



Government of **Western Australia**
Department of **Mines and Petroleum**
Environment



Management of Declared Rare Flora for Onshore Petroleum and Mineral Activities

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Guidelines for the Management of Declared Rare Flora for Onshore Petroleum and Mineral Activities

(Updated February 2006)

Special Series 16

These guidelines are relevant to the following Acts:

- *MINING ACT 1978*
- *PETROLEUM ACT 1967*
- *PETROLEUM PIPELINES ACT 1969*
- *PETROLEUM ACT 1967 SCHEDULE OF ONSHORE PETROLEUM EXPLORATION AND PRODUCTION REQUIREMENTS 1991*



Cover Page Figure 1: The Cairn Hill A Class Nature Reserve which contains three declared rare flora species and the endangered Coomberdale Chert Ecological Community.

This document provides guidance on dealing with Declared Rare Flora, however when working in Conservation Reserves and other Environmentally Sensitive areas operators need to consult “Information Series Pamphlet, No 11 Guidelines, Guidelines for Mineral Exploration and Mining within Conservation Reserves and other Environmentally Sensitive Lands in Western Australia”.

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1. Introduction

Western Australia has a diverse flora which is recognised internationally as one of the world's 34 biodiversity hotspots for its richness and uniqueness. There are over 12,000 different plant species

occurring in Western Australia with the majority of these being endemic to this State. Of the known endemic plant species many have limited scientific information. In addition it is considered that a further 4000 vascular plant species may still remain undescribed.

There are many species of flora which may become extinct, or which are rare or are otherwise in need of special protection because of current and past land use practices. These are gazetted as "rare flora" under the *Wildlife Conservation Act 1950*. Definitions of the categories of Declared Rare Flora (DRF) are presented in the subsequent section.

These rare flora are spread throughout the state, however the majority are concentrated geographically in the south west region of the State. Many rare flora populations occur outside of nature reserves, conservation parks and national parks that are managed by the State for conservation. It is important not only to conserve these species, but to manage them in an environmentally sensitive and sustainable manner for their on-going survival and benefit to the community.

Increasingly, the management of declared rare flora is being encompassed in a broader management plan which recognises the benefits of a self sustaining and functional ecosystem. These ecosystems can be classified as both non threatened and threatened ecological communities (TEC). Currently the State is formalising a Biodiversity Conservation Bill that will provide legal status for threatened ecological communities and provide critical flora habitat protection. This Bill when enacted will replace the *Wildlife Conservation Act 1950*.

These guidelines have been written to provide an indication of the relevant issues related to the approval of ground disturbing activities and management of Declared Rare Flora. Mineral and onshore petroleum activities that involve clearing of native vegetation or the destruction of individual plants have the potential to threaten the survival of rare flora. The mining and petroleum industries within their Codes of Practice acknowledge the responsibility to comply with environmental safeguards imposed under the *Mining Act 1978*, *Petroleum Act 1967*, *Petroleum Pipelines Act 1969*, *Environmental Protection Act 1986* and the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* to protect rare flora.

2. Declared Rare Flora Classifications

The following shows the classifications for listings on the DRF Schedule as defined under the *Wildlife Conservation Act 1950*.

Declared Rare Flora – Extant

Declared Rare Flora – Extant includes the category of *Threatened Flora* and its sub categories of *Critically Endangered*, *Endangered* and *Vulnerable* that have been more recently defined by the *Environmental Protection and Biodiversity Conservation Act 1999*. The definition of Declared Rare Flora – Extant is as follows:

Plants which have been adequately searched for and are deemed in the wild to be plants either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such.

Declared Rare Flora - Presumed Extinct

Declared Rare Flora – Presumed Extinct can be defined as follows:

Plants which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such.

2.1 Priority Flora List

There are also cases where plants appear to be rare or threatened, but for which there is insufficient scientific information to make a proper evaluation of their conservation status. These species are listed as Priority Flora. These require further investigation before they can be considered for inclusion on the DRF schedule.

The Priority Flora List does not have the same legal status as the DRF Schedule, however Priority Flora are considered under the *Environmental Protection Act 1986* as enforced by the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*, when determining biodiversity value of an area. The Priority Flora list is reviewed annually, with species being moved to different priority categories, or being added to the DRF Schedule depending on the recent surveys of plants on this list. Where species are found to be in abundance and under no immediate threat, they may be taken off the Priority List.

As a means of ensuring that these plants are not discounted and to provide some priorities for their survey, DEC maintains a Priority Flora List which categorizes the plants according to their conservation priority. Categories range from 1 to 4 and can be detailed as follows:

Priority One – Poorly Known Flora

Plants which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat e.g. road verges, urban areas, active mineral leases, etc. Such plants are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

Priority Two – Poorly Known Flora

Plants which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such plants are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

Priority Three – Poorly Known Flora

Plants which are known from several populations, and are not believed to be under immediate threat (i.e. not currently endangered). Such plants are under consideration for declaration as 'rare flora', but are in need of further survey.

Priority Four – Rare Flora

Plants which are considered to have been adequately surveyed and which, whilst being rare (in Australia) are not currently threatened by any identifiable factors. These plants require monitoring every 5-10 years.

It is important to consult with DEC if priority flora will be impacted upon by the proposed

mining or petroleum activity.

3. Legislation

A mining or exploration activity is directly regulated under the *Mining Act 1978*. In the case of onshore petroleum activities this regulation is via the *Petroleum Act 1967*, *Petroleum Pipelines Act 1969* and *Petroleum Act 1967 Schedule of Onshore Petroleum Exploration and Production Requirements 1991*. These Acts require a range of conditions to be satisfied that afford DRF protection and continued preservation. In addition to these Acts the following Acts in Western Australia regulate activities that have a direct affect on DRF.

Wildlife Conservation Act 1950 (WC Act 1950) administered by the Department of Environment and Conservation (DEC).

Environmental Protection Act 1986 (EPA Act 1986) as administered by the Department of the Environment.

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) administered by the Department of Environment, Water, Heritage and the Arts (DEWHA), Commonwealth Government.


To gain approval for land disturbances that directly affects DRF, approvals must be obtained under the relevant Acts and supporting regulations. The final approval for mining and petroleum activities in Western Australia is granted by the Department of Mines and Petroleum (DMP) once all approvals under the *WCA Act 1950*, *EPA Act 1986* and *EPBC Act 1999* have been given. Each of the Acts that directly afford protection to DRF can be explained as follows:

3.1 *Wildlife Conservation Act 1950*

The *Wildlife Conservation Act 1950* sets out requirements for the protection of flora. Any protected native flora that the Minister for the Environment considers to be rare, in danger of extinction or otherwise in need of special protection may, under the Act, be listed as Declared Rare Flora (DRF) to facilitate its continued survival in the wild.

A schedule of DRF is listed in the Government Gazette of Western Australia, with a review and updates annually. DEC botanists work closely with the community, tertiary institutions, environmental consultants and mining companies to find more populations of DRF species and to improve the knowledge and understanding of the conservation requirements of these species, and floral richness of Western Australia in general.

The requirements for the protection of DRF state that no person can take (which includes burning, clearing and/or modifying the habitat) any DRF without first obtaining the written consent of the Minister for the Environment. Such permission is also required where the taking of the DRF is beneficial, such as collecting seed or burning for regeneration of the species or habitat.



A person taking DRF without the appropriate approvals is liable to a fine, of up to \$10,000.

3.2 Environmental Protection Act 1986

New regulations under the *Environmental Protection Act 1986* now regulate the clearing of native vegetation in Western Australia. These new regulations replace previously enforced regulation under the *Soil and Land Conservation Act 1945*. Environmental Protection Regulations under the *Environment Protection Act 1986* directly control the disturbance of DRF. Under these regulations DRF locations are decreed to be Environmentally Sensitive Areas. In addition the regulations state, “the area covered by vegetation within 50m of DRF, to the extent that to which the vegetation is continuous with the vegetation in which the DRF is located” is deemed to be environmentally sensitive and thus requires a clearing permit.

These same Environmental Protection Regulations also control the clearing of native vegetation that does not contain DRF. The majority of these general native vegetation clearing activities require a clearing permit. Native vegetation clearing associated with mineral and petroleum activities is administered by the Native Vegetation Assessment Branch of DMP, acting under a delegation of the *Environmental Protection Act 1986*. Under this delegation only the Director of Environment and Deputy Director General Mineral and Petroleum Services within DMP can approve the clearing of native vegetation for the purpose of mineral and petroleum activities. As part of the application process for a clearing permit, proposals to clear native vegetation have a statutory requirement to be advertised to allow for public comment and provide a right of appeal. This process provides a means of ensuring that mining and onshore petroleum operations comply with the legal requirements and the three main environmental objectives of preserving biodiversity, minimising land degradation and maintaining ground and surface water quality that underlie the 10 native vegetation clearing principles are addressed. A list of the 10 native vegetation clearing principles are provided in appendix 1 of this document.

However, there are circumstances (clearing of native vegetation that does not contain DRF) in which a clearing permit is not required (i.e. exemptions). Exemptions include low impact and other mineral and petroleum activities designated in the regulations. Applicants should review their application in light of the exemptions outlined in this document, which can be downloaded from the [State Law Publisher's website](#).

Any disturbance of DRF without the appropriate clearing permit is liable to a fine, of up to \$500,000.

3.3 Environment Protection and Biodiversity Conservation Act 1999

At a national level a mineral or petroleum proposal can trigger the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*, when activities are considered to impact on a matter of National Environmental Significance (NES). A list of activities defined as triggers of NES can be reviewed within the *EPBC Act* via the Department of the Environment and Heritage's website. Nationally listed Threatened Flora are included as matters of NES, and most DRF are also listed as Threatened Flora under the *EPBC Act*.

Under the *EPBC Act*, the Australian Department of Environment, Water, Heritage and the Arts (DEWHA) can call for assessment. It must be noted that the *EPBC Act* is an independent process of that administered at a State level by DMP, EPA, DEC and DEC.

4. DMP's Interagency Agreements

To provide for a more efficient process of approvals under the various Acts a

range of agreements exist between DMP and the administering government agencies. These agreements are detailed in this section.

4.1 DEC and DMP's Mining Approvals Interagency Agreement

There is an agreement between DEC and DMP to recognise areas of environmental sensitivity (including DRF) and make companies aware of their obligations under the *Wildlife Conservation Act 1950*.

Currently an endorsement is placed by the Minister for State Development on all Mining Act tenements which are known to contain a DRF site at the time of grant. Via the endorsement, the responsibility is placed on the tenement holder to comply with the *Wildlife Conservation Act 1950*. This endorsement reads:

"The land the Subject of this licence/lease affects a Rare Flora Site/Sites declared under the Wildlife Conservation Act 1950. The licensee/leaseholder is advised to contact the Department of Environment and Conservation for detailed information on the management of Declared Rare Flora present within the tenement area."

In consultation with DEC, DMP has developed the following procedures to ensure that tenement holders with DRF sites are adequately informed to enable them to consult the regional DEC officers and obtain further information on the management and location of DRF.

It should be noted, however, that it is illegal for a person to take DRF without all of the necessary approvals. Thus the following procedures are designed to assist companies or individuals in complying with the legislation, and do not replace the legal onus on a company.

The procedures are as follows:

Mining Act tenement applications

When an **existing** DRF site (as depicted in the Department's TENGGRAPH/ public plan) affects a *Mining Act tenement application*, the DRF endorsement will be imposed at the time of grant.

Existing/Granted Mining Act tenements

When DEC notifies DMP of a **new** DRF site which affects an *existing Mining Act tenement*, the tenement holder is notified of the new DRF by DMP, then DMP using its delegated authority will impose the DRF endorsement on the mining tenement title. The endorsement requires the tenement holder to contact DEC in respect to the management and protection of the DRF.

Removal of DRF from State Register

DEC also advises DMP of the removal of DRF species from the Schedule of DRF. Although the flora are no longer designated as being rare or near extinction or otherwise in need of special protection, they may still remain a priority flora for management and should continue to be managed.

Upon notification from DEC, DMP will send a letter to the affected tenement holders outlining the removal of the rare flora from the Schedule of DRF.

4.2 EPA and DMP's Mining Approvals Interagency Agreement

In addition, a recent Memorandum of Understanding agreement between the Environmental Protection Authority (EPA) and DMP acknowledges that biodiversity is best conserved *in situ*. Any exploration and/or mining proposals that are considered to be environmentally significant will be referred to the EPA for assessment under the *Environmental Protection Act 1986*. DEC involvement occurs when activities have the potential to impact on protected flora.

4.3 EPA and DMP's Petroleum Approvals Interagency Agreement

DMP has a Memorandum of Understanding agreement in relation to onshore petroleum activities with the Environmental Protection Authority, whereby if a proposal is deemed to significantly impact on the environment, the proposal will be referred to the EPA. DEC becomes involved in the approval process when activities have the potential to impact on protected flora.

5. Management of Declared Rare Flora

5.1 Declared Rare Flora Protection Measures

The special protection afforded to DRF applies equally to all persons, and on all land tenures, whether they are Crown land, private or leasehold. On private land DEC works closely with landowners to discuss ways of managing rare flora, either by acquiring land through donation, purchase or land exchange or if the owner wants to retain the land, through fencing or other management incentives. Over the past decade, new nature reserves have been acquired in this way to protect populations of DRF.

Many DRF populations occur on roadsides especially in areas that have been extensively cleared for agriculture or urban development. Main Roads Department of Western Australia (MRWA) has developed operational guidelines for protection of DRF and both the MRWA and DEC work closely with Local Government Authorities to ensure protection of rare flora on Shire road reserves. These guidelines are also applicable to other transport routes, including within mining tenements and petroleum titles.

5.2 Proposal for Environmental Disturbance

Activities associated with onshore petroleum and mineral activities can result in a range of environmental disturbances. This may involve some modification of the surrounding environment during ground disturbing activities which are regulated under the *Mining Act 1978*, *Petroleum Act 1967* and *Petroleum Pipelines Act 1969* (as well as the Acts specific to DRF as mentioned in section 3.1 to 3.3).

Before the commencement of any ground-disturbing activities, the mineral tenement or petroleum title holder and/or operator must first obtain approval of the Department of Mines and Petroleum.

A company's or individual's requirements to satisfy the approval process for mining or petroleum

activities vary within DMP and are administered by separate branches. The individual processes for mining and petroleum respectively are detailed in the next sections.

5.2.1 Exploration and Mining Activities and DRF

All tenements are granted with a condition requiring the Director, Environment Division, DMP's approval prior to any ground disturbing or construction/development activities. To obtain this approval the operator must submit an exploration or mining proposal, which describes the activity, identifies the potential impacts and proposes management strategies to minimise these impacts. In addition the exploration or mining proposal should comply with all other endorsements and conditions on the tenement.

As an initial assessment of the occurrence of Declared Rare Flora operators can contact DEC, who on request will undertake a search of their current databases. For further details on DRF searches refer to section 5.2.3. If a desktop review indicates that DRF are present in the area of the proposed activity, then a botanical survey should be conducted to determine whether any DRF will be directly affected by the proposal. It should also be noted that when ground disturbance is to occur in an area where the vegetation has not been surveyed or is poorly surveyed, it would be prudent to determine the need for a biological survey in consultation with DEC.

Prior to conducting any botanical surveys, the proposed survey methods should be discussed with DEC to ensure that the methodology is suitable for assessment purposes. If DRF will be affected, further surveys may be required to determine the extent of impact on the species and an ongoing management plan for the protection/conservation of the population will be required.

When considering native vegetation clearing associated with the approval of a Notice of Intent/Mining Proposal (NOI/MP), under the *Environmental Protection Act 1986* (as detailed in section 3.2) a clearing permit may be required before final approval of the proposal can be granted. In order to assist in the preparation of an application, potential applicants are encouraged to contact the Native Vegetation Assessment Branch prior to submitting an application. Contact details can be found at the back of this document or at www.DMP.wa.gov.

Where Declared Rare Flora is to be removed by exploration and mining disturbance activities, permission is also required from the Minister for the Environment (via DEC) prior to the NOI/MP being approved. In addition approval may be conditional on proposal alterations, specific monitoring and continuing management programs as required. It is strongly recommended that consultation between the tenement holder, DEC Regional Officer and DMP Regional Environmental Officer be ongoing throughout the operation of the tenement.

If DRF will be disturbed an application to the Minister for the Environment to take DRF should be forwarded to DEC's Administrative Officer, Flora, Locked Bag 104, Bentley Delivery Centre 6983. Information related to the application to take DRF can be obtained by contacting local DEC officers, whose details are contained in the back of this document.

5.2.2 Onshore Petroleum Activities and DRF

In the early stages of onshore petroleum exploration, operators gain access to large tracts of land to provide the widest possible access and improve the chances of the discovery of petroleum and/or gas resources. These *Exploration Permits* can encompass up to 32,000km². Whereas *production permits* are much smaller and only encompass the specific oil or gas field to be developed. Petroleum exploration and development titles can be granted over a range of tenures including Crown land, pastoral land, reserved land, private land and over Native Title land where the provisions of the

Commonwealth Native Title Act 1993 have been satisfied. At this early stage of permit granting only general aspects of land tenure are reviewed. This review does not specifically examine the localised occurrence of DRF.

Onshore Petroleum titles are allocated by a competitive bidding process. A petroleum title gives the operator the exclusive right to explore however Petroleum titles when granted are subject to **imposed conditions** that require a separate Environmental Management Plan (EMP) for each work program to be submitted to DMP.

For all onshore petroleum proposals ranging from seismic surveys to pipeline construction, an EMP must to be submitted to DMP. EMPs document the petroleum activities and the characteristics of the surrounding environment. Within these plans the company is required to detail the expected environmental impacts and their proposed management which includes DRF.

The EMP details the exact location of the work program. As a check, DMP plots the location of the activity and ground disturbance in relation to the GIS databases held within the Department that includes the occurrence of DRF. This information is forwarded onto the relevant Environmental Assessor and is consulted during the processing of the EMP application.

DMP's role is to provide the first point of contact for proposed onshore petroleum activities. Environmental Assessors from DMP can provide advice on regulatory aspects and referrals to DEC, EPA and other government agencies and their related jurisdictions.

Identification of all impacts to the environment including all aspects related to DRF is the responsibility of the operator. After receiving advice from DMP, the proponent should consult with DEC on all DRF issues.

As an initial assessment of the occurrence of Declared Rare Flora operators can contact DEC, who on request will undertake a search of their current databases. For further details on DRF searches refer to section 5.2.3. If a desktop review indicates that DRF are present in the area of the proposed activity, then a botanical survey should be conducted to determine whether any DRF will be directly affected by the proposal. It should also be noted that when ground disturbance is to occur in an area where the vegetation has not been surveyed or is poorly surveyed, it would be prudent to determine the need for a biological survey in consultation with DEC. Prior to conducting any botanical surveys, the proposed survey methods should be discussed with DEC to ensure that the methodology is suitable for assessment purposes. If DRF will be affected, further surveys may be required to determine the extent of impact on the species and an ongoing management plan for the protection/conservation of the population will be required.

The *Environmental Protection Act 1986* provides a mechanism for the management of Native Vegetation Clearing at a State level. As part of this process a clearing permit may be required before final approval of the proposal can be granted. In order to assist in the preparation of an EMP and clearing permit application, potential applicants are encouraged to refer to the details in section 3.2 and if required contact the Native Vegetation Assessment Branch prior to submitting their documentation. Contact details can be found at the back of this document or at www.DMP.wa.gov.

When petroleum activities have a direct and unavoidable effect on Declared Rare Flora, approval is required from the Minister for the Environment (via DEC) for the activity to proceed. An application to the Minister for the Environment to take DRF should be forwarded to DEC's Administrative Officer, Flora, Locked Bag 104, Bentley Delivery Centre 6983. Inquires pertaining to applications to take DRF can be obtained by contacting a DEC officer, whose details are contained in the back of this document.

5.2.3 Data Searches for the Presence of DRF

As part of the submission of an EMP or a NOI/MP document, DEC on request, can provide a DRF database search facility and a desktop study for specified geographical areas. DEC's contact details are provided at the end of this document. The data supplied includes DRF species details and their geographical locations. Costs of the data search are incurred by the organisation or individual initiating the search. The search results indicate the likelihood of DRF (or Priority Flora) occurring in an area, and provide guidance for directing a site flora survey. It must be noted that DEC's database represents the DRF that have been compiled from submitted reports and does not represent an exhaustive survey of the entire State.

5.2.4 Commonwealth Requirements for DRF under the *Environment Protection and Biodiversity Conservation Act 1999*

At a National level regulations under the EPBC Act (as detailed in Section 3.3 of this document) require **operators** to refer the proposal to the DEWHA, if it is considered that the proposal is likely to cause impacts of National Environmental Significance. A referral to the DEWHA applies equally to petroleum and mining activities, thus operators should access the proposal in light of the criteria that define NES which includes DRF. Substantial penalties will be incurred by the operator for a failure to refer the proposal to the DEWHA. When operators are uncertain about referral to the DEWHA, it is recommended to adopt a precautionary approach and refer the proposal.

5.3 Evaluating and Monitoring Impacts on Declared Rare Flora

To summarise the impacts to DRF or priority species, it is recommended as part of the management of DRF, a summary table detailing the effect to the populations be constructed. In constructing the table the impact of the proposed operation on the DRF can be tracked through time. This table could be included in annual environmental reporting documentation to DMP to demonstrate a commitment to the ongoing management of DRF. An example of such a table is shown in Table 1 below:

Species	Plants Proposed to be Removed.			Total plant expected to be taken in mining plan area	Approx Total Plants in Lease/licence (or contiguous adjacent area)	Approx Other Populations In 10 Km	Total Known Population	Comments
	Year 1	Year 2	Total					

Table 1: Example of DRF Impact Table.

Where the presence of rare flora not previously know or that has occurred outside the area of earlier activities, may impede on the ongoing operations, permission may be given to disturb plants of DRF, provided the local conservation status of the species is not compromised. In such situations, a management program which encompassed monitoring may need to be prepared.

6. Benefits from Mining and Petroleum Activities

Botanical surveys conducted by mining and petroleum companies on tenement areas prior to operations can result in research on rare flora and communities being undertaken, thus providing both additional species-specific information and geographical distributions. Some surveys have resulted in additional populations of rare flora being recorded. This information helps DEC amend its database on the State's rare flora. An improved understanding of DRF and geographical distribution can be illustrated by the discovery of the presumed extinct plant *Hemigenia exilis* in the Leonora area, which initiated research and management programs.

Most Priority Flora, by definition, have not yet been adequately surveyed. Where Priority Flora are located in the vicinity of mineral or petroleum activity, additional surveys for the species can often result in increased numbers of plants or populations being located, thereby reducing the relative impact of the activity on the species population. Such work helps to overcome potential environmental impediments to mineral and petroleum activities, and provides additional information to DEC, enabling the status of the Priority Flora to be reviewed.

Some areas within the State have been recognised to have significant ecological value. To conserve these areas a process of gazettal is required that involves the acquisition and management of land for the specific preservation of biodiversity. In co-operation with government agencies, mining and petroleum companies have assisted in the creation of these nature reserves in some localities. In the Cairn Hill area near Moora, an A Class Nature Reserve was established over the Coomberdale Chert Ecological Community that contains three species of threatened flora and seven other plant species that are of research and conservation value (Cover Page Figure 1).

Operations in close proximity to DRF can heighten awareness of these populations through education of both the community and workforce.

Some types of mining disturbances result in species of DRF growing on disturbed sites as colonising species. There are instances where mining activities have actually promoted subsequent growth of DRF. These plants then become protected under the Act and though it may seem paradoxical that industry activities led to the growth of DRF, they are still protected. An example in the Southern Cross region is the colonising species *Eremophila inflata* (swollen-flowered emu bush) at Marvel Loch (Figure 2). In these situations, cooperative management arrangements need to be negotiated with DEC.

7. Future Directions for Management of DRF

Effective management of rare flora will be assisted by continued work by DEC, in association with industry. This work involves monitoring known populations of rare flora; taxonomic, biogeographic and population biology research; acquisition of additional nature reserves; the provision of incentives and assistance to private landowners; and the development of a rare flora geographical information system. Improved knowledge and management will aid in a more robust risk assessment, resulting in an optimisation of resource requirements.

Within Western Australia, increasing community awareness of the importance of endangered flora and threatened ecological communities together with the establishment of a bilateral agreement encompassing the *Environment Protection and Biodiversity Conservation Act* 1999 with the Australian Government and the current formulation of the Biodiversity Conservation Bill at a State level, indicates a clear commitment to conservation and protection of rare flora. Increasingly focus is being placed on the management of threatened and non threatened ecological communities which contain rare flora. The co-operation and involvement of the resource sector in this process is encouraged.

8. Acknowledgments

These guidelines have been prepared by officers of the Industry and Community Liaison Branch of the Geological Survey Division, Mineral and Titles Service Division, Petroleum and Royalties Division and the Environment Division of the Department of Mines and Petroleum in collaboration with the Department of Environment and Conservation (DEC).

9. Acronyms

DEC	- Department of Environment and Conservation
DEWHA	- Department of Environment, Water, Heritage and the Arts
DMP	- Department of Mines and Petroleum
DRF	- declared rare flora
EMP	- Environmental Management Plan
EP Act	- <i>Environmental Protection Act 1986</i>
EPA	- Environmental Protection Authority
EPBC Act	- <i>Environmental Protection and biodiversity conservation Act 1999</i>
NES	- National Environmental Significance
TEC	- threatened ecological community
WC Act	- <i>Wildlife Conservation Act 1950</i>

The following is a list of contact details for queries concerning Declared Rare Flora.

DEC Regional, District and Local Offices

OPERATIONS HEADQUARTERS

17 Dick Perry Avenue
Western Precinct Technology Park
KENSINGTON WA 6151
(08) 93340333 Fax 93340466

Postal Address:
Locked Bag 104
Bentley Delivery Centre 6983
(08) 93340333

Species and Communities Branch
General Enquires (08) 93340455
Administrative Officer, Flora (08) 93340422
Fax (08) 93340278

KIMBERLEY

Regional Office

Messmate Way
P0 Box 942
KUNUNURRA 6743
Tel: (08) 91684200
Fax: 91682179

District Office

Herbert Street
P0 Box 65
BROOME 6725
Tel: (08) 91921036
Fax: 91935027

MIDWEST

Regional Office

1ST Floor, The Foreshore Centre,
201 Foreshore Drive
P0 Box 72
GERALDTON 6530
Tel: (08) 99215995
Fax: 99215713

Local Office

211 Robinson Street
PO Box 500
CARNARVON 6701
Tel:(08)99413754
Fax: 99411801
Mobile: 0427413754
Satellite Phone: 0405182708

District Offices

124 Bashford Street
P0 Box 638
JURIEN 6516
Tel:(08)96521911
Fax: 96521922

Knight Terrace
DENHAM 6537
Tel:(08)99481208
Fax: 99481024

DEC Regional, District and Local Offices

PILBARA

Regional Office

Mardie Road
Karratha Industrial Estate
P0 Box 835
KARRATHA 6714
Tel:(08)91431488
Fax: 91441118

District Office

22 Nimitz Street
P0 Box 201
EXMOUTH 6707
Tel:(08)99491676
Fax: 99491580

SWAN

Regional Office

Dick Perry Avenue
Western Precinct Technology Park
KENSINGTON WA 6151
P.O. Box 1167
BENTLEY 6983
Tel: (08)93684399
Fax: 93684299

District Offices

Mundaring Weir Road
MUNDARING 6073
Tel (08) 92951955
Fax 92952404

5 Dundobar Road
WANEROO 6065
Tel (08) 94050700
Fax 94050777

Local Offices

Banksiadale Road
DWELLINGUP 6213
Tel:(08)95381078
Fax: 95381203

George Street
JARRAHDAL 6203
Tel:(08)95255177
Fax: 95255547

47 Henry Street
FREMANTLE 6160
Tel:(08)93360111
Fax: 94305408

GOLDFIELDS

Regional Office

Hannan Street
P0 Box 10173
KALGOORLIE 6430
Tel: (08) 90212677
Fax: 90217831

DEC Regional, District and Local Offices

WARREN	
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Department of Mines and Petroleum

ENVIRONMENT DIVISION
Mineral House 100 Plain Street EAST PERTH WA 6004

MINERALS ENVIRONMENT BRANCH	
Northern Region – Pilbara and Kimberley (Perth Office) (Covering Mineral Fields 04, 08, 09, 20, 21, 51, 45, 46, 47, 52 and 80) Mineral House 100 Plain Street EAST PERTH WA 6004 Tel: (08) 92223084 Fax: 92223860	South West and Goldfields Region (Perth Office) (Covering Mineral Fields 01, 12, 57, 58, 59, 66, 70S, 74, 77 and 70N) Mineral House 100 Plain Street EAST PERTH WA 6004 Tel: (08) 92223528 Fax: 92223860

(Kalgoorlie Office)

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NATIVE VEGETATION ASSESSMENT BRANCH

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Appendix 1

The **Principles for Clearing Native Vegetation** under Schedule 5 of the *Environmental Protection Amendment Act 2003* (Amendments to *Environmental Protection Act 1986*) are as follows.

Native vegetation should not be cleared if –

1. it comprises a high level of biological diversity;
2. it comprises the whole or a part of, or is necessary for the maintenance of, significant habitat for fauna indigenous to Western Australia;
3. it includes, or is necessary for the continued existence of, rare flora;
4. it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community;
5. it is significant as a remnant of native vegetation in an area that has been extensively cleared;
6. it is growing in, or in association with, an environment associated with a watercourse or wetland;
7. the clearing of the vegetation is likely to cause appreciable land degradation;
8. the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area;
9. the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water; or
10. the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.



Figure 2: Example of colonising species of rare *Eremophila inflata* (pale grey plants located on the left hand side of the photograph) on drill pad in Jilbadji Nature Reserve.

This pamphlet is issued by the Environment Division of the Department of Industry and Resources.

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N.B. The information contained in this pamphlet is designed to assist in gaining a general awareness of the requirements of *the Mining Act 1978, Petroleum Act 1967, Petroleum Pipelines Act 1969 and Petroleum Act 1967 Schedule of Onshore Petroleum Exploration and Production Requirements 1991* and is not intended to be a substitute for understanding the statutory requirements of the Act and Regulations there under.