



1. Application details

1.1. Permit application details

Permit application No.: 934/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Donnybrook-Balingup

1.3. Property details

Property: LOT 349 ON PLAN 116096 (BEELERUP 6239)
PRESTON AGRICULTURAL AREA LOT 392 (BEELERUP 6239)
PRESTON AGRICULTURAL AREA LOT 363 (BEELERUP 6239)
DONNYBROOK TOWNSITE LOT 489 (House No. 77 BENTLEY DONNYBROOK 6239)
ROAD RESERVE (DONNYBROOK 6239)

Local Government Area: Shire Of Donnybrook-Balingup
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
13.74		Mechanical Removal	Road construction or maintenance
2.38		Mechanical Removal	Road construction or maintenance
0.48		Mechanical Removal	Road construction or maintenance
7.3		Mechanical Removal	Extractive Industry
3		Mechanical Removal	Extractive Industry

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
Jayes Road Reserve, SLK 0.27 - 7.14 (13.74ha).	Few trees need to be removed for widening of road seal from 5.1m to 6.0m (TRIM ref DOC13624). The vegetation depicted in site photos along Jayes Road varies from Completely Degraded to Good.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Information taken from photographs of road side vegetation supplied as additional information with the application (TRIM ref DOC13624).
Beard Vegetation Association: -No. 3: Medium forest of Jarrah and Marri (Hopkins et al. 2001; Shepherd et al. 2001).			

Mattiske Vegetation Complexes:

-Balingup (BL): Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla on slopes and woodlands of Eucalyptus rudis on valley floors in the humid zone.

-Balingup (Blf): Woodlands of Eucalyptus rudis on valley floors and woodlands of Eucalyptus patens-Corymbia calophylla on foot slopes with some Eucalyptus marginata subsp. marginata on lower slopes

in the humid zone.

-Kirup (KR): Open forests to woodlands of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Banksia attenuata*-*Xylomelum occidentale* on sandy slopes in the humid zone.

-Dwellingup (D1): Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on lateritic uplands in the mainly humid and subhumid zones

(Mattiske Consulting 1998).

Hedde Vegetation Complexes:

-Balingup Complex in Medium to High Rainfall: Open forest of Jarrah and Marri.

-Goonaping Complex: Ranges from open-forest of Jarrah and Marri through low open woodland.

-Catterick Complex: Open forest of Jarrah and Marri in medium to high rainfall areas.

-Bridgetown Complex in Medium to High Rainfall: Open forest of Jarrah and Marri (Hedde et al. 1980).

Jayes Road Reserve, SLK 7.14 - 8.33 (2.38ha).

Beard Vegetation Association:

-No. 3: Medium forest of Jarrah and Marri (Hopkins et al. 2001; Shepherd et al. 2001).

Mattiske Vegetation Complexes:

-Dwellingup (D1): Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on lateritic uplands in mainly humid and subhumid zones.

-Grimwade (GR): Tall open forest to open forest of *Corymbia calophylla*-*Eucalyptus marginata* subsp. *marginata* with *Eucalyptus patens* on

A number of mid-storey Marri and Jarrah trees are to be removed, including the understorey (TRIM ref DOC13624).

The vegetation depicted in site photos consists of open verging vegetation with sparse understorey in most places; ranging from degraded to good condition (TRIM ref DOC13624).

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

Information taken from photographs of road side vegetation supplied as additional information with the application (TRIM ref DOC13624).

slopes and Eucalyptus rudis over some Agonis flexuosa on lower slopes in the humid zone

(Mattiske Consulting 1998).

Heddie Vegetation Complexes:

-Balingup Complex in Medium to High Rainfall: Open forest of Jarrah and Marri.

-Catterick Complex: Open forest of Jarrah and Marri in medium to high rainfall areas (Heddie et al. 1980).

Marmion Street Road Reserve, SLK 0.84 - 1.16 (0.48ha).

The vegetation to be cleared consists of a few Marri trees and understorey growth in a degraded condition.

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)

Information taken from photographs of road side vegetation supplied as additional information with the application (TRIM ref DOC13624).

Beard Vegetation Association:

-No. 1017: Medium open woodland of Jarrah and Marri with low woodlands of Banksia (Hopkins et al. 2001; Shepherd et al. 2001).

Aerial photography indicates a sand road has been previously cleared and vegetation surrounding this road is degraded (TRIM ref DOC13624).

Mattiske Vegetation Complex:

-Bentley (BN): Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Allocasuarina fraseriana on broad terraces in perhumid and humid zones (Mattiske Consulting 1998).

Heddie Vegetation Complex:

-Kingia Complex: Open forest of Jarrah and Marri with a well defined second storey of B. grandis, C. fraseriana. A wide range of soil is reflected in the floristic composition of the understorey (Heddie et al. 1980).

Beelerup Road Gravel Pit (3.0ha)

The proposal includes clearing approximately 3ha of an existing pit used for gravel extraction.

Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)

Information taken from photographs of pit vegetation supplied as additional information with the application (TRIM ref DOC13624).

Beard Vegetation Association:

-No. 3: Medium forest of Jarrah and Marri (Hopkins et al. 2001; Shepherd et al. 2001).

The vegetation under application comprises a number of large trees and mid-storey growth (TRIM ref DOC13624).

Mattiske Vegetation Complex:

-Kirup (KR): Open forest to

woodland of *Eucalyptus marginata* subsp. *Marginata*, *Corymbia calophylla*, *Banksia attenuata* and *Xylomelum occidentale* on sandy slopes in the humid zone.

Hedde Vegetation Complex:

-Williams-Avon-Brockman-Mumballup Complex: Fringing woodland of *E. rudis* and *M. raphiophylla* (Hedde et al. 1980).

Sandhills White Sand Gravel Pit (7.3ha)

The proposal includes clearing approximately 7.3ha of remnant vegetation to expand and existing sand pit (TRIM ref DOC13624).

Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)

Information taken from photographs of pit vegetation supplied as additional information with the application (TRIM ref DOC13624).

Beard Vegetation Association 3: Medium forest of Jarrah and Marri.

No. 1184: Medium woodland of fringing Jarrah, Marri, *E. rudis* and *A. flexuosa* (Hopkins et al. 2001; Shepherd et al. 2001).

Aerial photography indicates the vegetation to be in very good condition, consisting of a number of large trees and mid-storey.

Mattiske Vegetation Complex:

-Kirup (KR): Open forest to woodland of *Eucalyptus marginata* subsp. *Marginata*, *Corymbia calophylla*, *Banksia attenuata* and *Xylomelum occidentale* on sandy slopes in the humid zone (Mattiske Consulting, 1998).

Hedde Vegetation Complex:

Kingia Complex: Open forest of Jarrah and Marri with a well defined second storey of *B. grandis* and *C. fraseriana*. A wide range of soil is reflected in the floristic composition of the understorey (Hedde et al., 1980).

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 proposal is for the clearing of approximately 26.9ha of native vegetation for sand extraction (7.3ha), gravel extraction (3.0ha), road construction and maintenance (0.48ha), (2.38ha) and (13.74ha) within the Shire of Donnybrook-Balingup.

A range of vegetation associations are present within the application areas, consisting mainly of Medium woodland of Jarrah (*Eucalyptus marginata*) and Marri (*Corymbia calophylla*) in medium to high rainfall areas and open forests of Jarrah and Marri with medium woodland fringing vegetation (Shepherd et al., 2001).

The majority of the vegetation associations are above the National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS, 2001).

The Balingup (Bif) vegetation association (16.9%) and the Williams-Avon-Brockman-Mumballup complex

(23.0%) (Hedde et al., 1980) are the only representatives which are below the National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS, 2001) biodiversity target of 30%.

The Beelerup Road (3.0ha) application area is associated with the Williams-Avon-Brockman-Mumballup complex (23%) (Hedde et al., 1980) and is in a degraded condition.

The Jaynes Road (13.74ha) application area is associated with the Balingup (Bif) 16.9% (Hedde et al., 1980) complex and thought it may be below the National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS, 2001) is located within an area that has extensive remnant vegetation remaining within the 10km local area.

Given, the degraded condition of the Beelerup Road (3.0ha) and the Marmion Street (0.48ha) application areas, the extensive amount of remnant vegetation remaining within the 10km local area, the Jaynes Road (2.38ha) and the Jaynes Road (13.47ha) application areas are linear and occur along existing roads, the low number of fauna and flora species within the 10km local areas and the distance of these species to the application areas it is not likely this proposal will be at variance to this principle.

Methodology Shepherd et al. (2001)
Keighery (1994)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Busselton 50cm ORTHOMOSAIC - DLI03

(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 is 2 records of 1 'Endangered', 1 record of 1 'Vulnerable' and 2 records of 2 'Priority' fauna species occurring within a 10km local area of the Sandhills (7.3ha), Beelerup (3.0ha) and Marmion Street (0.48ha) application areas. The closest record, *Pachysaga strobila* (Priority 1) is approximately 3.5km east south-east of the Sandhills (7.3ha) application (SAC Bio Datasets 220607).

The Sandhills Road application area (7.3ha) is highly likely to result in the possible loss of habitat trees and the displacement of (and some loss of) individual fauna within the application area and place pressure on resources within adjacent remnant bushland as refugee fauna attempt to re-establish within these areas. However, this proposed clearing of 7.3ha is not likely to be a 'significant' loss of habitat for indigenous fauna due to the remaining remnants within the 10km local area.

Given the small scale and degraded condition of the the Marmion Street (0.48ha) applications. It is not likely the application area will be at variance to the application.

The Beelerup Road (3.0ha) application is relatively small however the removal of mature habitat trees may impact on fauna species therefore this proposal may be at variance to the principle.

There are 94 records of 2 'Vulnerable' and 11 records of 1 'Priority' fauna species within the 10km local area of the Jaynes Road (2.38ha and 13.74ha) application areas. The closest record, *Chuditch* (*Dasyurus geoffroii*), is approximately 14.0m south of the application area (SAC Bio Datasets 220607).

Orell & Morris (1994) state that '*Chuditch* appear to utilise native vegetation along road reserves in the wheatbelt and the major portion of the remaining populations occur in Jarrah (*Eucalyptus marginata*) forests'.

Given, that the habitat within the Jaynes Road application areas are associated with a medium forest of Jarrah and Marri (Shepherd et al., 2001) that may be utilised by the *Chuditch*, the proposal may remove mature habitat trees utilised by other fauna species and the road reserves provide ecological linkages for fauna movements this proposal may therefore be at variance to this Principle.

To ensure this species (*Chuditch*) and any other fauna species are identified and managed accordingly, conditions have been imposed on the permit to ensure an inspection is undertaken by a fauna specialist to identify the presence of any fauna species within the areas proposed for clearing.

Methodology Orell & Morris (1994)
Shepherd et al. (2001)
SAC Bio Datasets (220607)
GIS Databases:
- Busselton 50cm ORTHOMOSAIC - DLI03

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

Comments Proposal may be at variance to this Principle

There are 27 records of 9 'Priority' species occurring within a 10km local area of the Sandhills (7.3ha), Beelerup (3.0ha) and Marmion Street (0.48ha) application areas (SAC Bio Datasets 210607). The closest record, *Tetratheca parvifolia* (Priority 3) to the application areas is approximately 665m south west of the Sandhills (7.3ha) application.

Given the small scale and degraded condition of the Beelerup Road (3.0ha) and the Marmion Street (0.48ha) it is not likely that these application areas would be at variance to this principle.

Regional Biodiversity Advice, DEC (2007) indicated that there were several known occurrences of *Caustis* sp. *Boyanup* (Priority 1) within 1.5km of the Sandhills Road application area. Other known occurrences within 1.5km include *Acacia semitrullata* (Priority 3) and *Synaphea hians* (Priority 3). These known occurrences have been recorded along roadsides and other vegetation remnants within the 10km local area, and are associated with the same soil and vegetation type as the area under application (Sandhills Road (7.3ha)). Therefore, the species mentioned above may occur within the Sandhills Road application area (7.3ha).

To ensure all rare and priority flora are identified and managed accordingly, a condition has been imposed on the permit to ensure a survey is undertaken by a flora specialist to identify the presence of rare and priority flora within the area proposed for clearing (Sandhills Road (7.3ha) application area).

Where rare and priority flora are identified, the Shire will be required to submit the records to the Department, ensuring no species are removed unless approved by the Director General. In addition, a condition has been imposed to offset the values of the area to be cleared through revegetation of extraction sites.

There are 5 records of 3 Priority species occurring within an approximate 10km local area of the Paynes Road application areas (13.74ha and 2.38ha) (SAC Bio Datasets 210607). The closest record, *Tetratheca parvifolia* (Priority 3) is approximately 3.4km north west of the application area.

Given that the Jayes Road (2.38ha) and the Jayes Road (13.47ha) application areas are linear and occur along existing roads, the low number of Priority species (5 records) recorded within the 10km local area, the distance of these species to the application areas (3.4km) and that the clearing of vegetation is likely to be 2.5m from the road edge it is not likely this proposal will be at variance to this principle.

Methodology Regional Biodiversity Advice (2007)

GIS databases:

- Declared Rare and Priority Flora List - CALM 13/08/03
- Busselton 50cm Orthomosaic - DLI 03
- Mattiske Vegetation - CALM 24/3/98
- Soils, Statewide - DA 11/99

(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 occurrences of Threatened Ecological Communities (TEC's) within the Donnybrook Balingup Shire. The closest of the records, community type SCP07 (herb rich saline shrublands in claypans) is approximately 18.5km west south-west of the Marmion Street (0.48ha) application area.

DEC advice (2007) indicates that there are no known records of Threatened Ecological Communities associated with the application areas. The closest TEC communities to the application areas are associated with different soil complexes and vegetation associations.

Given the above, It is not likely this proposal will be at variance to this principle.

**Methodology DEC (2007)
SAC Bio Datasets (200607)**

(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 National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS, 2001) recognises that the retention of 30% or more of the pre-clearing extent of each ecological community is the target.

IBRA Bioregion \$	Pre - European (ha)*	Current Extent (ha)	Remaining (%)	Conservation status**
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Jarrah Forest No.3	2,390,534	1,661,219	69.5	Least Concern
Jarrah Forest No.1017	11,839	9,202	77.7	Least Concern
Jarrah Forest No.1184	63,565	28,717	45.2	Least Concern
Shire (LGA) #				
Donnybrook-Balingup			72.0	Least Concern
Beard Vegetation Association \$:				
No. 3	2,661,514	1,863,982	70.0	Least Concern
No. 1017	17,528	11,335	64.7	Least Concern
No. 1184	63,565	28,717	45.2	Least Concern
Mattiske Vegetation Complex:				
Balingup (BL) ^^	59,481	21,226	35.7	Least Concern
Balingup (Blf) ^^	2,974	502	16.9	Vulnerable
Kirup (KR) ^	34,599	23,704	68.5	Least Concern
Dwellingup (D1) ^	2,082,806	1,936,288	93.0	Least Concern
Grimwade (GR) ^^	22,059	12,320	55.9	Least Concern
Bentley (BN) ^^	2,136	1,408	65.9	Least Concern
Hedde Vegetation Complex +:				
Williams-Avon-Brockman-				
Mumballup	15,859	3,655	23.0	Vulnerable
Kingia	79,881	71,966	90.1	Least Concern
Balingup in				
Medium to High Rainfall	45,900	25,849	56.3	Least Concern
Goonaping	17,332	15,787	91.1	Least Concern
Bridgetown in				
Medium to High Rainfall	39,679	12,852	32.4	Least Concern

\$ (Hopkins et al., 2001)

^ (Mattiske, 1998)

^^ (Mattiske, 2003)

+ (Hedde et al., 2002)

(Shepherd et al., 2001)

* (Shepherd et al., 2005)

** (Department of Natural Resources and Environment 2002) if less than 30%

*** Within the Intensive Land use Zone

The Jaynes Road (13.74ha) Balingup (Blf) 16.9% (Hedde et al., 1980) and the Beelerup Road gravel pit Williams-Avon-Brockman-Mumballup complex 23.0% (Hedde et al., 1980) are the only representatives which are below the National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS, 2001) biodiversity target of 30%.

To mitigate any potential impacts of the clearing of remnant vegetation, whilst acknowledging the need to maintain and upgrade roads, the proposed clearing will be carried out in accordance with a condition requiring that clearing vegetation is to be avoided, and where this is not possible, the clearing will be minimised. In addition, to addressing the loss of vegetation within the road reserves, sand and gravel pits, conditions have been imposed to offset the values of the areas to be cleared through revegetation of extraction sites.

Given, that the majority of the vegetation associations are above the National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS, 2001) and the remaining remnants within the 10km local areas of the applications the proposal is unlikely to be at variance to this Principle.

Methodology

Hopkins et al. (2001)

Shepherd et al. (2005)

Shepherd et al. (2001)

Department of Natural Resources and Environment (2002)

Mattiske (2003)

AGPS (2001)

GIS databases:

- Mattiske Vegetation - CALM 24/3/98

- Hedde Vegetation Complexes - DEP 21/06/95

- Interim Biogeographic Regionalisation of Australia - EM 18/10/00

- Local Government Authorities - DLI 8/07/04

- 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 may be at variance to this Principle

The areas under application are not associated with any known major watercourses or wetlands within the shire.

The proposed clearing for the Sandhills Rd sand pit (7.3ha) is adjacent to Thompson Brook approximately 278m east of the application area. The Beelerup Rd gravel pit (3.0ha) is located near the Preston River approximately 313m west of the application area. No wetlands are mapped within the areas under application.

The Marmion Street application area (0.48ha) has been previously cleared for road construction and maintenance and drains and culverts are likely to be installed to manage the flow of water.

The Jayes Road application area (13.74ha) intersects 2 minor watercourses and runs adjacent to Balingup Brook (major non-perennial watercourse). Therefore, at these small junctions between Jaynes Road and the minor non-perennial watercourses areas of native vegetation will be associated with a watercourse. Jaynes Road has been previously cleared for road construction and maintenance and drains and culverts are likely to be installed to manage the flow of watercourses.

Given the above, the proposal maybe at variance to this principle as the application is associated with 2 minor non-perennial watercourses. However, historical road maintenance and construction would have significantly modified the native vegetation within these sections of the application.

Methodology

GIS Databases:

-ANCA, Wetlands - CALM 08/01

-EPP Areas - DEP 06/95

-EPP Lakes - DEP 28/07/03

-Hydrography, linear - DOE 1/2/04

-Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC

-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC

(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

DAFWA (2005) did not undertake a comprehensive assessment of the land degradation risks associated with the proposed clearing. However, advice received, advised that the proposal is unlikely to cause land degradation.

The proposed clearing for sand (7.3ha) and gravel (3.0ha) extraction may cause some short term land degradation issues in terms of surface water sedimentation and soil erosion during works.

To minimise long term land degradation associated with the sand and gravel extraction appropriate conditions have been imposed requiring revegetation on the completion of the extraction.

The proposed clearing on road sides (0.48ha, 2.38ha and 13.74ha) may cause some short term land degradation issues in terms of surface water sedimentation and soil erosion during works. However, these issues should be minimal as the road application areas are linear, occur along existing roads with roadside infrastructure (table drains and culverts) to prevent land degradation issues and the clearing will occur periodically. In addition, the Shire shall take protective measures during operations of clearing and road construction to avoid damaging or destroying native vegetation (Shire of Donnybrook Balingup, 2007).

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

Shire of Donnybrook Balingup (2007)

DAFWA (2005)

GIS databases:

-Acid Sulfate Soil Risk Map, SCP - DoE 01/02/04

-Salinity Risk LM 25m - DOLA 00

-Groundwater Salinity, Statewide - 22/02/00

(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 may be at variance to this Principle

The proposed Sandhills (White Sand Gravel Pit) application area is located adjacent to an un-named conservation reserve, vested with the Conservation Commission for the protection of flora and fauna.

The shire has agreed to put in a 50m buffer between the application area and the conservation reserve to

prevent any edge effects (TRIM ref DOC27240).

Given the above, the proposal (Sandhills White Sand Gravel Pit) is not likely to be at variance to this Principle.

The Beelerup Gravel Pit is located approximately 2.5km north of the un-named conservation reserve (Lot 397 On Plan 218026). Given, the application area is in a degraded condition, its relatively small size (3.0ha) and the distance to the closest conservation area, it is unlikely to be at variance to this principle.

The Marmion Street proposal is located 150m north of the Boyanup State forest. Given, the application area is in a degraded condition, its relatively small size (0.48ha) it is unlikely to impact on the environmental values of the nearby conservation area.

A number of DEC-managed reserves including Greenbushes and Wilga State Forests and 6 parcels of Ex Dir Freehold Land border the Jayes Road application areas (2.38ha and 13.74ha).

With any new construction or widening there is a requirement for a cleared area of 2.5m from the outer point of the road formation for machinery operation (Shire of Donnybrook Balingup, 2007) and therefore the proposed clearing may increase edge effects, such as weed invasion within these areas, therefore the proposal maybe at variance to this principle.

The Shire shall take protective measures during operations of clearing and road construction to avoid damaging or destroying native vegetation (Shire of Donnybrook Balingup, 2007).

Several other conservation reserves are located within 7km of the road, including the Golden Valley Farm Homestead (Register of National Estate); The Mullalyup and Greenbushes Management Priority Areas, and Reserve A25446 (C95, C99 & 98 - System 6 Conservation Reserves), however due to the distance it is considered unlikely the proposed clearing along this road will impact on these conservation reserves.

Methodology Shire of Donnybrook Balingup (2007)
GIS databases:
-CALM Managed Lands and Waters - CALM 1/06/04
-Register of National Estate - EA 28/01/03
-System 6 Conservation Reserves - DEP 06/95

(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 areas under application are within two hydrographic catchment areas including the Leschenault Estuary-Preston River and the Hardy Estuary-Blackwood River area; both gazetted under the Rights in Water and Irrigation Act 1914.

The areas under application are not located within any Public Drinking Water Source Areas.

DAFWA (2005) did not undertake a comprehensive assessment of the land degradation risks associated with the proposed clearing. However, advice received, advised that the proposal is unlikely to cause land degradation.

The Sandhills (White Sand Gravel Pit) and the Beelerup (Road Gravel Pit) are unlikely to cause deterioration in surface or underground water.

The Sandhills sand pit is associated with sandy soils that are likely to be free draining and surrounded by remnant vegetation. The Beelerup Gravel Pit is relatively small in size approximately 3.0ha and is associated with gravel and stony soils again likely to be free draining.

The proposed clearing within the sand and gravel pits may cause some short term surface water sedimentation during works, however the rehabilitation of the pits post-extraction should minimise any possible long-term degradation of surface water.

Appropriate conditions have been imposed requiring revegetation on the completion of the extraction.

The road construction and maintenance along Marmion Street and Jaynes Road are unlikely to cause deterioration in surface or underground water. The proposed clearing may cause some short term surface water sedimentation during works.

Both the Marmion Street (0.48ha) and the Jayes Road (2.38ha) are relatively small application areas. The Marmion Street application area is also associated with sandy soils and is likely to be free draining.

The Jayes Road (2.38ha) and the Jayes Road (13.47ha) application areas are associated with loamy gravel

and are less likely to be free draining. However, as these application areas are linear, occur along existing roads with roadside infrastructure (table drains and culverts) to prevent land degradation issues and the clearing will occur periodically, it is not likely the proposal will be at variance to this principle.

Methodology GIS databases:
 -Hydrographic Catchments - Catchments - DOW
 -Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04

(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 Sandhills (White Sand Gravel Pit) and the Beelerup (Road Gravel Pit) are unlikely to cause or exacerbate flooding.

The Sandhills sand pit is associated with sandy soils that are likely to be free draining and surrounded by remnant vegetation. The Beelerup Gravel Pit is relatively small in size approximately 3.0ha and is associated with gravel and stony soils again likely to be free draining.

The road construction and maintenance along Marmion Street and Jaynes Road are unlikely to cause or exacerbate flooding.

The proposed clearing is contained within existing road reserves at an elevation of between 85m and 105m. Both the Marmion Street (0.48ha) and the Jaynes Road (2.38ha) are relatively small application areas. The Marmion Street application area is also associated with sandy soils and is likely to be free draining.

The Jaynes Road (2.38ha) and the Jaynes Road (13.47ha) application areas are associated with loamy gravel and are less likely to be free draining. However, as these application areas are linear, occur along existing roads with roadside infrastructure to prevent land degradation issues and the clearing will occur periodically, it is not likely the proposal will be at variance to this principle.

Methodology GIS databases:
 -Hydrography Linear - DoE 1/2/04
 -Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
 The areas under application are located within a Native Title Claim area. The applied area is contained within existing road reserves that are vested in the Shire of Donnybrook-Balingup.

Therefore, the clearing as proposed should not fall under the future acts process under the Native Title Act 1993.

To mitigate any loss of biodiversity within the sand and gravel pits as well as the road reserves, conditions have been imposed on the permit for management of flora, fauna, dieback and weed control.

The Shire has advised of a progressive rehabilitation program in another sand pit (Sandhills Yellow Sand Gravel Pit). The Shire has stated that there is no more clearing required and rehabilitation is planned for the majority of the closed areas. The rehabilitation will be as per the Department of Conservation and Land Management - The Management of Rehabilitation of Gravel Pits (TRIM ref DOC13624).

Methodology GIS databases:
 -Native Title Claims - DLI 7/11/05

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Extractive Industry	Mechanical Removal	7.3		Assessable criteria have been addressed and the proposal was found to be maybe at variance to principle (b) and (c) and not likely to be at variance to all remaining principles. The assessing officer therefore recommends the Sandhills Road Sand Pit area be granted. With conditions that a floristic survey is undertaken to identify values remaining in the area also specific conditions addressing dieback and weeds, recording and reporting as well as management and replanting.
Extractive Industry	Mechanical Removal	3		Assessable criteria have been addressed and the proposal was found to maybe be at variance to principle (b) and not likely to be at variance to all principles.

The assessing officer therefore recommends a permit be granted for the Beelerup Road Gravel Pit with management conditions addressing dieback,

Road Mechanical 13.74
construction oRemoval
maintenance

weeds and recording and reporting, replanting and maintenance.

Assessable criteria have been addressed and the proposal was found to be maybe at variance to principle (b) and (f) and not likely to be at variance to all remaining principles.

The assessing officer therefore recommends a permit be granted for the Jayes Road reserve, with specific conditions addressing potential impact on fauna values, recording and reporting, along with management conditions addressing dieback and weeds.

Road Mechanical 2.38
construction oRemoval
maintenance

Assessable criteria have been addressed and the proposal was found to be maybe at variance to principle (b) and not likely to be at variance to all remaining principles.

The assessing officer therefore recommends a permit be granted for the Jayes Road reserve, with specific conditions addressing potential impact on fauna values, recording and reporting, along with management conditions addressing dieback and weeds.

Road Mechanical 0.48
construction oRemoval
maintenance

Assessable criteria have been addressed and the proposal was found not likely to be at variance to all principles.

The assessing officer therefore recommends that a permit be granted for the Marmion St road reserve with management conditions addressing dieback and weeds.

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)

