GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 4200/1
Permit Holder:	Shire of Murray
Duration of Permit:	2 May 2011 – 2 May 2016

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. **Purpose for which clearing may be done**
   Clearing for the purpose of gravel extraction.

2. **Land on which clearing is to be done**
   State Forrest 14, BANKSIADALE 6213 (Turner Block).

3. **Area of Clearing**
   The Permit Holder must not clear more than 1.14 hectares of native vegetation within the area hatched yellow on attached Plan 4200/1.

4. **Application**
   This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. **Type of clearing authorised**
   This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

6. **Period in which clearing is authorised**
   (a) The Permit Holder shall not clear native vegetation unless actively mining within three months of the authorised clearing being undertaken.

   (b) The Permit Holder shall not clear any native vegetation after 2 May 2016.

7. **Compliance with Assessment Sequence and Management Procedures**
   Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

8. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

(a) avoid the clearing of native vegetation;
(b) minimise the amount of native vegetation to be cleared; and
(c) reduce the impact of clearing on any environmental value.

9. Dieback and weed control

(a) When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
   (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
   (ii) shall only move soils in *dry conditions*;
   (iii) ensure that no *dieback* or *weed*-affected soil, *mulch, fill* or other material is brought into the area to be cleared; and
   (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(b) At least once in each 12 month period for the term of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

10. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

(a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.

(b) within 12 months following completion of extraction activities, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit by:
   (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
   (ii) ripping the ground on the contour to remove soil compaction; and
   (iii) ripping the pit floor and contour batters within the extraction site; and
   (iv) laying the vegetative material and topsoil retained under condition 10(a) on the cleared area(s).

(c) within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(b) of this Permit:
   (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
   (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 10(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, *revegetate* the area by deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area and ensuring only *local provenance* seeds and propagating material are used.

(d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 10(c)(ii) of this permit, the Permit Holder shall repeat condition 10(c)(i) and 10(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.

(e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 10(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 10(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 10(c)(ii).

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

(a) In relation to the clearing of native vegetation authorised under this Permit:
- (i) the species composition, structure and density of the cleared area;
- (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (iii) the date that the area was cleared; and
- (iv) the size of the area cleared (in hectares).

(b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 10 of this Permit:
- (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
- (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
- (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
- (v) a copy of the environmental specialist's report.

12. Reporting

(a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
- (i) of records required under condition 11 of this Permit; and
- (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.

(b) Prior to 2 February 2016, the Permit Holder must provide to the CEO a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

dieback means the effect of *Phytophthora* species on native vegetation;

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fill means material used to increase the ground level, or fill a hollow;

local provenance means native vegetation seeds and propagating material from natural sources within 50 kilometres of the area cleared.

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

watercourse has the meaning given to it in section 3 of the *Rights in Water and Irrigation Act 1914*;

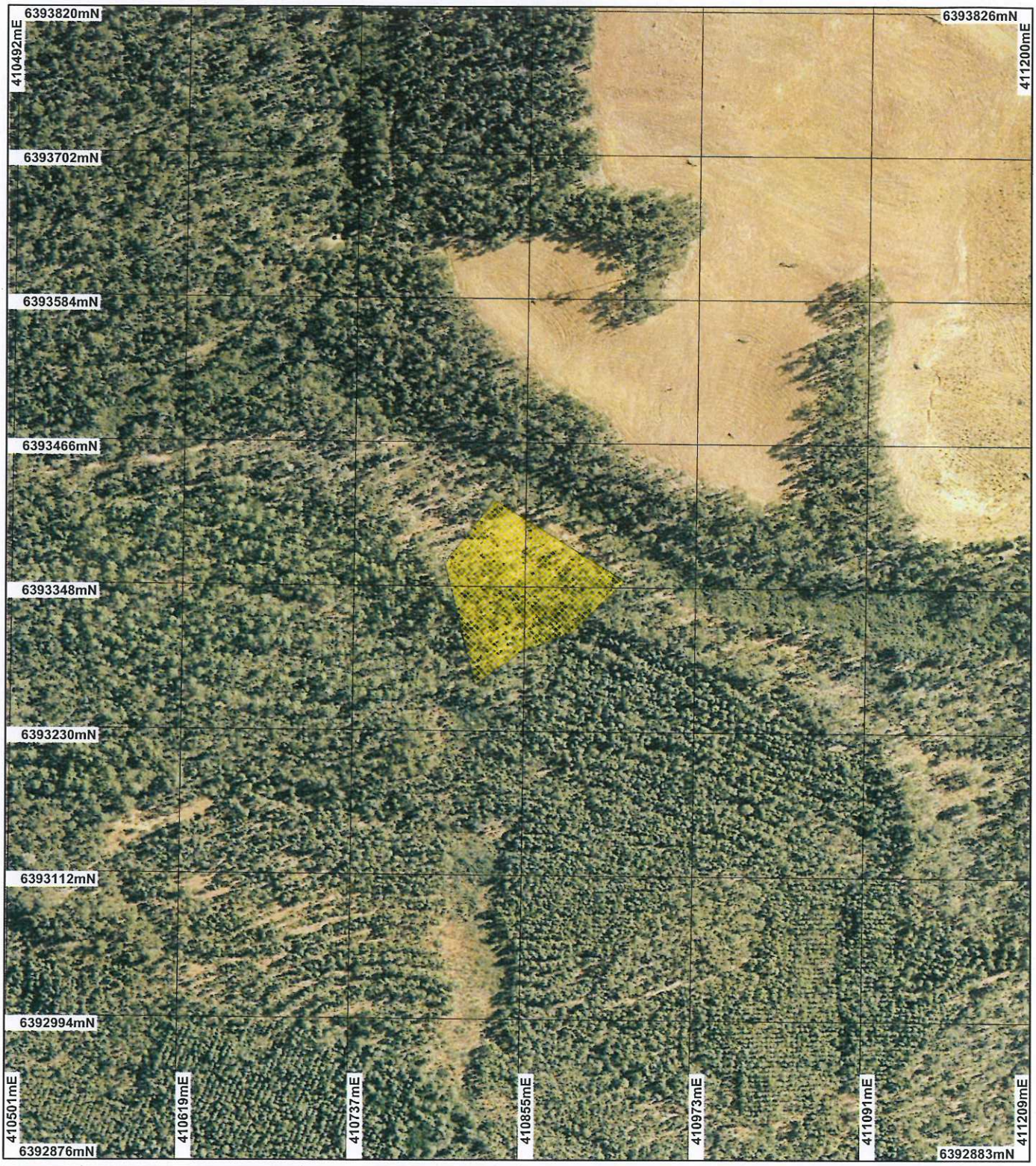
wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

7 April 2011

Plan 4200/1



LEGEND

- Road Centrelines
- Cadastre for labelling
- Freehold
- Crown Reserve
- State Forest / Timber Reserve (cont)
- Marine Park
- Crown Lease
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land (cont)
- Water
- Clearing Instruments
- Areas Approved to Clear
- Dwellingup 50cm Orthomosaic - Landgate 2006

N

0 100 m

Scale 1:4166
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Date 7/4/11

K FAULKNER

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Our environment, our future

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4200/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Shire of Murray**

1.3. Property details

Property: STATE FOREST 14 (BANKSIADALE 6213)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.14		Mechanical Removal	Extractive Industry

1.5. Decision on application

Decision on Permit Application: Granted

Decision Date: 7 April 2011

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 3 is described as medium forest; Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri).	The proposed clearing of 1.14ha is for the purpose of gravel extraction by the Shire of Murray within the Dwellingup State Forest.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the vegetation was established through aerial photography (Dwellingup 50cm Orthomosaic - Landgate 2006)
Mattiske Vegetation Complex ; My1 is described as Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Eucalyptus patens on valley slopes to woodland of fs24 Eucalyptus rudis-Melaleuca rhaphiophylla on the valley floors in humid and subhumid zones.	The area under application consists of Jarrah and Marri forest in very good (Keighery 1994) condition.		
Heddle Vegetation Complex Murray Complex in Medium to High rainfall - no description available.			
(Shepherd 2009, Heddle et al 1980, Mattiske 1998).			

3. Assessment of application against clearing principles

Comments

The area under application consists of Jarrah and Marri forest in very good (Keighery 1994) condition within the Dwellingup State Forest.

The proposal to clear up to 1.14 hectare of native vegetation for the purpose of gravel extraction is unlikely to have any significant environmental impacts on declared rare flora species or threatened ecological communities in the vicinity of the project. The vegetation to be cleared is well represented in the local area, and would not have a detrimental impact on fauna.

As the application area occurs within the Dwellingup State Forest it is considered for the proposed clearing to impact on the environmental values of this conservation area through the introduction of weeds, risk of spreading dieback and the direct removal of vegetation. Therefore the proposed clearing is at variance to this Principle. These potential impacts will be managed through a dieback and weed condition on the permit.

The application area occurs ~30 m from a major perennial watercourse- Conjurunup Creek. The proposed

clearing occurs within Zone 1 of the Public Drinking Water Source Area for the Conjurunup Pipehead Dam Catchment Area. Clearing can potentially cause contamination in the resource area, especially when close to a stream bed. Therefore the proposed clearing may cause degradation of surface water of the nearby watercourse and possibly the Conjurunup Pipehead Dam if appropriate erosion control measures are not enforced. Therefore, the proposed clearing may be at variance to Principle (i).

Methodology

References
-Keighery (1994)
GIS Databases
-SAC Bio Datasets (23/02/2011)
-Heddle Vegetation Complexes
-NLWRA, Current Extent of Native Vegetation
-Hydrograhy, linear
-Pre-European Vegetation

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

Comments

The proposed clearing of 1.14ha is for the purpose of gravel extraction by the Shire of Murray within the Dwellingup State Forest. The Shire of Murray's annual civil works construction program requires gravel recourses for road construction and maintenance.

An agreement relating to entry under the Local Government Act for the purpose of removing basic raw materials have been signed by both the Swan Region DEC and the Shire of Murray for the Huntly Gravel Pit. The agreement is for the extraction of gravel for 5 years for the purpose of road maintenance within the Dwellingup, North Dandalup and East Coolup precincts of the Shire of Murray.

A Pit Management Plan and Gravel Extraction Rehabilitation Plan have been development for the proposed activity and has been approved.

The Shire of Murray plan to rehabilitate the application area once extraction activities are finished and have developed a rehabilitation plan (Shire of Murray 2011). In addition, the pit will be managed under the DEC guidelines for basic raw material pits which will ensure that the drainage from the pit is managed appropriately. The Shire of Murray state that bunds to control water flow between the pit and the watercourse will be constructed, assess roads including culverts and drainage lines will be maintained and access to the pit will be limited during rain periods and monitored to limit impacts on Conjurunup Creek.

Guidelines for the Management and Rehabilitation of Basic Raw Material Pits (DEC 2008) within DEC owned land states that a 75m buffer is required for order 4 streams within a Public Drinking Water Source area (PDWSA) to prevent degradation of the watercourse. The proposed clearing occurs 30 m away from an order 4 stream. The Guidelines also state that the Department of Water should be notified of any disturbance within a PSWSA.

Department of Water (DoW) (2011) stated that the clearing and extractive activities could potentially cause contamination of the Conjurunup Creek which is the main feeder stream into the Conjurnup Creek Pipehead dam. According to the DoW Water Quality Protection Note 10 Contaminating spills - emergency response, the proposed clearing is rated a high impact. Impacts could include increase in turbidity, fuel and chemical spills from machinery and dewatering impacts during gravel extraction. Without measures in place the first rains may transport any built up contaminants from the site into the nearby stream and may result in high concentrations of contaminants entering the Conjurunup Creek Pipehead Dam (Department of Water 2011).

Written permission and conditions are required from the Department of Water for clearing and excavation activities within catchment Areas (Department of Water 2011).

Methodology

References
-DEC (2008)
-Department of Water (2011)
-Shire of Murray (2011)

4. References

DEC (2008) Guidelines for the Management and Rehabilitation of Basic Raw Material Pits. Department of Environment and Conservation. DEC ref A376633

Department of Water (2011) Direct Interest Submission PSWSA - CPS 42001/1 - Shire of Murray - Dwellingup State Forest. DEC ref A380107

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of

WA (Inc). Nedlands, Western Australia.

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

Shire of Murray (2011) Huntly Gravel Pit: Gravel Extraction Rehabilitation Plan. January 2011. DEC ref A376633

5. 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)