



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9331/1
File Number: DWERVT8133
Duration of Permit: From 16 October 2021 to 16 October 2023

PERMIT HOLDER

City of Busselton

LAND ON WHICH CLEARING IS TO BE DONE

Lot 8 on Diagram 66799, Naturaliste

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.1 hectares of *native vegetation* including 11 *Agonis flexuosa* trees within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending 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.

2. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, mulch, fill, or other material is brought into the area to be cleared; and

- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

| No. | Relevant matter | Specifications |
|-----|---|---|
| 1. | In relation to the authorised clearing activities generally | <ul style="list-style-type: none"> (a) the species composition, structure, and density of the cleared area; (b) 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; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 2. |

4. Reporting

The permit holder must provide to the *CEO* the records required under condition 3 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

| Term | Definition |
|-------------------|--|
| CEO | Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> . |
| clearing | has the meaning given under section 3(1) of the EP Act. |
| condition | a condition to which this clearing permit is subject under section 51H of the EP Act. |
| dieback | means the effect of <i>Phytophthora</i> species on native vegetation. |
| department | means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3. |
| EP Act | <i>Environmental Protection Act 1986</i> (WA) |
| native vegetation | has the meaning given under section 3(1) and section 51A of the EP Act. |
| weeds | means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i> ; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned. |

END OF CONDITIONS



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

22 September 2021

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).



Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

| | |
|------------------------|------------------------------------|
| Permit number: | CPS 9331/1 |
| Permit type: | Area permit |
| Applicant name: | City of Busselton |
| Application received: | 18 June 2021 |
| Application area: | 0.10 hectares of native vegetation |
| Purpose of clearing: | Extractive industry |
| Method of clearing: | Mechanical |
| Property: | Lot 8 on Diagram 66799 |
| Location (LGA area/s): | City of Busselton |
| Localities (suburb/s): | Naturaliste |

1.2. Description of clearing activities

The application is to clear 0.1 hectares of native vegetation including 11 *Agonis flexuosa* (peppermint trees) within an area that had previously been used as Bluegum plantation. The area is located within a prescribed premises licenced for the Vidler Road landfill operation. The proposed clearing is required to enable the extraction of sand. After clearing and sand extraction, the application area will be utilised as a landfill, as a part of the existing landfill operation.

1.3. Decision on application

| | |
|----------------|-----------------------------------|
| Decision: | Granted |
| Decision date: | 22 September 2021 |
| Decision area: | 0.1 hectares of native vegetation |

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 14 days and no submissions were received.

In undertaking the assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has considered the site characteristics (see Appendix A), the Clearing Principles set out in Schedule 5 of the EP Act (Appendix B), relevant datasets (See Appendix E), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Section 3 and 4).

In particular, the Delegated Officer has determined that:

- Several records of conservation significant fauna, including the threatened the Black cockatoo species, *Isodon fusciventer* (Quenda), and *Pseudocheirus occidentals* (Western Ringtail Possum (WRP)) are

known from the local area. Given the Completely Degraded condition and isolated trees proposed to be cleared, it is unlikely that the application area comprise significant habitat within the context of the local area.

- Clearing may introduce and spread weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values. The likelihood of weed and dieback introduction and spread could be reduced by applying weed and dieback management measures.

After consideration of the available information, the Delegated Officer determined the proposed clearing is unlikely to have long-term adverse impacts on adjacent native vegetation and its habitat values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing; and
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

Rehabilitation following extraction activities is not required as a condition on the clearing permit, noting the use as a landfill following extraction. Site remediation activities will likely be addressed through the landfill operation conditions.

1.5. Site map



Figure 1. Map of the application area

The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The application area was recently comprised of a blue gum (*Eucalyptus globulus*) plantation that was harvested in 2020. It is now devoid of all native vegetation apart from 11 peppermint (*Agonis flexuosa*) trees which are regrowth from when the plantation was initially established (approximately 15 – 20 years ago). To excavate the required clean fill from the application area, removal of the 11 peppermint (*Agonis flexuosa*) trees will be required (Accendo, 2021).

In their current state, it was determined that the trees within the clearing area are of a condition that is not sustainable in the long term. It is considered that no other reasonable and practicable avoidance measures can be implemented within the clearing footprint (Accendo, 2021).

The Delegated Officer was satisfied that the applicant could not have made any additional efforts to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B) identified the impacts of the proposed clearing present a risk to fauna, clearing in extensively cleared landscape and land degradation. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values – fauna – Clearing principle (b)

Assessment

Sixty-eight conservation significant fauna species have been recorded within the local area. Many of the records are of migratory birds and fauna associated with the marine environment. Of the 68 records, the three Black cockatoo species (*Calyptorhynchus banksia naso*, *C. baudinii*, and *C. latirostris*), Chuditch (*Dasyurus geoffroii*),

Quenda, Brush-tailed phascogale (*Phascogale tapoatafa wambenger*) and WRP were further assessed for their proximity and high frequency of records and distribution within the local context.

Chuditch prefers large unfragmented habitats, including dense riparian jarrah forests. Given the Completely Degraded vegetation within the application area and the lack of canopy connectivity, it is unlikely that Chuditch would inhabit the site.

Brush-tailed phascogale inhabits dry sclerophyll forest and open woodlands with hollow bearing trees. The type and condition of the vegetation proposed to be cleared do not exhibit this characteristic and is unlikely to comprise habitat for the Brush-tailed phascogale.

The Priority 4 Quenda require a dense understorey for cover (van Dyck and Strahan, 2008), including exotic species. The application area is void of tall vegetation and sparsely vegetated with native and non-native weeds. Quenda is unlikely to occur within the application area given Quenda's preference for dense vegetation (Watson, 2018).

Numerous records of the Endangered Baudin' cockatoo and Carnaby's cockatoo (*Calyptorhynchus latirostris*) and the Vulnerable Forest red-tailed Black cockatoo (*Calyptorhynchus banksii naso*), together referred to as the Black cockatoos, are known from the area. Black cockatoos habitat can be considered in terms of breeding, roosting and foraging habitat. Roost sites tend to be located in the largest trees within a particular area and in close proximity to both water and food supplies. The trees proposed to be cleared are young, non-hollow bearing peppermint trees that would be unlikely to provide roosting, breeding or significant foraging habitat to Black cockatoos.

The application area and its vicinity are within the mapped preferable habitat for WRPs. As many as 876 records of the critically endangered WRP are known from the local area. The nearest record of which to the application area is located approximately 1.4 km to the south. Most of the records from the local area are from a dense Banksia Woodland remnant located approximately 4 km east of the application area. The trees proposed to be cleared are relatively young, isolated compared to surrounding vegetation and non-hollow bearing peppermint trees (*Agonis flexuosa*). Although this species of tree is known to be preferred by WRP (Shedley et al., 2014), given the lack of canopy connectivity between the trees and adjacent vegetation, and the availability of adjacent vegetation in better condition, the trees proposed to be cleared are unlikely to be inhabited by WRP. Photographs provided with the application also do not indicate the presence of any dreys. The area, being a landfill site, is reportedly infested with feral cats and foxes (Accendo, 2021), known to be the predators of WRP. The absence of canopy connectivity within the application area exacerbates the risk of WRP predatory by feral animals. Therefore, the application area is unlikely to contain significant habitat for WRP. The removal of the 11 peppermint trees is unlikely to have an impact on WRP and its habitats within the local area, noting they are not currently utilising the habitat within the application area.

Conclusion

Based on the above assessment, the application area is unlikely to contain significant habitat for Black cockatoos, Chuditch, Brushed-tailed Phascogale, Quenda or WRP. The removal of the 11 peppermint trees is unlikely to significantly impact on the existence and maintenance of conservation significant fauna habitat within the local context.

Conditions:

Nil fauna management condition required.

3.2.2. Significant remnant vegetation - Clearing Principle (e)

Assessment

The vegetation proposed to be cleared is not a part of large remnant of native vegetation nor ecological linkage (see figure 2) in the local area. The proposed clearing is surrounded by patches of native vegetation. The local area retains 41 percent of its original native vegetation cover. Removal of the vegetation from the proposed clearing area would unlikely impact on the ecological function of the adjacent remnant vegetation or sever any ecological linkages. Clearing, however, may indirectly impact on the condition of adjacent remnant vegetation by facilitating the spread of weeds and dieback.

Conclusion

For the reasons set out above, it is considered that the potential impact of the proposed clearing on nearby vegetation can be managed by taking steps to minimise the risk of the introduction and spread of weeds and dieback.

Conditions

To address the above impacts, weed and dieback management measures will be required as a condition on the clearing permit.



Figure 2. Remnant vegetation surrounding the application area

3.2.3. Land and water resources – Water logging and acidification risks – clearing principles (g) and (i)

Assessment

Classified as the Cowaramup west sandy flats phase soil unit, the soils in the application area are characterised by poorly drained flats and depression with deep organic stains (DPIRD, 2019). As such, the soils are mapped as prone to water logging and acidification. Clearing of native vegetation within this environment may have impacts of the land and water resources.

As a part of the prescribed premises of the landfill facility, the surface water on the proposed clearing area and its vicinity has been managed to mitigate the risks of land degradation. The applicant advised that the current surface water cycle within the application area and adjacent landfill consists of input from rainwater being infiltrated on site. Subsequent to the proposed clearing and sand mining, all surface water will be retained within the excavated areas to enable infiltration within the bunded excavated area, as currently practised for the management of surface water within the prescribed premises of the landfill facility. The applicant is also committed to stabilise the area afterwards (Accendo, 2021).

Given the limited extent of clearing and surface water management measures that have been and will be applied on the application area, the proposed clearing is unlikely to exacerbate waterlogging or acidification of the soils or surface water.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to cause appreciable land degradation due to waterlogging and soil acidification.

Conditions

Nil conditions required.

3.3. Relevant planning instruments and other matters

The application area is within a prescribed premises for a landfill operation. The landfill operates under Licence L9167 issued under Part V Division 3 of the EP Act, which is valid until 2030.

Several Aboriginal sites of significance have been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

A.1. Site characteristics

| Characteristic | Details |
|------------------------|--|
| Local context | <p>The area proposed to be cleared is located within a prescribed premises licenced for a landfill. The proposed clearing includes 11 trees spread in nine isolated patches of native vegetation. The area was previously used for plantation and was harvested in 2020. It is adjacent to a waste management facility and surrounded by patches of remnant vegetation.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 41 per cent of the original native vegetation cover.</p> |
| Ecological linkage | The proposed clearing area is not a part of any formal or non-formal ecological linkage. |
| Conservation areas | The application area does not occur within or adjacent to any conservation area. |
| Vegetation description | <p>Photographs and vegetation survey report provided by the applicant indicate the vegetation within the proposed clearing area consist of <i>Agonis flexuosa</i> (peppermint trees) over Sydney Gum and weeds (Accendo, 2021). Representative photos are available in Appendix D.</p> <p>This is inconsistent with the mapped vegetation Complex Cowaramup (Valley) – 76-Cw2, which described as woodland of <i>Eucalyptus marginata</i> subspecies <i>marginata</i>, <i>Corymbia calophylla</i> on slopes and low woodland of <i>Melaleuca preissiana</i>, <i>Banksia littoralis</i> in per-humid and humid zones (Shepherd et al., 2001)</p> <p>The mapped vegetation type retains approximately 20.32 per cent of the original extent (Government of Western Australia, 2019).</p> |
| Vegetation condition | <p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Completely Degraded condition (Keighery, 1994).</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p> |
| Climate and landform | <p>Mean annual rainfall 807.0 mm with mean number of days of rain 72 per year.</p> <p>Mean temperature ranges between 7.5 and 28.5</p> |
| Soil description | Soils within the application area is mapped as Cowaramup wet sandy flat phase (216CoCOdw), described as poorly drained flats and depression with deep organic stained sands. |
| Land degradation risk | The soil unit within the application area is mapped as prone to water logging and acidification. |
| Waterbodies | The desktop assessment and aerial imagery indicated that no watercourses transect the area proposed to be cleared. |
| Hydrogeography | The application area is within the Murray River catchment, as proclaimed under the RIWI Act. It is mapped as having low salinity risk. |
| Flora | Eighteen conservation significant flora have been recorded within 10 km radius of the application area. None of the flora are recorded within the application area and its vicinity. The nearest record is located approximately 2.05 km away from the application area. |
| Ecological communities | There are 10 Priority and Threatened ecological communities mapped within the local area. The closest ecological community to the application area is the Subtropical and Temperate Coastal Saltmarsh located 2.34 km away. The application area does not |

| Characteristic | Details |
|----------------|--|
| | contain habitat that would support any of these ecological communities. |
| Fauna | Sixty-eight conservation significant fauna have been recorded within the local area, but none is recorded within the application area. The nearest fauna record is that of Black cockatoo, recorded in 2019 within 100 metres of the application area. A known Black cockatoo roost site is 6 km away. |

A.2. Vegetation extent

| | Pre-European extent (ha) | Current extent (ha) | Extent remaining (%) | Current extent in all DBCA managed land (ha) | Current proportion (%) of pre-European extent in all DBCA managed land |
|---|--------------------------|---------------------|----------------------|--|--|
| IBRA bioregion* | | | | | |
| Jarrah Forest | 450,665.7 | 251,455.0 | 55.80 | 168,9684 | 67.2 |
| Margaret River Plateau – Subregion | 27,387.48 | 27,770.48 | 65 | 23,629.24 | 95 |
| Vegetation complex | | | | | |
| Cowaramup Cw2 (76):. | 6,654.66 | 1,352.26 | 20.32 | 245.24 | 96 |
| Local area | | | | | |
| 10km radius | 18,213.877 | 7,517.27 | 41.27 | - | - |
| *Government of Western Australia (2019a) | | | | | |
| **Government of Western Australia (2019b) | | | | | |

A.3. Flora analysis table

| Species name | Conservation status | Suitable habitat features ? [Y/N] | Suitable vegetation type? [Y/N] | Suitable soil type? [Y/N] | Distance of closest record to application area (km) | Number of known records within 10 km radius (total) | Are surveys adequate to identify? [Y, N, N/A] |
|--------------------------------------|---------------------|-----------------------------------|---------------------------------|---------------------------|---|---|---|
| <i>Acacia semitrullata</i> | 4 | N | Y | Y | 3.56 | 1 | N/A |
| <i>Banksia sessilis var. cordata</i> | P4 | N | Y | Y | 3.99 | 3 | N/A |
| <i>Boronia tenuis</i> | P4 | N | N | Y | 5.55 | 5 | N/A |
| <i>Caladenia excelsa</i> | T | N | Y | Y | 2.05 | 25 | N/A |
| <i>Caladenia huegelii</i> | T | N | Y | Y | 3.62 | 2 | N/A |
| <i>Caladenia viridescens</i> | T | N | Y | N | 3.72 | 14 | N/A |
| <i>Caladenia excelsa</i> | T | N | Y | Y | 4.94 | 25 | N/A |
| <i>Caladenia huegelii</i> | T | N | Y | Y | 7.36 | 2 | N/A |

| Species name | Conservation status | Suitable habitat features? [Y/N] | Suitable vegetation type? [Y/N] | Suitable soil type? [Y/N] | Distance of closest record to application area (km) | Number of known records within 10 km radius (total) | Are surveys adequate to identify? [Y, N, N/A] |
|------------------------------|---------------------|----------------------------------|---------------------------------|---------------------------|---|---|---|
| <i>Caladenia viridescens</i> | T | N | Y | N | 7.31 | 14 | N/A |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.4. Fauna analysis table

| Species name | Conservation status | Suitable habitat features? [Y/N] | Suitable vegetation type? [Y/N] | Distance of closest record to application area (km) | Number of known records within 10 km radius (total) | Are surveys adequate to identify? [Y, N, N/A] |
|--|---------------------|----------------------------------|---------------------------------|---|---|---|
| <i>Calyptorhynchus banksii naso</i> | VU | N | N | 0.83 | 45 | N/A |
| <i>Calyptorhynchus baudinii</i> | EN | N | N | 16.92 | 135 | N/A |
| <i>Calyptorhynchus latirostris</i> | EN | N | N | 16.92 | 58 | N/A |
| <i>Calyptorhynchus sp. 'white-tailed black cockatoo'</i> | EN | N | N | 0.83 | 135 | N/A |
| <i>Dasyurus geoffroii</i> | VU | N | Y | 36.82 | 10 | N/A |
| <i>Falco peregrinus</i> | OS | N | Y | 40.33 | 9 | N/A |
| <i>Isoodon fusciventer</i> | P4 | N | N | 11.35 | 85 | N/A |
| <i>Notamacropus irma</i> | P4 | N | Y | 31.18 | 12 | N/A |
| <i>Phaethon rubricauda</i> | MI | N | Y | 46.91 | 116 | N/A |
| <i>Phascogale tapoatafa wambenger</i> | P4 | N | Y | 15.80 | 35 | N/A |
| <i>Pseudocheirus occidentalis</i> | CR | N | Y | 14.15 | 876 | N/A |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.5. Ecological community analysis table

| Community name | Conservation status | Suitable habitat features? [Y/N] | Suitable vegetation type? [Y/N] | Suitable soil type? [Y/N] | Distance of closest record to application area (km) | Number of known records within 10 km radius (total) | Are surveys adequate to identify? [Y, N, N/A] |
|----------------------------------|---------------------|----------------------------------|---------------------------------|---------------------------|---|---|---|
| Banksia WL SCP | P3 | N | N | N | 3.09 | 126 | N/A |
| Coastal Saltmarsh | P3 | N | N | N | 2.34 | 16 | N/A |
| Dunsborough Forest Swamp | P1 | N | N | N | 4.13 | 1 | N/A |
| Meelup Granites | VU | N | N | N | 8.83 | 1 | N/A |
| Melaleuca lanceolata forests | P2 | N | N | N | 4.08 | 1 | N/A |
| SCP09 | VU | N | N | N | 5.00 | 1 | N/A |
| SCP1b | VU | N | N | N | 7.84 | 3 | N/A |
| SCP3b | VU | N | N | N | 2.58 | 14 | N/A |
| Sugar Loaf Granites | P1 | N | N | N | 6.01 | 3 | N/A |
| Whicher Scarp Paluslope Wetlands | P1 | N | N | N | 3.43 | 6 | N/A |

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.6. Land degradation risk table

| Risk categories | <i>Land Unit: Cowaramup flats phase</i> |
|--------------------------|--|
| Wind erosion | M1: 10-30% of the map unit has a high to extreme hazard |
| Water erosion | L1: <3% of the map unit has a moderate to high hazard |
| Salinity | L1: <3% of the map unit has a moderate to high hazard |
| Subsurface Acidification | H2: >70% of the map unit has a moderate to very high to risk |
| Flood risk | L1: <3% of the map unit has a moderate to high hazard |
| Water logging | H2: >70% of the map unit has a moderate to very high to risk |

Appendix B Assessment against the clearing principles

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|---|------------------------------|--|
| Environmental value: biological values | | |
| <p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The local area contains records of several conservation significant fauna. The area proposed to be cleared comprises of 11 Peppermint trees over weeds. It is considered to not contain significant flora, fauna, habitats or assemblages of plants and therefore does not contain a high level of biodiversity.</p> | Not likely to be at variance | No |
| <p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The local area contains records of several conservation significant fauna. The proposed clearing area is located within the mapped distribution for the three species of Black cockatoo and WRP. The trees proposed to be cleared are relatively young, non hollow bearing peppermint trees. They are unlikely to comprise significant habitat for both Black cockatoos and the WRP.</p> | Not likely to be at variance | Yes <i>Refer to Section 3.2.1, above.</i> |
| <p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>Eight Threatened flora have been recorded within 10 km radius of the application area. The nearest record is of <i>Caladenia excelsa</i> (EN) located approximately 2 km away from the application area. Whilst the soils in the application area may exhibit the same characteristics with that of some of the recorded flora, given the Completely Degraded condition of the vegetation, the area proposed to be cleared is not likely to contain the habitat for flora species listed under the BC Act.</p> | Not likely to be at variance | No |
| <p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain species that resemble a threatened ecological community. The proposed clearing is not likely to impact any TECs.</p> | Not likely to be at variance | No |
| Environmental value: significant remnant vegetation and conservation areas | | |
| <p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The vegetation proposed to be cleared is not a part of a significant remnant. It is not considered to be part of a significant ecological linkage in the local area.</p> | Not likely to be at variance | Yes <i>Refer to Section 3.2.2, above.</i> |
| <p><u>Principle (h):</u> <i>“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.”</i></p> | Not likely to be at variance | No |

| Assessment against the clearing principles | Variance level | Is further consideration required? |
|---|------------------------------|--|
| <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p> | | |
| Environmental value: land and water resources | | |
| <p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>Given no water courses or wetlands are recorded in the vicinity of the application area, the proposed clearing is not likely to impact an environment associated with a watercourse or wetland.</p> | Not likely to be at variance | No |
| <p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils are highly susceptible to water logging and subsurface acidification. Noting the limited extent of the application area and the surface water management measures applied to the application area and its vicinity, the proposed clearing is not likely to have an appreciable impact on land degradation.</p> | Not likely to be at variance | Yes <i>Refer to Section 3.2.3, above.</i> |
| <p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>Given no water courses, wetlands or Public Drinking Water Sources Areas are recorded in the vicinity of the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p> | Not likely to be at variance | Yes Refer to Section 3.2.3 |
| <p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p> | Not likely to be at variance | No |

Appendix C Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

| Condition | Description |
|---------------------|--|
| Pristine | Pristine or nearly so, no obvious signs of disturbance. |
| Excellent | Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species. |
| Very good | Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing. |
| Good | Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing. |
| Degraded | Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing. |
| Completely degraded | The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs. |



Figure 3. Six of the eleven *Agonis flexuosa* (peppermint trees) proposed to be cleared, with **Acacia longifolia* (Sydney Golden Wattle) shrub in the foreground and background.



Figure 4. Two of the eleven *Agonis flexuosa* proposed to be cleared.



Figure 5 A and B. Vegetation adjacent to the application area. Note the distance and type of vegetation

Appendix E. Sources of information

E.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)

- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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