



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Purpose Permit Number: 4209 / 1

File Number: A0290/201101

Duration of Permit: From 4 June 2011 to 4 June 2016

PERMIT HOLDER

ARC Energy Limited

LAND ON WHICH CLEARING IS TO BE DONE

Production Licence L5

PURPOSE FOR WHICH THE CLEARING MAY BE DONE

1. Clearing for the purpose of petroleum production.

CONDITIONS

Type of clearing authorised

1. The Permit Holder must not clear more than 3 hectares of native vegetation. All clearing must be within the area cross-hatched yellow on attached Plan 4209/1.
2. The Permit Holder shall not clear native vegetation unless the purpose for which the clearing is authorised is enacted within 6 months of the authorised clearing being undertaken.

Avoid, minimise etc clearing

3. 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:
 - (i) avoid the clearing of native vegetation;
 - (ii) minimise the amount of native vegetation to be cleared; and
 - (iii) reduce the impact of clearing on any environmental value.

Dieback and weed control

4. 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.

Retain and spread vegetative material and topsoil

5. 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 clearing authorised under this permit, *revegetate* and *rehabilitate* the areas that are no longer required for the purpose for which they were cleared under this Permit by:
 - (i) ripping the ground on the contour to remove soil compaction; and
 - (ii) laying the vegetative material and topsoil retained under Condition 5(a).
- (c) within 4 years of laying the vegetative material and topsoil on the cleared area in accordance with Condition 5(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 5(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.

Records to be kept

6. 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;
 - (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 5 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;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.

Reporting

7. (a) The Permit Holder shall provide a report to the Executive Director, Environment, Department of Mines and Petroleum by 31 July each year for the life of this permit, demonstrating adherence to all conditions of this permit, and setting out the records required under Conditions 6(a) and 6(b) of this permit in relation to clearing carried out between 1 July and 30 June of the previous financial year.
- (b) Prior to 4 June 2016, the Permit Holder must provide to the Executive Director, Environment, Department of Mines and Petroleum a written report of records required under Conditions 6(a) and 6(b) of this Permit where these records have not already been provided under Condition 7(a) of this Permit.

Definitions

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

condition means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

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;

Keighery scale means the vegetation condition scale described in *Bushland Plant Survey: A Guide to Plant Community Survey for the Community (1994)* as developed by B.J. Keighery and published by the Wildflower Society of WA (Inc). Nedlands, Western Australia;

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;

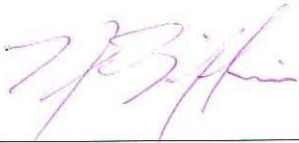
planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means *revegetation* that can be established from in situ seed banks 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, revegetated and revegetation means the re-establishment of a cover of native vegetation in an area such that the species composition, structure, density and *condition* is similar to pre-clearing vegetation types in that area, and can involve *regeneration, direct seeding and/or planting*;

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*.



Tim Griffin
DEPUTY DIRECTOR GENERAL
APPROVALS
DEPARTMENT OF MINES AND PETROLEUM

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

12 May 2011