

# Attachment 1: Clearing assessment report, Cowaramup Bay Road reconstruction



**File reference:** RDS/0003

## **BACKGROUND**

It is proposed to reconstruct and widen a section of Cowaramup Bay Road, as shown in the accompanying maps, resulting in the clearing of up to 1.5 ha of native vegetation. This 7 km section of road extends from Bussell Highway in the east to Caves Road in the west, and is the first stage of the Shire's reconstruction project for Cowaramup Bay Road. Planning for the future reconstruction of the section of Cowaramup Bay Road west of Caves Road is currently also underway, however due to significant environmental values in this section, it is planned to undertake further design work prior to seeking a clearing permit for those works.

Cowaramup Bay Road provides the primary point of access to Gracetown from Bussell Highway. It is currently 5-6 metres wide, which is insufficient given the type and volumes of traffic the road receives. It is proposed to reconstruct and widen the existing sealed road to 6.5 metres, with 1 metre unsealed shoulders on either side, and associated drainage and erosion control works. This will improve driver visibility and overall road safety.

This section of the road reserve is largely surrounded on both sides by cleared, agricultural land, with some smaller pockets of remnant vegetation adjoining the road. There are no conservation areas in close proximity to this section of road.

The road reconstruction will result in the clearing of no more than 1.5 hectares of native vegetation within the larger area shown in shapefile 'Cowaramup Bay Rd purpose permit area' (attached). Supporting shapefile 'Cowaramup Bay Rd potential clearing' (attached) demonstrates the Shire of Augusta Margaret River's intended clearing area, based on the initial road reconstruction design. There may be minor changes to the intended clearing area due to site conditions, hence the reason for applying for a purpose permit to provide this flexibility. Regardless of any minor changes to the design, the total area cleared will be less than 1.5 ha.

## **BIODIVERSITY VALUES**

### **Flora and Vegetation**

A flora and vegetation survey was undertaken along the entire road reserve in September 2020 by Stream Environment and Water (copy attached), incorporating reconnaissance level survey and targeted flora searches. In addition, site inspections by Shire Environment and Landcare Officers have been undertaken at the road reserve. As stated, further design work is required to adequately consider the environmental values west of Caves Rd.

The vegetation along the road reserve is predominantly in degraded to completely degraded condition with small patches of native vegetation in good condition. Adjoining agricultural land use and historical disturbance is likely to have contributed to the introduction of weeds into this

area. Environmental weeds are common along this section of road, with *Watsonia meriana* subsp. *bulbillifera* in particular recorded at several locations along the road reserve.

Many marri trees (*Corymbia calophylla*) growing along the roadside have been affected by canker fungus, and are in poor condition.

There are large sections of road reserve that are cleared of native vegetation, or that have been planted in the past with introduced species such as blue gums, or with rows of peppermint trees. Over 55% of the purpose permit area is cleared or contains vegetation that has been planted to provide screening and/or windbreak for adjoining properties.

A small section of the road crosses a Shire-managed reserve (Reserve No. 47049) that encompasses the Wadandi Trail. Vegetation in this section is in very good condition. The other section of vegetation in very good condition runs along the boundary of the property at 173 Cowaramup Bay Road. The vegetation on this section of the property is under a conservation covenant.

There are no conservation reserves adjacent or in proximity to the clearing area.

Broad-scale vegetation complex mapping (Government of Western Australia, 2019. *2018 South West Vegetation Complex Statistics*. Current as of March 2019) identifies that vegetation within the project area is within the Cowaramup and Wilyabrup vegetation complexes, comprising the following:

- Cowaramup C2: Open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Banksia grandis* on lateritic uplands in perhumid and humid zones. **32.45% pre-European extent remaining**
- Cowaramup Cw2: Woodland of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on slopes and low woodland of *Melaleuca preissiana*-*Banksia littoralis* on depressions in perhumid and humid zones. **20.32% pre-European extent remaining**
- Wilyabrup W1: Tall open forest of *Eucalyptus diversicolor*-*Corymbia calophylla*-*Allocasuarina decussata*-*Agonis flexuosa* on deeply incised valleys in the hyperhumid zone. **53.67% pre-European extent remaining**
- Wilyabrup Ww1: Tall open forest of *Eucalyptus diversicolor*-*Agonis flexuosa*-*Callistachys lanceolata* with some *Corymbia calophylla* on flats and valleys in the hyperhumid zone. **53.71% pre-European extent remaining.**

At the local scale, the flora and vegetation survey by Stream Environment and Water (2020) found that the following vegetation units occurred within this section of the road reserve.

- **Planted** – historically planted Eucalypts and *Agonis flexuosa* trees for windbreak/screening of adjacent properties (33% of purpose permit area)
- **CcEmBI** - Woodland of *Corymbia calophylla* and *Eucalyptus marginata* over shrubland of *Bossiaea linophylla* and *Xanthorrhoea preissii* over shrubland of *Hibbertia hypericoides* (29% of purpose permit area)
- **Cleared** (22% of purpose permit area)
- **CcAfXp** - Woodlands of *Corymbia calophylla* over open woodland of *Agonis flexuosa* over shrubland of *Xanthorrhoea preissii* and *Bossiaea ornata* (13% of purpose permit area)
- **CcTp** - Woodland of *Corymbia calophylla* over closed shrubland of *Taxandria parviceps* over sedgeland of *Mesomelaena tetragona* and *Cyathochaeta avenacea* (2.7% of purpose permit area)

No Threatened or Priority Flora or Ecological Communities have been recorded within the proposed permit area, based on a desktop review of DBCA and DAWE datasets and the field survey by Stream Environment and Water (2020).

## Fauna

A review was undertaken of the DBCA rare fauna database. One record of the Conservation-dependent South-western brush-tailed phascogale (*Phascogale tapoatafa* subsp. *wambenger*) occurs at the eastern extent of the road reserve in the adjoining cleared property, and records of Endangered black cockatoo species (*Calyptorhynchus baudinii*, *Calyptorhynchus latirostris*) are located at the intersection with Bussell Highway. There are no other known records of significant fauna within or in close vicinity of the road reserve. However, based on local knowledge, there is potential for other threatened species including Western Ringtail Possums, Quenda, Brushtail Possums and Brushtail Phascogales to occur, despite not being formally recorded.

It is known that habitat for Western Ringtail Possum (WRP) occurs in both remnant vegetation and residential areas around Cowaramup, including along the Wadandi Trail Reserve near the eastern extent of the project area. A recent survey for WRP and Brush-tailed Phascogale was undertaken around the nearby Percy Street in Cowaramup in May 2020 (Litoria, 2020, IBSA-2020-0185) which recorded both WRP and Brushtail Possum in the area, and but did not make any observations of Brush-tailed Phascogale.

In addition, a citizen science project funded by the Shire of Augusta Margaret River to survey WRP occurrence between Cowaramup and Augusta is currently being implemented by local NRM group Nature Conservation Margaret River Region. This project includes a 1 km transect along the Wadandi Trail about 400 metres north of Cowaramup Bay Road, which has recorded on average 3.2 WRP individuals per transect at this site since surveying began in July 2018 (Nature Conservation Margaret River Region, March 2021, unpublished data). This Cowaramup transect is comparable in WRP density to the other 11 transect sites located in the Capes Region.

Given the vegetation proposed to be removed is predominantly in degraded condition, and there are large areas of cleared or planted sections along the road, it was not considered necessary to undertake a formal fauna survey within the project area. A site inspection was undertaken by Shire Environment and Landcare Officers, which included observations of fauna and fauna habitat.

The site inspection identified 16 large habitat trees (>50cm DBH) that potentially fall within the clearing area. These comprise 14 marri (*Corymbia calophylla*), 1 blackbutt (*Eucalyptus patens*) and 1 (dead) jarrah (*E. marginata*) trees. Crowns were inspected of all trees and no hollows large enough to support black cockatoo species were observed, however it is recognised that there is potential for hollows providing nesting habitat for black cockatoos to be present.

Stands of peppermint trees (*Agonis flexuosa*), both planted and naturally occurring, were inspected for signs of western ringtail possum (WRP). One drey was observed in a peppermint tree near the intersection with Barnett Gr, and while scats were not observed in this location, they were identified in peppermint vegetation in other locations along the road reserve. This confirms that WRP is present in the road reserve, however given the degraded condition of vegetation and lack of ecological connectivity including lack of canopy connectivity over the road, it is unlikely that the road reserves provides significant habitat for this species.

No signs of any other fauna of conservation significance were observed, however it is expected that species such as brush-tailed phascogale, brush-tailed possum, and quenda may utilise habitat in the road reserve.

## POTENTIAL IMPACTS

### Flora and Vegetation

The clearing of up to 1.5 ha of vegetation along this section of Cowaramup Bay Road Reserve is unlikely to have any impacts to significant flora or vegetation values. There are no known records of any threatened or priority flora or ecological communities within the road reserve or nearby that will be impacted by the proposed clearing.

Vegetation is predominantly in degraded/completely degraded condition, with a high occurrence of weeds and several sections of cleared or planted vegetation. There are some smaller pockets of roadside vegetation in good or very good condition where they adjoin remnant vegetation and clearing in these areas will be minimised where possible. It is not expected that the proposed removal of roadside vegetation will affect the value or condition of this offsite vegetation.

In many parts of the road reserve, there is adequate cleared space within the existing road shoulder and adjacent drain to not require significant clearing of native vegetation, particularly removal of larger trees. Clearing will be kept to a minimum by utilising already cleared land for road widening works where possible.

Weeds have proliferated in some sections of the road reserve, with the particularly invasive environmental weed *Watsonia meriana* subsp. *bulbillifera*, recorded at several locations. Best practice weed hygiene measures will be implemented during clearing and road construction activities to avoid the introduction and spread of weeds.

There are no significant water courses or waterways intercepted by the road reserve. Cowaramup Brook runs about 1 km to the south of the road, and will not be impacted by the clearing. Part of the road upgrade involves building and/or replacing culverts at 19 locations, which will not alter surface water flows or increase sediment movement into the environment.

### Fauna

Given that most of the road reserve proposed for clearing is either already cleared, planted, or in degraded/completely degraded condition, and the road provides minimal ecological connectivity with other remnant areas of native vegetation, it is not considered that the vegetation provides significant habitat for fauna.

Sixteen potential habitat trees (>50cm DBH) comprising marri, jarrah and blackbutt were identified that are located along the road's edge and could potentially fall within the clearing area. While evidence of black cockatoo nesting has not been observed at the site (e.g. hollows), there is potential for some of these trees to contain hollows that could be large enough for black cockatoo nesting. It is also expected that habitat along the road reserve provides foraging/feeding habitat for black cockatoo species from time to time.

The Shire will incorporate the location of 16 habitat trees into the design of the road in order to avoid removal of these trees where possible. Should any of these trees need removal, a qualified fauna specialist will be engaged prior to and during clearing to ensure that there is no black cockatoo nesting activity at the time of clearing.

Evidence of WRP activity in the project area (drey, scats) confirms that this species uses habitat within the road reserve for both foraging/feeding and nesting. Peppermint trees, which are a favoured species for WRP in this region, have predominantly been planted in rows along the road for screening/windbreak, although there are some smaller stands of peppermint that may be naturally occurring. Both could be used by WRP.

The planted rows of peppermint tree occur at a reasonable distance from the existing edge of the road, and are unlikely to be removed as part of the clearing proposal. There is potential for

some small-scale removal of peppermint trees where they do occur close to the road edge, including 2 trees near the Armstrong Road intersection. As mentioned above, these tree locations will be incorporated into the design of the road, and removal will be avoided where possible. The Shire will engage a qualified fauna spotter/handler to inspect vegetation prior to and during clearing, and to move any displaced animals to nearby habitat in accordance with DBCA's *Procedures to Minimise the Risk to Western Ringtail Possums during Vegetation Clearing and Building Demolition* (2015), given that there is likely to be some removal of potential WRP habitat.

While some native fauna species such as black cockatoos, Quenda or Brushtail Phascogale may use some pockets of vegetation for feeding/foraging along the road reserve, it is not expected that the clearing will have a significant impact to these species.

## **CONCLUSION AND MANAGEMENT RECOMMENDATIONS**

The clearing of 1.5 ha of roadside vegetation within the Cowaramup Bay Road Reserve to allow for road reconstruction and widening is not considered to be at variance with the 10 clearing principles.

The Shire of Augusta Margaret River will implement the following measures to ensure that impacts of clearing native vegetation are minimised.

- The road reconstruction will be designed to minimise disturbance to native vegetation where possible, by avoiding removal of native habitat trees, and undertaking retrenchment pruning as an alternative to tree removal where branches pose a safety hazard.
- Clearing through the Shire-managed Wadandi Trail Reserve (R47049) will be minimised where possible.
- Existing surface drainage patterns will be maintained during road reconstruction, with no changes to surface hydrology or movement of sediment into the surrounding environment.
- Best practice weed and dieback hygiene measures will be implemented during clearing and construction (clean vehicles and machinery prior to entering the site).
- Clearing will be implemented in strict accordance with DBCA's *Procedures to Minimise the Risk to Western Ringtail Possums during Vegetation Clearing and Building Demolition* (DBCA, 2015), including the presence of a fauna spotter and handler on site prior to and during construction in order to inspect trees and manage any disturbed animals.

## **COMMENTS ON THE PROPOSED CLEARING AGAINST THE CLEARING PRINCIPLES**

*Principle (a) – Native vegetation should not be cleared if it comprises a high level of biological diversity*

It is not anticipated that the proposed clearing of up to 1.5 ha of native vegetation will have a significant impact on vegetation that is of a high level of biodiversity. The roadside vegetation is predominantly in degraded to completely degraded condition, with a high presence of weeds. It is surrounded by cleared freehold land for farming and viticulture, and provides limited ecological connectivity to areas of nearby remnant vegetation.

There are no known occurrences of Threatened or Priority species or ecological communities in the road reserve.

*Principle (b) – Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia*

The DBCA threatened fauna database does not contain any records of threatened fauna within the road reserve. One record of South-western brush-tailed phascogale occurs at the eastern

extent of the road reserve in the adjoining cleared property, and records of Endangered black cockatoo species are located at the intersection with Bussell Highway. However, based on local knowledge, there is potential for other threatened species including Western Ringtail Possums, Quenda, Brushtail Possums and Brushtail Phascogales to occur, despite not being formally recorded.

A site inspection confirmed that the vegetation contains habitat for western ringtail possum (WRP), with a drey and scats observed at the site within peppermint vegetation. The clearing along the road verge is not considered to have a significant impact to WRP or its habitat, given the degraded to completely degraded nature of the vegetation, its lack of connectivity with extensive areas of remnant vegetation, and small scale of clearing. The Shire will ensure that DBCA's clearing protocols are adhered to for protecting WRP immediately prior to and during clearing, with the presence of a qualified fauna spotter and handler on site to manage any disturbed animals.

Roadside trees have the potential to provide habitat for other native fauna, including threatened black cockatoo species. Up to sixteen potential habitat trees (>50cm DBH) occur along the road edge that could potentially be impacted by the proposed clearing. No evidence of hollows likely to support nesting by black cockatoo species were observed at the site, however it is recognised that there is potential for trees within the road reserve to be used for foraging, roosting and nesting habitat for Black Cockatoo species.

The removal of habitat trees (>50cm DBH) will be avoided where possible through road design and retrenchment pruning as an alternative to tree removal where feasible. A qualified fauna specialist will be on site immediately prior to and during clearing to ensure that there is no disturbance to trees that are being used for nesting by black cockatoo species.

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

There are no known occurrences of Rare or Priority flora within the project area, or within the local vicinity of this section of the road reserve.

*Principle (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.*

There are no known Threatened or Priority Ecological Communities, or their buffer zones, within this section of the road reserve, or within the local vicinity of the road reserve.

*Principle (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.*

The native vegetation in the Cowaramup Bay Road Reserve is unlikely to be significant as a remnant of native vegetation. The road reserve falls in Cowaramup (C2, Cw2) and Wilyabrup (W1, Ww1) vegetation complexes, which are generally well represented in the south west region. Cw2 has a smaller level of representation of 20.32% of pre-European extent remaining, however no more than 0.3 ha of this community is likely to be impacted by the proposal, and most of this area is in degraded condition.

*Principle (f) – Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland*

The section of the Cowaramup Bay road reserve is not associated a watercourse or wetland. The Cowaramup Brook runs about 1 km to the south through agricultural land. A tributary of Cowaramup Brook crosses the road near its western extent which is managed via an existing

culvert and vehicle bridge. It is not planned to alter drainage or clear native vegetation associated with the drainage line at this location.

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

The proposed clearing is not likely to cause appreciable land degradation. The road widening and associated drainage works will be designed to maintain existing surface water patterns and to reduce the occurrence of erosion or runoff of sediment into the environment.

*Principle (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.*

Leeuwin Naturaliste National Park occurs approximately 500 metres to the north west and 1,100 metres to the south west of the clearing area. The national park will not be affected by this project. A conservation covenant occurs immediately adjacent to the road reserve on 173 Cowaramup Bay Road. The conservation covenant area will not be disturbed by the proposed clearing and road construction works. Best practice weed hygiene will be implemented to minimise the risk of introducing or spreading weeds.

*Principle (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.*

The proposed clearing is not likely to cause deterioration in the quality of surface or underground water. The road reconstruction has been designed to maintain existing surface water flows, with no runoff of water or sediment into the surrounding environment. Underground water will not be intercepted.

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

The proposed clearing is not likely to cause, or exacerbate, the incidence of flooding.

## REFERENCES

Department of Biodiversity Conservation and Attractions (2015). *Procedures to Minimise the Risk to Western Ringtail Possums during Vegetation Clearing and Building Demolition.*

Government of Western Australia. (2019). *2018 South West Vegetation Complex Statistics.* Current as of March 2019.

Litoria Ecoservices (2020). *Preliminary Western Ringtail Possum and Brush-tailed Phascogale Habitat Assessment and Survey. Percy St, Cowaramup.* Unpublished report prepared for the Shire of Augusta Margaret River.

Stream Environment and Water (2020). *Reconnaissance and Targeted Flora and Vegetation Survey, Cowaramup Bay Road.* Unpublished report prepared for the Shire of Augusta Margaret River.

## ATTACHMENT 2: LIST OF PHOTOS AND DESCRIPTIONS

Photo #	Comment	Side of road
105748	Habitat Tree 1, Marri	South
110240	Roadside vegetation adjacent to Wadandi Trail Reserve	North/East
110555 110606	Habitat Tree 2, Marri	South
111425 111509	Habitat Tree 3, Marri	South
111535	Habitat Tree 4, Jarrah (dead)	South
111655 111657	Habitat Tree 5, Marri	South
111725	View of roadside vegetation looking west (unlikely to be disturbed)	South
112001 112026	Habitat Tree 6, Marri	South
112252	View of roadside vegetation looking east (unlikely to be disturbed)	North
112913 112922	Habitat Tree 7, Marri	South
113547 113651 113654	Marri trees affected by canker fungus	South
114021	View of roadside vegetation adjacent to conservation covenant area	South
140427 140429	Habitat Tree 8, Marri	North
140450 140452	Habitat Tree 9, Marri	North
120822 120845	Habitat Tree 10, Marri	North
114220 114227	Habitat Tree 11, Marri	South
131720 131722	Habitat Tree 12, Marri	North
114526	View of roadside vegetation looking east	North
114610	Drey in peppermint tree	North
115407 120359	Planted peppermint trees	North
122129	Peppermint trees	South
135635	Culvert location (looking west)	North
125408 125423	Planted Eucalypts	North



130158	Planted peppermint trees	North
132436		
132600		
132602	Habitat Tree 13, Blackbutt	South
133458		
133502	Habitat Tree 14, Marri	North
133537	Large peppermint tree	North
123010		
123045	Habitat Tree 15, Marri	South
134129	Habitat Tree 16, Marri	North
123628	Drainage line crossing, western extent (no disturbance to drainage line vegetation)	North
123946		South