



## 1. Application details

### 1.1. Permit application details

Permit application No.: 7666/1  
Permit type: Purpose Permit

### 1.2. Applicant details

Applicant's name: Shire of Northam  
Application received date: 27 June 2017

### 1.3. Property details

Property: Chinganning Road Reserve – 11721413 and 11657611, Copley  
Local Government Authority: Northam, Shire of  
Localities: Copley

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	Road widening and maintenance

### 1.5. Decision on application

**Decision on Permit Application:** Refused  
**Decision Date:** 23 January 2019  
**Reasons for Decision:** The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing is at variance to principles (b) and (f), may be at variance to principle (a), and is not likely to be at variance to the remaining principles.

The Delegated Officer determined that the vegetation within the application area comprises significant feeding habitat to black cockatoos, vegetation associated with a watercourse and may comprise of high level of biological diversity.

On 14 December 2017, a Delegated Officer of the Department of Water and Environmental Regulation (DWER) wrote to the applicant, outlining the above mentioned environmental impacts and advised that in order to address potential impacts further avoidance and minimisation was required and an offset for the remaining significant residual impacts. The applicant reduced the application from five hectares to 3.2 hectares, but no further avoidance or offsets were provided.

On 26 November 2018, the Delegated Officer wrote to the applicant and provided 21 days written notice of the intent to refuse to grant a clearing permit. No response from the applicant was received.

In making the decision to refuse to grant the clearing permit, the Delegated Officer had regard to the environmental values of the native vegetation outlined under principles (a), (b) and (e), and planning instruments and other relevant matters outlined in this report.

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

**Vegetation Description** Three South West Forests vegetation complexes are mapped within the application area (Heddlé et al., 1998):

- 'Murray 2' (MY2) is described as: open forest of *Eucalyptus marginata* subsp. *thalassica* - *Corymbia calophylla* - *Eucalyptus patens* and woodland of *Eucalyptus wandoo* with some *Eucalyptus accedens* on valley slopes to woodland of *Eucalyptus rudis* - *Melaleuca raphiophylla* on the valley floors in semiarid and arid zones;
- 'Pindalup' (Pn) is described as: open forest of *Eucalyptus marginata* subsp. *thalassica* - *Corymbia calophylla* on slopes and open woodland of *Eucalyptus wandoo* with some *Eucalyptus patens* on the lower slopes in semiarid and arid zones; and

- 'Yalanbee' (Y5) is described as: mixture of open forest of *Eucalyptus marginata* subsp. *thalassica* - *Corymbia calophylla* and woodland of *Eucalyptus wandoo* on lateritic uplands in semiarid to perarid zones.

<b>Clearing Description</b>	The application is to clear 5 hectares of native vegetation within Chinganning Road reserve, Copley, for the purpose of road widening and maintenance.
<b>Vegetation Condition</b>	Good; Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994). To Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).
<b>Comment</b>	The vegetation description and condition was determined via aerial imagery and a site inspection undertaken by Department of Water and Environmental Regulation (DWER) Officer's (DWER, 2017).

### 3. Minimisation and mitigation measures

To address the identified environmental impacts the applicant reduced the amount of native vegetation to be cleared from 5 hectares to 3.2 hectares.

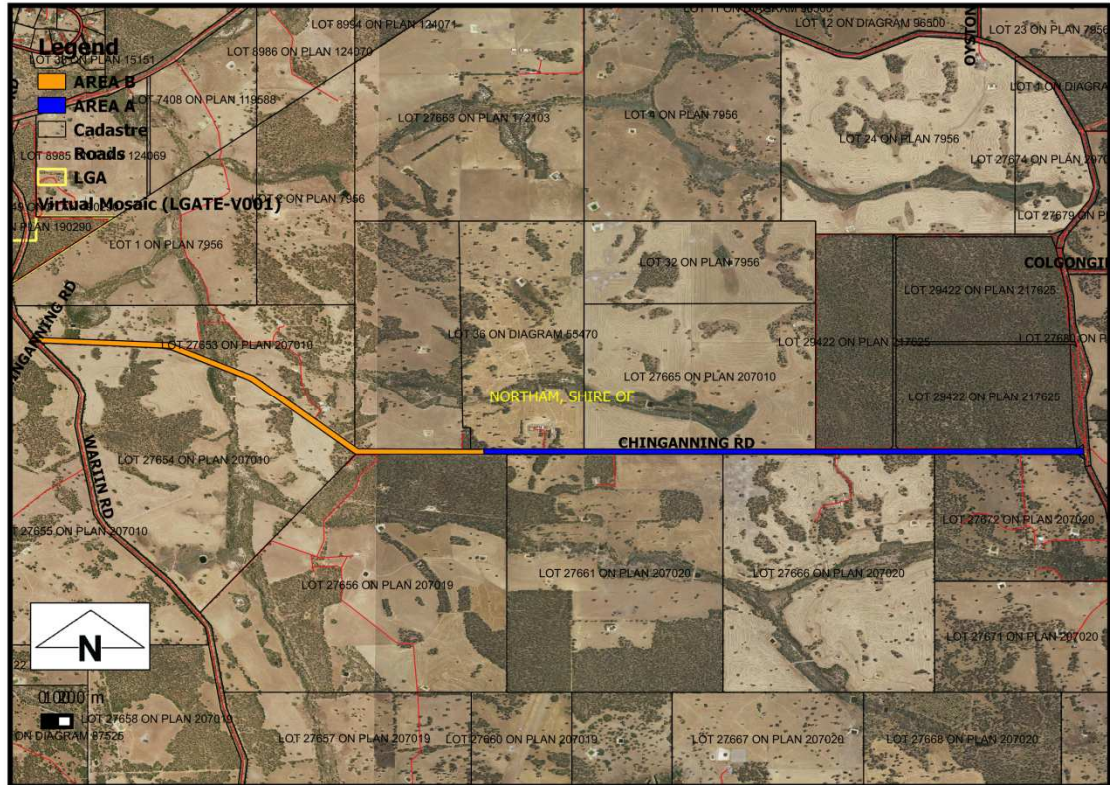
The applicant advised that:

- The widening of the existing road between 6.0 SLK to 7.1SLK, will be approximately 4 meters widening each side to cover the works (0.88 hectares); and
- Maintenance works 0.0 SLK to 6.0 SLK, is to reinstate the correct road width, which will require removal vegetation 2 meters each side from the current road width (2.4 hectares) (Shire of Northam, 2017).

### 4. Assessment of application against clearing principles

#### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

<b>Comments</b>	<p><b>Proposed clearing may be at variance to this Principle</b></p> <p>The application is for the proposed clearing of 5 hectares of native vegetation within Chinganning Road reserve (PIN's 11657611 and 11721413), Copley, for the purpose of road widening and maintenance.</p> <p>Approximately 1.5 kilometres from the western end of the application area has been partially cleared prior to the application. This assessment has been undertaken using the pre clearing condition of the application area.</p> <p>The application area is in a degraded to good (Keighery, 1994) condition (DWER, 2017). The application area has been considered as two distinct areas based on differences in the vegetation condition and composition:</p> <p>Area A comprises 3.8 kilometres of the application area from the eastern end and consists predominantly of <i>Eucalyptus marginata</i> (jarrah) and <i>Corymbia calophylla</i> (marri) within the overstorey with <i>Banksia</i> sp. dominant within the midstorey. Associated vegetation includes <i>Allocasuarina</i> sp., <i>Macrozamia</i> sp., <i>Xanthorrhoea</i> sp. and <i>Hibbertia</i> sp. The understorey was dominated by weedy grasses. <i>Eucalyptus wandoo</i> (wandoo) was present within the overstorey within the most western portion of Area A (DWER, 2017).</p> <p>Area B comprises 3.2 kilometres of the application area from the most western edge and consists predominantly of wandoo within the overstorey with some scattered marri and jarrah throughout. The midstorey was degraded (Keighery, 1994) with scattered <i>Banksia</i> sp., <i>Macrozamia</i> sp. and <i>Xanthorrhoea</i> sp. throughout. The understorey was in a completely degraded (Keighery, 1994) condition, dominated by weeds (DWER, 2017).</p>
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**Figure 1: Two Areas identified within the application area.**

According to available databases, one threatened flora and 14 priority flora species have been recorded within the local area (10 kilometre radius). As discussed under Principle (c), the proposed clearing area is not likely to contain suitable habitat for threatened flora species.

Of the priority flora species recorded within the local area, seven species are listed as Priority 4 and five species are listed as Priority 3. Priority 3 species are known from several locations, and do not appear to be under imminent threat, and Priority 4 species are considered to have been adequately surveyed, and are considered not currently threatened or in need of special protection, but could be if present circumstances change. Given the above, the proposed clearing is not likely to impact on the conservation status of any Priority 3 or Priority 4 flora species.

One Priority 1 flora species, *Senecio gilbertii*, and one Priority 2 flora species, *Cyanicula ixioides* subsp. *candida*, have been recorded within the local area. *Senecio gilbertii* is found on peaty sand, swamps and slopes (Western Australia Herbarium 1998-). Vegetation within in the application area is not likely to comprise of suitable habitat for this species.

*Cyanicula ixioides* subsp. *candida* has been recorded approximately 4.8 kilometres south of the application area and has been found on sand, laterite and gravel (Western Australia Herbarium, 1998-). There are seven known occurrences of this species, distributed over 270 kilometres. One record located approximately 8.2 kilometres south of the application area is located within conservation estate. Given the linear nature of the application area that is located adjacent to an existing road infrastructure, the proposed clearing is not likely to have a significant impact on significant habitat or the conservation status of this species.

As assessed in Principle (b), Area A provides good quality foraging and potential breeding habitat and Area B provides low quality foraging habitat and potential breeding habitat for the conservation significant forest red-tailed black-cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and Carnaby's cockatoo (*Calyptorhynchus latirostris*). The clearing of 1.92 hectares of good quality foraging is likely to have an impact on significant habitat for these species.

As assessed under Principle (d), the proposed clearing area is not likely to contain vegetation consistent with a threatened ecological community (TEC).

Given the above, the application area may be considered to comprise a high biological diversity and the proposed clearing may be at variance to this Principle.

**Methodology**    References:  
 DWER (2017)  
 Keighery (1994)  
 Western Australia Herbarium (1998-)

**(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 Proposed clearing is at variance to this Principle**

Eight fauna species listed as rare or likely to become extinct under the *Biodiversity Conservation Act 2018* (BC Act) within the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* have been recorded within the local area, being: woylie (*Bettongia penicillata* subsp. *ogilbyi*), forest red-tailed black-cockatoo, Baudin's cockatoo, Carnaby's cockatoo, chuditch (*Dasyurus geoffroii*), shield-backed trapdoor Spider (*Idiosoma nigrum*), bilby (*Macrotis lagotis*), and numbat (*Myrmecobius fasciatus*) (Department of Biodiversity, Conservation and Attractions [DBCA], 2007-).

Carnaby's cockatoo, Baudin's cockatoo and forest red-tailed black-cockatoo have been given the status of endangered and vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These species forage on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (*Banksia*, *Hakea* and *Grevillea*), as well as *Allocasuarina* and *Eucalyptus* species, *Corymbia calophylla* and a range of introduced species (Valentine and Stock, 2008). The application area provides foraging habitat for the three black cockatoo species due to the presence of jarrah, marri and *Banksia* species.

According to available databases the closest known breeding area is located approximately seven kilometres north of the application area. The recovery plan for Carnaby's cockatoo defines breeding habitat as including nesting sites, and the foraging habitat and water sources within foraging distance of nesting sites (Department of Parks and Wildlife, 2013). These areas are considered to be habitat critical to the survival for Carnaby's cockatoo (Department of Parks and Wildlife, 2013). The loss or degradation of feeding habitat within 12 kilometres of nesting sites is considered to pose the greatest risk to Carnaby's cockatoo (Saunders and Ingram, 1998; Department of Parks and Wildlife, 2013). As the cleared area contains foraging habitat within 12 kilometres of a known nesting site, the application area may comprise of significant foraging habitat for black cockatoos.

To be suitable as a black cockatoo breeding site, trees require a suitable nest hollow or be of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, a suitable DBH is 500 millimetres (Commonwealth of Australia, 2012). A site inspection undertaken within the application area identified a number of large trees that have the potential to develop suitable breeding hollows for the black cockatoos. Small hollows were observed in some trees, however they were not of size or shape to be suitable for breeding by the Carnaby's cockatoo (DWER, 2017).

Noting the vegetation identified within the application area, Area A comprises of good quality foraging habitat and potential breeding habitat for the conservation significant black cockatoo species. Area B is likely to comprise of potential breeding and low quality foraging habitat for this species.

The chuditch currently inhabit most kinds of wooded habitat within its current range including eucalypt forest (especially jarrah, dry woodland and mallee shrublands). In jarrah forest, chuditch populations occur in both moist, densely vegetated, steeply sloping forest and drier, open, gently sloping forest (Department of the Environment and Energy [DotEE], 2017a). Suitable habitat for this species may occur within the application area, however given clearing is proposed to an extent between 2 – 4 metres either side of a road reserve that currently retains approximately 14 metres vegetation either side, suitable habitat for this species will remain adjacent to the application area.

In the Wheatbelt, the shield-backed trapdoor spider typically inhabits clay soils whereas the arid Midwest populations are associated with rocky habitats, primarily in positions with increased moisture retention properties like gullies and drainage lines on southern facing slopes. In the Wheatbelt, populations are associated with eucalypt woodland and *Acacia* shrubland, and in the arid Midwest they are associated with *Acacia* shrubland (DotEE, 2017b). Suitable habitat for this species is not likely to be located within the application area.

One record of the woylie, in 2002 and one record of the numbat, in 1981 has been recorded with the local area. Two records of bilby have been recorded within the local area, the most recent being in 1956. Given the low number and age of the records of these species it is unlikely that these species will occur within the application area.

The application area may provide an ecological linkage allowing fauna to move between conservation areas and remnant vegetation within the local area. The local area retains approximately 49 per cent native vegetation and the application area comprises good to degraded (Keighery, 1994) condition vegetation. The proposed clearing will involve clearing of up to four metres either side for a one kilometre stretch and up to two metres wide for the remainder of the application area. The road reserve currently retains approximately 14 metres of vegetation either side of the road and therefore vegetation will remain within the road reserve that will function as an ecological linkage. Therefore, the proposed clearing is not likely to have a significant impact on the movement of fauna across the landscape.

The proposed clearing is likely to impact upon significant habitat for the black cockatoo species. Given the above, the proposed clearing is at variance to this Principle.

**Methodology** References:  
Commonwealth of Australia (2012)  
DBCA (2007-)  
Department of Parks and Wildlife (2013)  
DotEE (2017a)  
DotEE (2017b)  
Valentine and Stock (2008)  
Saunders and Ingram(1998)

GIS Datasets:  
SAC Biodata sets accessed November 2017

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

**Comments** **Proposed clearing is not likely to be at variance to this Principle**  
According to available databases, one threatened flora species has been recorded within the local area. This species grows in granite outcrops, often in rock crevices (Brown et al., 1998).

Suitable habitat for this species is not likely to be located within the application area and was not recorded during the site inspection (DWER, 2017).

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

**Methodology** References:  
Brown et al. (1998)  
DWER (2017)

GIS Datasets:  
SAC Bio datasets (accessed November 2017)

**(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** **Proposed clearing is not likely to be at variance to this Principle**  
No TECs have been recorded within the application area. The closest mapped TEC, 'Eucalypt woodlands of the Western Australian Wheatbelt' is located 18 kilometres east of the application area.

The application area is located outside of the Wheatbelt region and the known distribution of the abovementioned TEC, therefore the application area is not likely to be necessary for the maintenance of a TEC.

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

**Methodology** GIS Datasets:  
SAC Bio datasets (accessed November 2017)

**(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** **Proposed clearing is not likely to be at variance to this Principle**  
The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The local area (10 kilometre radius) retains approximately 49 per cent native vegetation. The application area is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and within the Shire of Northam which retain approximately 54 per cent and 24 per cent of their pre-European vegetation extents respectively (Government of Western Australia, 2017).

The application area is mapped as South West Forests Vegetation Complexes My2, Y5 and Pn of which retain 69, 66 and 77 per cent of their pre-European vegetation extents within the Jarrah Forest IBRA bioregion respectively (Government of Western Australia, 2018).

The application area contains foraging and potential breeding habitat for black cockatoo species, however, as the local area and mapped vegetation complexes retain vegetation above the recommended threshold, and given the linear nature of the application area, it is not likely to be considered significant as a remnant of native vegetation in an area that has been extensively cleared.

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

	<b>Pre-European</b>	<b>Current Extent</b>	<b>Remaining</b>	<b>Extent in DBCA Managed Lands</b>
	<b>(ha)</b>	<b>(ha)</b>	<b>(%)</b>	<b>(%)</b>
<b>IBRA Bioregion</b>				
Jarrah Forest	4,506,660	2,416,018	54	69
<b>South West Forests Vegetation Complex**</b>				
My2	59,317	40,904	69	40
Y5	126,610	83,855	66	39
Pn	167,151	128,369	77	60

**Methodology** References:  
Commonwealth of Australia (2001)  
\*\*Government of Western Australia (2018)

GIS Databases:  
NLWRA, Current Extent of Native Vegetation

**(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** **Proposed clearing is at variance to this Principle**  
According to available databases, one major watercourse, Chinganning Gully, and two minor watercourses intersect the application area.

Given the above, the application area is considered to be growing in association with a watercourse and the proposed clearing is at variance to this Principle.

However, given the linear nature of the proposed clearing and that there are likely to be culverts or existing drainage infrastructure in place, the proposed clearing is not likely to have a significant impact on the environmental values of the abovementioned watercourses.

**Methodology** GIS Databases:  
Hydrology, linear

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments** **Proposed clearing is not likely to be at variance to this Principle**  
Two soils types have been mapped within the application area which are described as (Northcote et al., 1960 – 1968):

- Tf3: low hilly to hilly terrain which comprises valleys that are frequently narrow and have short fairly steep pediments, along with breakaways, mesas, and occasional granite tors. Chief soils are hard acidic yellow mottled soils along with sandy acidic yellow mottled soils all of which contain moderate to large amounts of ironstone gravels in their surface horizons; and
- JZ2: Dissected plateau having a gentle to moderately undulating relief, and with broad swampy drainage-ways and basins. It is characterized by lateritic gravels and block laterite: the chief soils are ironstone gravels with sandy and earthy matrices. They overlie duricrusts of recemented ironstone gravels and/or vesicular laterite, and/or mottled-zone and/or pallid-zone material.

Given the abovementioned mapped soil types, the proposed clearing along a seven kilometre linear stretch of road in a good to degraded (Keighery, 1994) condition with vegetation to remain within the road corridor is not likely to lead to land degradation through water erosion, water logging, wind erosion, salinity or eutrophication.

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

**Methodology** References:  
Northcote et al. (1960 – 1968)

GIS databases:  
Hydrology, linear  
Soils, statewide



**(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 Proposed clearing is not likely to be at variance to this Principle**

The eastern portion of the application area is located adjacent to Inkpen Road Nature Reserve. The Keaginine Nature Reserve is located approximately 440 metres north west of the western end of the application area.

Given the close proximity of the Inkpen Road Nature Reserve the proposed clearing may indirectly impact this nature reserve through the spread of weeds and dieback. Weed and dieback management practices will mitigate this risk.

The application area may provide an ecological linkage allowing fauna to move between conservation areas and remnant vegetation within the local area. However the proposed clearing will involve clearing of up to four metres either side of the road for a one kilometre stretch and up to two metres wide for the remainder of the application area. The road reserve currently retains approximately 14 metres of vegetation either side of the existing road and therefore vegetation will remain within the road reserve that will continue to function as an ecological linkage.

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

**Methodology** GIS Databases:  
DBCA, Tenure

**(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 Proposed clearing is not likely to be at variance to this Principle**

According to available databases, one major watercourse, Chinganning Gully, and two minor watercourses intersect the application area.

The proposed clearing may increase run-off and sedimentation into the watercourses intersecting the application area, however this impact is likely to be minimal and short term. In addition, there are likely to already be culverts in place which will ensure that surface water flow is not disturbed.

Groundwater salinity is mapped between 1000 - 7000 milligrams per litre total dissolved solids which is considered to be brackish to saline. Due to the small size and linear nature of the proposed clearing, the good to degraded (Keighery, 1994) condition of the application area, and that native vegetation is to remain within the road corridor, the proposed clearing is not likely to cause deterioration in the quality of underground water.

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

**Methodology** References:  
Keighery (1994)

GIS Databases:  
Hydrology, linear  
Groundwater salinity

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments Proposed clearing is not likely to be at variance to this Principle**

Given the mapped soil types present, size of the proposed clearing and that vegetation remains within the road reserve, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

While three watercourses intersect the application area, the clearing is not likely to be of a size or scale as to cause or exacerbate flooding.

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

**Methodology** GIS Datasets:  
Hydrography, linear

**Planning instruments and other relevant matters.**

**Comments** The application was advertised on the DWER's website on 2 August 2017 for a 21 day submission period. No submissions have been received in relation to this application.

No Aboriginal Sites of Significance have been recorded within the application area.

**Methodology** GIS Datasets:  
Aboriginal Sites of Significance

## 5. Applicant's Submissions

On 14 December 2017, a Delegated Officer of DWER wrote to the applicant, outlining the above mentioned environmental impacts. It was noted that the applicant reduced the application from five hectares to 3.2 hectares, however despite these measures the Delegated Officer advised that significant residual impacts remain and advised that in order to address potential impacts further avoidance and minimisation was required and an offset for the remaining significant residual impacts.

On 24 October 2018, a copy of the preliminary assessment and DWER's letter dated 14 December 2017 was re sent to the applicant.

On 26 November 2018, the Delegated Officer wrote to the applicant and provided 21 days written notice of the intent to refuse to grant a clearing permit. No response from the applicant was received.

## 6. References

- Brown A., Thomson-Dans C. and Marchant N. (1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.
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- Western Australian Herbarium (1998- ) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. <http://florabase.dpaw.wa.gov.au/> (Accessed November 2017)