaic of open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata with some Eucalyptus rudis on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones.</p>			
<p>Churchman Brook Mattiske: My1 (Murray 1) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on valley slopes to woodland of fs24 Eucalyptus rudis-Melaleuca raphiophylla on the valley floors in humid and subhumid zones.</p>	<p>Aerial photography for shows the north section of vegetation and the southern most portion of the land to be cleared is in excellent condition. The remaining area appears to be have been modified during dam construction and for car parks and picnic areas.</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>He1 (Helena 1) - Mosaic of open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata with some Eucalyptus rudis on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones.</p>			
<p>Wungong Dam Mattiske: Murray 1 (My1) Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on valley slopes to woodland of fs24 Eucalyptus rudis-Melaleuca raphiophylla on the valley floors in humid and subhumid zones.</p>	<p>Aerial photography indicates that the area has been cleared for the dam wall and associated infrastructure. The remaining vegetation appears to have been disturbed.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>
<p>New Victoria Dam Mattiske: My1 (Murray 1) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on valley slopes to woodland of fs24 Eucalyptus rudis-</p>	<p>Aerial photography for the area under application have been disturbed for the construction and maintenance of the dam wall and associated infrastructure.</p>	<p>Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)</p>	<p>The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.</p> <p>The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.</p>

Melaleuca raphiophylla on the valley floors in humid and subhumid zones.

He1 (Helena 1) - Mosaic of open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata with some Eucalyptus rudis on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones.

Bickley Brook Dam

Mattiske: He1 (Helena 1) - Mosaic of open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata with some Eucalyptus rudis on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones.

DS (Darling Scarp) - Mosaic of open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla, with some admixtures with Eucalyptus laeliae in the north (subhumid zone), with occasional Eucalyptus marginata subsp. elegantella (mainly in subhumid zone) and Corymbia haematoxylon in the south (humid zone) on deeper soils adjacent to outcrops, woodland of Eucalyptus wandoo (subhumid and semiarid zones), low woodland of Allocasuarina huegeliana on shallow soils over granite outcrops, closed heath of Myrtaceae-Proteaceae species and lithic complex on or near granite outcrops in all climate zones.

Lower Helena Pipehead Dam

Mattiske: Helena 2 (He2) Mosaic of open forest of Eucalyptus marginata subsp. thalassica-Corymbia calophylla and woodland of Eucalyptus wandoo with some Eucalyptus accedens and Eucalyptus rudis on the deeper soils ranging to closed heaths and lithic complex on shallow soils associated with granite on steep slopes of valleys in semiarid and arid zones.

Aerial photograph shows that the proposal area has been disturbed for the creation of the dam wall and associated infrastructure.

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)

The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.

The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.

Aerial photography for the area in question shows the vegetation to be in excellent condition.

Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)

The clearing is for up to 1 ha for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.

The clearing is to be done by hand-held brush-hook, axe or possible chainsaw. Minimal disturbance is required to clear the survey lines and may vary from a single branch to an entire sapling or tree.

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments	<p>Proposal is not likely to be at variance to this Principle</p> <p>The areas to be cleared are all within Environmentally Sensitive Areas, including Ramsar Wetlands, areas on the Register of National Estate, or fringing native vegetation in the policy area as defined in the Environmental Protection (Swan and Canning Rivers) Policy 1998.</p> <p>The clearing is for up to 1 ha per site for the Water Corporation to conduct dam surveys and maintenance to reduce the risk to public safety.</p> <p>Disturbance is to be minimal as clearing is to be undertaken by hand-held brush-hook, axe or chainsaw and is to occur along survey lines. Clearing will vary from removal of a single branch to an entire sapling or tree.</p> <p>Aerial photography for each of these site shows the vegetation under assessment does not appear to have a higher diversity than the surrounding area.</p> <p>Given the minimal clearing and the proposed mechanisms for clearing the proposal is not likely to be at variance to this principle.</p>
Methodology	<p>Aerial Photographs provided by proponent. GIS datasets Pemberton 1.4m Orthomosaic - DOLA 99 Kununurra 0.4 Orthomosaic - DOLA 95/98/02 Swan Coastal Plain North 1M orthomosaic -DLI 01/04 Albany 1.4M Orthomosaic - DLI March 03</p>

(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	<p>Proposal is not likely to be at variance to this Principle</p> <p>The proposal is for clearing up to 1 ha at each of the 13 sites for dam surveys and maintenance. The areas to be cleared are relatively small and clearing is to be undertaken by hand.</p> <p>The areas under application do not appear to act as ecological linkages. All these areas to be cleared are surrounded by intact native vegetation, that is likely to have greater value for fauna habitat.</p>
Methodology	<p>Aerial Photographs provided by proponent. GIS datasets Pemberton 1.4m Orthomosaic - DOLA 99 Kununurra 0.4 Orthomosaic - DOLA 95/98/02 Swan Coastal Plain North 1M orthomosaic -DLI 01/04 Albany 1.4M Orthomosaic - DLI March 03</p>

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

Comments	<p>Proposal is not likely to be at variance to this Principle</p> <p>No Declared Rare Flora or priority species have been recorded in the areas proposed to be cleared. However, the CALM Rare and Priority Flora List (1/7/05) show the following:</p> <p>Kununurra Dam - no known DRF or priority species within 50 km of the proposed clearing.</p> <p>Ord Dam - no known DRF or priority species within 50 km of the proposed clearing.</p> <p>Canning Dam - 1 known DRF and 4 priority species within 10 km of the proposed clearing on the same vegetation type.</p> <p>Churchman Brook - 1 known DRF and 3 priority species within 10 km of the proposed clearing on the same vegetation type.</p> <p>Wungong Dam - 3 known priority species on the same vegetation type within 10 km of the proposed clearing.</p> <p>New Victoria Dam - 2 known DRF and 1 priority flora species on the same vegetation type within 10 km of the proposed clearing.</p> <p>Bickley Brook Dam - 11 known DRF and 20 priority species on the same vegetation types within 10 km of the proposed clearing.</p>
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Lower Helena Pipehead Dam - 3 known DRF and 9 priority species on the same vegetation type within 10 km of the proposed clearing.

Mundaring Weir - 3 known DRF and 11 priority species on the same vegetation type within 10 km of the proposed clearing.

Quinnup Dam - no known DRF species within 10 km of the proposed clearing.

Manjimup Dam - no known DRF or priority species within 10 km of the proposed clearing.

Pemberton Pipehead Dam - no known DRF or priority species within 10 km of the proposed clearing.

Bolganup Dam - 30 known DRF and 11 priority species on the same vegetation type within 10 km of the proposed clearing.

Given the minimal clearing and the proposed mechanisms for clearing, clearing of branches and individual plants by hand along survey lines, the proposal is not likely to be at variance to this principle.

Methodology GIS Datasets
Declared Rare and Priority Flora List - CALM 1/7/05

(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 no known TECs within the areas proposed to be cleared.

Data from CALM's TEC database show that TECs exist within the local area of the application areas. It is not likely that these TECs exist in the application areas.

Methodology GIS Databases:
Threatened Ecological Communities - CALM 12/4/05

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments **Proposal is not likely to be 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 an extent below 30% of that present pre-European Settlement (Department of Natural Resources and Environment, 2002; EPA, 2000). Vegetation complexes in this application (described below) are above the recommended minimum of 30% representation.

Kununurra Diversion Dam

Vegetation Association 59 - Grasslands, high grass savanna sparse tree; bauhinia & coolabah over Mitchell, blue & tall upland grasses (100% remaining).

Ord Dam

Beard Vegetation association 812 - Grassland, high grass savanna woodland; bloodwood & woollybutt over upland tall grass & curly spinefix (100% remaining).

Beard Vegetation Association 126 - Bare areas; freshwater lakes (92.3% remaining).

Canning Dam

Mattiske: My1 (Murray 1) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on valley slopes to woodland of fs24 Eucalyptus rudis-Melaleuca raphiophylla on the valley floors in humid and subhumid zones (85.3% remaining).

He1 (Helena 1) - Mosaic of open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata with some Eucalyptus rudis on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones (80.4% remaining).

Churchman Brook

Mattiske: My1 (Murray 1) - Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on valley slopes to woodland of fs24 Eucalyptus rudis-Melaleuca raphiophylla on the valley floors in humid and subhumid zones (85.3% remaining).

He1 (Helena 1) - Mosaic of open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata with some Eucalyptus rudis on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones (80.4% remaining).

Wungong Dam

Mattiske: Murray 1 (My1) Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Eucalyptus patens* on valley slopes to woodland of fs24 *Eucalyptus rudis*-*Melaleuca raphiophylla* on the valley floors in humid and subhumid zones (85.3% remaining).

New Victoria Dam

Mattiske: My1 (Murray 1) - Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Eucalyptus patens* on valley slopes to woodland of fs24 *Eucalyptus rudis*-*Melaleuca raphiophylla* on the valley floors in humid and subhumid zones (85.3% remaining).

He1 (Helena 1) - Mosaic of open forest of *Corymbia calophylla*-*Eucalyptus patens*-*Eucalyptus marginata* subsp. *marginata* with some *Eucalyptus rudis* on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones (80.4% remaining).

Bickley Brook Dam

Mattiske: He1 (Helena 1) - Mosaic of open forest of *Corymbia calophylla*-*Eucalyptus patens*-*Eucalyptus marginata* subsp. *marginata* with some *Eucalyptus rudis* on the deeper soils ranging to closed heath and lithic complex on shallow soils associated with granite on steep slopes of valleys in humid and subhumid zones (80.4% remaining).

DS (Darling Scarp) - Mosaic of open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*, with some admixtures with *Eucalyptus laevis* in the north (subhumid zone), with occasional *Eucalyptus marginata* subsp. *elegantella* (mainly in subhumid zone) and *Corymbia haematoxylon* in the south (humid zone) on deeper soils adjacent to outcrops, woodland of *Eucalyptus wandoo* (subhumid and semiarid zones), low woodland of *Allocasuarina huegeliana* on shallow soils over granite outcrops, closed heath of *Myrtaceae*-*Proteaceae* species and lithic complex on or near granite outcrops in all climate zones (35% remaining).

Lower Helena Pipehead Dam

Mattiske: Helena 2 (He2) Mosaic of open forest of *Eucalyptus marginata* subsp. *thalassica*-*Corymbia calophylla* and woodland of *Eucalyptus wandoo* with some *Eucalyptus accedens* and *Eucalyptus rudis* on the deeper soils ranging to closed heaths and lithic complex on shallow soils associated with granite on steep slopes of valleys in semiarid and arid zones (73.1% remaining).

Mundaring Weir

Mattiske: Helena 2 (He2) Mosaic of open forest of *Eucalyptus marginata* subsp. *thalassica*-*Corymbia calophylla* and woodland of *Eucalyptus wandoo* with some *Eucalyptus accedens* and *Eucalyptus rudis* on the deeper soils ranging to closed heaths and lithic complex on shallow soils associated with granite on steep slopes of valleys in semiarid and arid zones (73.1% remaining).

Qunininup Dam

Mattiske: Wheatley (WH1) Tall open forest of *Eucalyptus diversicolor*-*Corymbia calophylla* on slopes and tall open forest of *Eucalyptus patens* on valley floor in perhumid and humid zones (78% remaining).

Manjimup Dam

Mattiske: Pemberton (PM1) Tall open forest of *Eucalyptus diversicolor* with mixtures of *Corymbia calophylla* on valley slopes and low forest of *Agonis juniperina*-*Banksia seminuda*-*Callistachys lanceolata* on valley floors in the perhumid zone (65.6% remaining).

Pemberton Pipehead Dam

Mattiske: Lefroy (LF) Tall open forest of *Eucalyptus diversicolor*-*Corymbia calophylla* on slopes and low woodland of *Agonis juniperina*-*Callistachys lanceolata* on lower slopes in hyperhumid and perhumid zones (81.9% remaining).

Bolganup

Beard Vegetation Association 1 - Tall forest; karri (*Eucalyptus diversicolor*) (66.2% remaining).

Beard Vegetation Association 3 - Medium Forest; jarrah-marri (72.1% remaining).

Methodology

EPA (2000)
Shepherd et al. (2001)
Hopkins et al. (2001)
Department of Natural Resources and Environment (2002)
Mattiske Consulting (1998)
Mattiske (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

The proposal is for clearing at 13 locations across the State for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.

All 13 locations are associated with watercourses. The Kununrra and Ord Dams are also associated with the

Lake Argyle and Lake Kununurra which are listed as Ramsar sites.

The proposed clearing is to be minimal, along survey lines. All clearing is to be done by hand and will vary from a single branch to an entire sapling or tree being removed. Clearing in this manner is unlikely to adversely affect the watercourses and Ramsar sites associated with this proposal.

Methodology Hydrology, linear - DOE 1/2/04;
RAMSAR, Wetlands - CALM 21/10/02
Geomorphic Wetlands (Mgmt Categories) SCP - DOE 15/09/04
Rivers 250K - GA

(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 proposal is for clearing up to 1 ha at 13 sites across the State for the Water Corporation to conduct dam surveys and dam maintenance to reduce the risk to public safety.

The proposed clearing is to be done by hand along survey lines and will result in the removal of selected branches and entire saplings or trees.

The impacts of this type of clearing is minimal and is not likely to cause land degradation.

Methodology Aerial Photographs provided by proponent.
GIS datasets:
Pemberton 1.4m Orthomosaic - DOLA 99
Kununurra 0.4 Orthomosaic - DOLA 95/98/02
Swan Coastal Plain North 1M orthomosaic -DLI 01/04
Albany 1.4M Orthomosaic - DLI March 03

(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

Two of the proposed areas under application occur within CALM managed State Forest. The areas surrounding these dam walls, which are proposed to be cleared, are not considered to be conservation areas.

The majority of the proposals are surrounded by State Forest, Nature Reserves and/or National Parks. The proposed clearing is not likely to impact on these forests, reserves and parks as the clearing is within an area associated with the dam wall, is to be done by hand and there will be minimal removal of native vegetation.

Methodology GIS Database:
CALM Managed Lands and Waters - CALM 1/07/05

(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 for clearing small areas of native vegetation for the Water Corporation to conduct dam surveys and dam maintenance.

All clearing is to be undertaken by hand.

This type of clearing is not likely to degrade the water quality in the area.

Methodology

(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 proposal is for clearing small areas of native vegetation for the Water Corporation to conduct dam surveys and dam maintenance.

All clearing is to be undertaken by hand.

This type of clearing is not likely to exacerbate flooding in the areas proposed to be clear.

Methodology

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

Comments

The Water Corporation Act 1995 provides the functions of the Water Corporation in s.27 of that Act. Under s.29 the Water Corporation may do all things necessary in the performance of its function. Further, under the Water Agencies (Powers) Act 1984 (s.82 and s.83), the Water Corporation may carry out works that are intended to provide, or are related to the provision of, water services, including an incidental power to clear land (s.83(3)(b)(ii)). State Solicitor's Office advice has indicated that the exercise of its statutory powers provides an underlying entitlement for Water Corporation to clear land and therefore the grant of a clearing permit is not an future act that affects native title.

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Dam construction or maintenance	Mechanical Removal		Grant	The clearing is for less than 1ha for dam surveys and dam maintenance required to minimise risk to public safety. Clearing is to be conducted by hand. The clearing principles have been addressed and it is considered that the clearing as proposed is not likely to be at variance to any of them. Given the small area to be cleared the assessing officer recommends that the clearing permit be granted.
Dam construction or maintenance	Mechanical Removal		Grant	
Dam construction or maintenance	Mechanical Removal		Grant	
Dam construction or maintenance	Mechanical Removal		Grant	
Dam construction or maintenance	Mechanical Removal		Grant	

5. References

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6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)