



1. Application details

1.1. Permit application details

Permit application No.: 1919/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: B & J Catalano Pty Ltd

1.3. Property details

Property: LOT 191 ON DIAGRAM 13038 (House No. 450 REEN GIDGEGANNUP 6083)
Local Government Area: City Of Swan
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
15.3		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
Beard Vegetation Association No.3:	The site has been logged in the past and variously grazed over the years. A portion of the southern deposit has been affected by dieback (<i>Phytophthora</i> sp.) (B & J Catalano, 2005).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	A site inspection was made on 23 August 2005. During the site inspection the whole resource area was traversed in north-south and east-west lines approximately 50 metre intervals (B & J Catalano, 2005).
Medium forest of <i>Eucalyptus marginata</i> (Jarrah) and <i>Corymbia calophylla</i> (Marrl).			Five 100m ² plots were selected and all species observed in each plot, identified. The plots were selected as being visually typical of the best quality vegetation within each part of the resource area to provide data on the best vegetation (B & J Catalano, 2005).
Mattiske Vegetation Complex:	The vegetation is dominated by <i>Eucalyptus marginata</i> subsp. <i>marginata</i> with associated <i>Dryandra</i> shrubs and scattered <i>Hibbertia</i> species (B & J Catalano, 2005).		
Dwellingup (D2): Open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> and <i>Corymbia calophylla</i> on lateritic uplands in the subhumid and semiarid zones.			
Yarragil (Yg1): Open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> and <i>Corymbia calophylla</i> on slopes with mixtures of <i>Eucalyptus patens</i> and <i>Eucalyptus megacarpa</i> on the valley floors in humid and subhumid zones.			
Hedde Vegetation Complex:			
Dwellingup Complex in Medium to High Rainfall: No Description			
Murray and Bindoon Complex in Low to Medium Rainfall: No Description			

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 15.3ha of native vegetation for gravel extraction within the City of Swan.

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

The site has been logged in the past and variously grazed over the years. A portion of the southern deposit has been affected by dieback (Landform Research, 2005). The remaining remnants have been highly modified and are in a degraded condition.

Given, the site has been assessed in a flora survey with no DRF or Priority species recorded, the degraded condition of the vegetation within the application area and the extensive amount of remnant vegetation remaining within the 10km local area it is not likely this proposal will be at variance to this principle.

Methodology AGPS (2001)
Landform Research (2005)
GIS Databases:
-Swan Coastal Plain North 20cm Orthomosaic - DLI06

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments **Proposal may be at variance to this Principle**
There are no records of any known Threatened Fauna within the area proposed for clearing.

There are 2 records of 2 'Endangered', 24 records of 6 'Vulnerable' and 18 records of 6 'Priority' fauna species occurring within 10km local area of the application area Lot 191. The closest record, Forest Red-tailed Black-Cockatoo, *Calyptorhynchus banksii naso* (Vulnerable) is approximately 3.2km south, south-east of the application area (SAC Bio Datasets 160707).

The application area (15.3ha) 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.

The application area has been previously cleared however, from site photographs there appears to be mature trees that could provide (if of suitable size) nesting habitat for Baudin's Black-Cockatoo, Carnaby's Black-Cockatoo, Forest Red-Tailed Black Cockatoo, Western Ringtail Possum and the Crested Shrike-tit all of which are found within the 10km local area.

Aerial photography shows that there are extensive areas of native vegetation remaining in the 10km local area that appear to be in similar or better condition than the application area. Therefore, the fauna species listed above are likely to find habitat in equal or better condition (with fewer disturbances) within the nearby remnants.

It is unlikely this proposal (15.3ha) would be a 'significant' loss of habitat for indigenous fauna due to the remaining remnants within the 10km local area but the application is likely to include habitat for fauna that is declared Specially Protected under the Wildlife Conservation Act.

Given, the above the application maybe at variance to this principle.

To ensure any 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 threatened species within the areas proposed for clearing.

Methodology SAC Bio Datasets (160707)
GIS Database:
-Swan Coastal Plain North 20cm Orthomosaic - DLI06

(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 recorded occurrences of Declared Rare or Priority Flora within the area proposed to be cleared.

There are 19 records of 2 'Rare' species and 54 records of 18 'Priority' species occurring within 10km local area of Lot 191. The closest record, *Grevillea flexuosa* (Rare) is approximately 680m north east of the application

area (SAC Bio Datasets 160707).

A site inspection was made on 23 August 2005. During the site inspection the whole resource area was traversed in north-south and east-west lines at approximately 50 metre intervals (Landform Research, 2005). Five 100m² plots were selected and all species observed in each plot, identified. The plots were selected as being visually typical of the best quality vegetation within each part of the resource area to provide data on the best vegetation (Landform Reserach, 2005).

The site has been logged in the past and variously grazed over the years. A portion of the southern deposit has been affected by dieback (Landform Research, 2005).

The vegetation is dominated by *Eucalyptus marginata* subsp. *marginata* with associated *Drynadra* shrubs and scattered *Hibbertia* species (Landform Research, 2005).

A total of 34 taxa were observed in the site investigations. A comparison was made to the Declared Rare and Priority Flora List to determine if any Rare or Priority species had been identified. None of the species identified are listed as declared Rare or Priority Species (Landform Research, 2005).

The application area has been subject to previous logging and grazing activities.

Based on the soil description and the vegetation associations there is the possibility that the flora species found within the 10km local area could be located in the area, however, the proponent did conduct a survey within the application area where plant species present were identified and compared against relevant databases. This survey did not locate any Rare or Priority species within the application area.

Given the above it is unlikely that the native vegetation within the application includes, rare or priority flora due to a modified understorey of the application area this proposal is not likely to be at variance to this principle.

Methodology SAC Bio Datasets (160707)
Landform Research (2005)

(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 recorded occurrences of Threatened Ecological Communities within the area proposed to be cleared.

There are no occurrences of Threatened Ecological Communities (TEC's) within a 10 km local area of the application. The closest record, community type SCP3c (*Eucalyptus calophylla* - *Xanthorrhoea preissii* woodlands and shrublands, Swan Coastal Plain) is approximately 12.7km west of the application area (SAC Bio Datasets 160707).

The closest records of the TEC's occur on different soil systems and within different vegetation associations. It is not likely that this proposal will be at variance to this principle.

Methodology Sac Bio Datasets (160707)
GIS Database:
-Soils, Statewide - DA 11/99
-Pre-European Vegetation - DA 01/01_1
-Mattiske Vegetation - CALM 24/3/98

(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.

Pre-European	Current extent (ha)	Remaining (ha)	Conservation** (%)	% In reserves status	DEC Managed Land
IBRA Bioregions*****					
Northern Jarrah Forest	1,898,799	1,117,139	58.8	Least concern	N/A
Shire*					
Swan	103,944	54,792	52.7	Least Concern	N/A
Mattiske Vegetation Complex***					

Dwellingup D2	86,142	73,767	85.6	Least concern	N/A
Yarragil Yg1	80,111	68,034	84.9	Least concern	N/A
Hedde Vegetation Complex***					
Dwellingup Med/High rainfall	83,738	71,331	85.6	Least concern	N/A
Murray & Bindoon Low/Med rainfall		63,710	44,469	69.8	Least concern
	N/A				
Beard Vegetation Complex*****					
No. 3	2,661,514	1,863,982	70.0	Least Concern	N/A

* (Shepherd et al. 2006)

** (Department of Natural Resources and Environment 2002)

*** (Mattiske Consulting 1998)

**** (Hedde et al. 2002)

***** (Shepherd et al. 2001)

^ Area within Intensive Land Use Zone

The site has been logged in the past and variously grazed over the years. A portion of the southern deposit has been affected by dieback (Landform Research, 2005).

Given, that all the vegetation associations are above the National Objective and Targets for Biodiversity Conservation 2001-2005 (AGPS), the remaining remnants within the 10km local area and the modified condition of the application it is unlikely that the native vegetation within the application would be considered 'significant' as a remnant and therefore this proposal is not likely to be at variance to this principle.

Methodology Shepherd et al. (2006)
 Shepherd et al. (2001)
 Department of Natural Resources and Environment (2002)
 Mattiske Consulting (1998)
 Hedde et al. (2002)
 Landform Research (2005)
 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 is not likely to be at variance to this Principle

The application area is not associated with any watercourse or wetlands.

There are no ANCA or Ramsar wetlands within the 10km local area. The closest major watercourse is the Woorloo Brook, approximately 2.3km north west of the application area.

The closest record is of a minor non-perennial watercourse that lies approximately 93 metres west of the application area.

The native vegetation within the application has been modified. The vegetation is unlikely to have any 'significant' value for the minor watercourse and the proposal is not likely to have any deleterious effect on this watercourse as the application has already been highly modified.

Given the above, it is not likely that the application area will be at variance to this principle.

Methodology GIS Database:
 -Hydrography, linear - DOE 1/2/04
 -Hydrography, linear (hierarchy) - DOW
 -Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC
 -RAMSAR, Wetlands - CALM 14/02/03
 -EPP, Wetlands 2004 (DRAFT) - DOE 21/7/04
 -ANCA, Wetlands - CALM 08/01

(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 proposed clearing of 15.3ha of land within Lot 191 is unlikely to cause appreciable land degradation (DAFWA, 2007).

The application area has a groundwater salinity of 500-1000mg/L and is a low salinity risk. The soils are free draining and the proposal is unlikely to increase waterlogging. Acid Sulfate Soils have not been mapped for the area.

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

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

Given the above it is not likely that this proposal will be at variance to this principle.

Methodology DAFWA (2007)

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 is not likely to be at variance to this Principle

GIS Database records indicate that the closest DEC reserve to the application area is Walyunga National Park approximately 7.6km west, north-west of the application area.

The proposal involves clearing 15.3ha of native vegetation for extractive industry.

The site has been logged in the past and variously grazed over the years (Landform Research, 2005).

Given the degraded condition of the vegetation, the distance to the closest conservation reserves and the current and historical use of the property for livestock grazing and pasture it is not likely that this proposal will be at variance to this principle.

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 areas under application lies high within the hydrographic catchment areas of the Swan Avon-Lower Swan gazetted under the Rights in Water and Irrigation Act 1914.

The application area drains towards Gidgegannup Brook to the west and Equitus Brook to the north and ultimately the Avon River (Landform Research, 2005).

The site has been logged in the past and variously grazed over the years. A portion of the southern deposit has been affected by dieback (Landform Research, 2005). The remaining remnants have been highly modified and are in a degraded condition.

The proposed clearing is not likely to impact on the quality of surface water as there are no water courses on the area proposed for excavation and under normal weather conditions the application area is free draining with most precipitation penetrating the gravel and cap rock (Landform Research, 2005).

During excavation the surface will be internally drained and it is proposed to clear the resource areas gradually (Landform Research, 2005)

No significant alteration to surface water and no alteration to groundwater is proposed (Landform Research, 2005).

The groundwater may increase slightly through a small additional recharge (landform Research, 2005).

Eutrophication risk would be low on and offsite (DAFWA, 2007).

Salinity risk would be low onsite and medium offsite (DAFWA, 2007).

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

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

Given the above it is not likely that this proposal will be at variance to this principle.

Methodology Landform Research (2005)
DAFWA (2007)
GIS databases:
-Hydrography, linear (medium scale, 250k GA)
-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 proposed clearing of 15.3ha of native vegetation is unlikely to cause or exacerbate flooding.

The application area is free draining with most precipitation penetrating the gravel and cap rock (Landform Research, 2005).

The application area is also located on a low ridge with an elevation of between approximately 235m and 290m.

Waterlogging and flooding risk would be low both onsite and offsite (DAFWA, 2007).

Given the above it is not likely that this proposal will be at variance to this principle.

Methodology Landform Research (2005)
GIS Databases:
-Topographic Contours, Statewide - DOLA 12/09/02

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

Comments
The applied area is contained within Lot 191, Reen Road Gidgegannup zoned General Rural under the City of Swan Town Planning Scheme No.9.

There are no Aboriginal sites of Significance listed for Lot 191 and it is not within a Native Title Claim area.

Planning Consent was granted to Quarry Park Pty Ltd for a laterite quarry in 2001. An extractive Industries Licence (TRIM ref DOC26857) was issued and this was subsequently transferred to B and J Catalano, the current operator of the quarry (Landform Research, 2005).

The application of 2001 was approved by the Western Australian Planning Commission on 3 October 2002 for a period of ten years. The City of Swan also granted approval (Landform Research, 2005).

The quarry is listed as Gravel Resource 21/66 in released Statement of Planning Policy No 2.4, Basic Raw Material (Landform Research, 2005).

B and J Catalano applied for and received a new Planning approval and an Extractive Industries Licence for a period of 10 years (TRIM ref DOC23473).

An environmental management plan was produced and the proposed extractive industry was not formally assessed however, the proposal is managed under part V of the EP Act 1986, public advice was given and no appeals were received.

A submission was received from the public. Some of the issues raised are not within the scope of the clearing provisions of the EP Act. Other issues have been addressed in the assessment of this application.

Methodology Landform Research (2005)
GIS Databases:
-Town Planning Scheme Zones - MFP 8/98

- Local Government Authorities - DLI
- Native Title Claims - DLI 7/11/05
- Aboriginal Sites of Significance - DIA_1

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Extractive Industry	Mechanical Removal	15.3	Assessable criteria have been addressed and it was found that the proposal may be at variance to principle (b) and not likely to be at variance to all remaining principles. If a permit is granted specific conditions will need to be included to avoid and minimise the clearing. Conditions will also be required to address dieback, weeds, fauna, revegetation, rehabilitation, recording and reporting.

5. References

- AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.
- DAFWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM ref XXXXX.
- 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.
- Hedde, 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.
- Hedde, 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. (Updated 2002).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Landform Research (2005) Excavation - Environmental Management Plan, Modification to Planning Approval, Laterite Gravel Quarry, Lot 191 Reen Road Gidgegannup, Landform Research, Roleystone, Western Australia.
- Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
- Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM. (Updated 2003).
- SAC Bio Datasets (160707) Department of Environment and Conservation, Kensington, 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.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001a) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2006).

6. Glossary

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

