

Attachment 1: Desktop assessment and site inspection, Curtis Street and Brockman Road, Cowaramup



File reference: RDS/0379

Background

It is proposed to undertake road enhancement works at Curtis Street and Brockman Road in Cowaramup in order to improve road safety and visibility, which is a matter of ongoing concern of residents. This will involve the following:

- Upgrade of the Curtis Street/Brockman Road southern intersection to include a sealed surface on a portion of Curtis Street, drainage improvements, and widening of the shoulders to improve safety and visibility.
- Enhancement of the Brockman Road/Miamup Road intersection, including reconstruction and widening of the shoulders to improve safety and visibility for turning vehicles.

The proposed road works will involve the clearing of a total of 0.062 ha of native vegetation.

A desktop assessment, followed by multiple site inspections by environment and landcare officers have been undertaken of the project area. The vegetation is in good to degraded condition. Given its location on a road reserve in a semi-rural/residential area, the vegetation has been subject to disturbance from vehicle movement, dust, weeds, and adjacent clearing and agricultural land uses. The native understorey is interspersed with annual and perennial weeds. Native trees are predominately marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), with the occurrence of some planted species, such as karri and tea tree. A number of dead or poor condition marri trees are within the proposed clearing area, which show evidence of being affected by the marri canker fungus.

The proposed clearing of 0.062 ha will include the removal of six marri trees, all under 40cm DBH, and one small jarrah tree approximately 10 cm DBH. One of the marri trees in the project area is dead, and three of the five other marri trees are affected by the marri canker fungus and in poor conditions. No other native trees will be removed as part of the clearing application. Crowns of the marri trees were inspected, and there are no branches of adequate size to support hollows that could provide breeding habitat for black cockatoo species.

Photos taken during site inspections and their descriptions are included in Attachment 2.

Significant flora

There are no known occurrences of rare or priority flora within the proposed clearing area, however there are a records of Priority flora species in proximity to the proposed clearing area. These include the following:

- Priority 3 species *Grevillea brachystylis* subsp. *brachystylis* – This species is a much-branched, prostrate or decumbent, non-lignotuberous shrub, 0.2-0.5 m high, to 3 m wide.

ATTACHMENT 1: DESKTOP ASSESSMENT AND SITE INSPECTION, CURTIS STREET AND BROCKMAN ROAD, COWARAMUP

It flowers August to November, and occurs in black sand/sandy clay in swampy situations (FloraBase, 1995).

This WA Herbarium record (9006079) is located in the adjacent Shire reserve 48838. The Busselton – Flinders Bay Rail Trail (now known as the Wadandi Track) traverses this reserve, and a flora and vegetation survey was undertaken in 2012 (Attachment 3) where the occurrence of this species in the reserve was identified. The population was mapped recently by DBCA and a small portion of the northern extent of the mapped population occurs within the proposed clearing area (Attachment 4). Informal advice from DBCA indicates that this is a healthy population with over 100 plants in the reserve, and that the priority listing of this taxon may change in the future as further taxonomic work is done (Attachment 5).

There is potential for the P3 species *G. brachystylis* subsp. *brachystylis* to occur within the clearing area. However, as with *L. furtiva*, this is unlikely given that the site is not characterised by any drainage or wet areas. Drainage improvements for the road works have been designed for water to drain to the east towards the existing culvert at the Brockman/Miamup intersection, and shall not affect the P3 population.

- Priority 2 species *Leptomeria furtiva* – This species is a lax, sprawling shrub, 0.2-0.45m high. Its flowers are orange-brown, and the flowering period is August to October. It occurs on winter-wet flats, in grey or black peaty sand (FloraBase, 1997).

This WA Herbarium record (1023896) is dated 15/10/1948, and located on the unsealed section of Curtis Street approximately 5.5 metres from the south-eastern extent of the clearing area. On inspection of the clearing area by environmental and landcare officers, it was noted that the site is not associated with any drainage channels, wetlands or wet areas. The soil is characterised by gravelly clay, and vegetation is mapped as part of the Cowaramup (C2) vegetation complex, which is described as “*Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Banksia grandis on lateritic uplands in perhumid and humid zones.*”

Given that *L. furtiva* is associated with winter-wet flats and grey or black peaty sand, it is unlikely that the species occurs within or in areas surrounding the proposed clearing area. In addition, given that the record of this species dates back over 70 years ago, the accuracy of the location, and the likelihood of its presence today is uncertain.

- Four WA Herbarium records exist of Priority 1, 2 and 3 species in the adjacent freehold land to the north. These are very old records, dating from 1946 to 1967, and their actual location and presence today is uncertain. The property and surrounding freehold land are largely cleared for semi-rural/rural purposes, and the likelihood of this site supporting conservation significant flora is low.

Management recommendations

The Shire of Augusta Margaret River will implement the following measures to ensure that impacts to flora and vegetation are minimised wherever possible.

- The clearing envelope will be clearly identified to ensure that any direct disturbance occurs within defined clearing boundaries. Pre-start inductions for project staff and contractors will include a briefing on the importance of the area for significant flora (specifically *Grevillea brachystylis* subsp. *brachystylis*, but also any other potential significant flora) and on the requirement to restrict work to the approved clearing envelope.

ATTACHMENT 1: DESKTOP ASSESSMENT AND SITE INSPECTION, CURTIS STREET AND BROCKMAN ROAD, COWARAMUP

- The six marri trees proposed for removal will be clearly marked in the field prior to clearing.
- Retrenchment pruning of adjacent trees will be undertaken as an alternative to being removed in order to maintain a high level of road safety, while minimising tree removal.
- Dieback and weed control measures will be implemented during operations.

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 will have an impact on vegetation that is of a high level of biodiversity. The roadside vegetation ranges from good condition to degraded condition, with weeds present at the site, and karri and tea trees that have been planted along the road reserve. One of the marri trees in the project area is dead, and three are affected by the marri canker fungus and in poor condition.

The road reserve falls in the Cowaramup (C2) vegetation complex, with 27.96% of the pre European extent remaining. The vegetation in the road reserve exists in a highly disturbed landscape, surrounded by cleared semi-rural and rural land.

Measures will be undertaken to minimise impacts to native vegetation during clearing, including clearly identifying the approved clearing area and trees for removal, designing the road works to include improvements in surface drainage, pruning trees as an alternative to tree removal, and implementing dieback and weed management.

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

There are no known occurrences of threatened fauna within the clearing area.

Roadside trees have the potential to provide habitat for native fauna, however given the degraded nature of the vegetation, it is unlikely that the road reserve provides significant habitat for native fauna. The crowns of the marri trees within the site were inspected, and there were no branches of adequate size to support hollows large enough for use by threatened species, such as black cockatoos.

Clearing of vegetation will be minimised where possible, and retrenchment pruning of trees with overhanging branches will be undertaken as an alternative to tree removal, in order to maintain a high level of road safety.

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 flora within the clearing area, however there are records of Priority flora species in close proximity to the project area, including *Grevillea brachystylis* subsp. *brachystylis* (Priority 3) which has a small portion of the population mapped within the clearing area, *Leptomeria furtiva* (Priority 2) that occurs outside the clearing area but within the road reserve, and other old records of Priority flora in adjacent, cleared freehold land.

The vegetation in the road reserve exists in a highly disturbed landscape, surrounded by cleared semi-rural and rural land. The likelihood of old records (ranging from 1946 to 1967) of Priority flora being present within the 0.062 ha clearing area is low. The *Leptomeria furtiva* record is very close to the clearing area, however this species is associated with winter-wet flats and peaty sand, which are not characteristic of the project area.

A small portion of the northern extent of the mapped population of P3 *Grevillea brachystylis* subsp. *brachystylis* occurs within the proposed clearing area. This is a healthy population of

over 100 plants, and it is not anticipated that the proposed clearing will have a significant impact to this population.

Measures will be undertaken to minimise impacts to potential significant flora during clearing, including clearly identifying the approved clearing area and trees for removal, undertaking pre-start briefing of project staff and contractors regarding potential significant flora in the area and the need to stay within clearing boundaries, designing the road works to include improvements in surface drainage, pruning trees as an alternative to tree removal, and implementing dieback and weed management

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 priority or threatened ecological communities within the road reserve, or within local proximity to 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 road reserve is unlikely to be significant as a remnant of native vegetation. The road reserve exists in a highly disturbed landscape, surrounded by cleared semi-rural and rural land. The existing roadside vegetation is in good to degraded condition, with weeds and introduced trees present at the site, and marri trees affected by the marri canker fungus. Adjoining remnant native vegetation exists in Shire Reserve 48838, and along the Wadandi Track that runs north-south in the local area.

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 project area is not associated a watercourse or wetland.

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 unlikely to cause appreciable land degradation. Drainage associated with the road enhancement works will be designed to ensure there is no 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

There are no conservation reserves in close proximity to the proposed road enhancement projects. The closest conservation reserves are Wooditjup National Park, approximately 5 km to the south, and Leeuwin-Naturaliste National Park approximately 6 km to the west.

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 works and associated drainage will be designed to ensure there is no erosion or runoff of sediment into the environment. Underground water is unlikely to 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. The road widening and associated drainage will be designed to ensure that there is no flooding of water within the road reserve or surrounding environment.

Conclusion

ATTACHMENT 1: DESKTOP ASSESSMENT AND SITE INSPECTION, CURTIS STREET AND BROCKMAN ROAD, COWARAMUP

The proposed clearing of 0.062 ha of native vegetation at Curtis Street and Brockman Road in Cowaramup for road enhancement works is not considered to have an impact on significant conservation values. There are a number of Priority flora records in the area, however the likelihood of these species being within the proposed clearing area is low. The Shire of Augusta Margaret River will implement measures prior to and during clearing to ensure that impacts are minimised wherever possible.

Attachment 2 – Curtis Street clearing application, list of photos and descriptions

Photo # (in shapefile)	Description
Curtis St photo 1	Marri tree 1 – stem ~30cm DBH
Curtis St photo 2	Marri tree 1 – photo of crown, branches are not of adequate size to support hollows suitable for nesting for black cockatoo species
Curtis St photo 3	Marri tree 2 – dead
Curtis St photo 4	Marri tree 2 – dead. Branches are not of adequate size to support hollows suitable for nesting for black cockatoo species.
Curtis St photo 5	Marri tree 3 – stem ~20-30cm DBH. Very poor condition, likely affected by marri canker fungus.
Curtis St photo 6	Introduced <i>Eucalyptus</i> sp. (most likely karri) planted at the site
Curtis St photo 7	Photo facing south from the Brockman Road/Curtis Street intersection, looking at the southern side of Curtis Street.
Curtis St photo 8	Marri tree 4 – juvenile tree located in the clearing area on the Miamup Road/Brockman Road intersection.
Curtis St photo 9	Photo facing south from the Brockman Road/Curtis Street intersection, looking at the northern side of Curtis Street. Marri tree 5 (~30 cm DBH) in foreground, affected by marri canker fungus, Marri tree 6 in background, also affected by marri canker fungus, and Jarrah tree 1 (~10cm DBH).
Curtis St photo 10	Marri tree 5 - photo of crown, branches are not of adequate size to support hollows suitable for nesting for black cockatoo species
Curtis St photo 11	Marri tree 6 – poor condition, likely affected by marri canker fungus.
Curtis St photo 12	Photo facing south from the Brockman Road/Curtis Street intersection looking towards the proposed sealed section of Curtis Street, showing quality of roadside vegetation.
Curtis St photo 13	Photo of northern side of Curtis Street showing native understorey and weeds.
Curtis St photo 14	Photo of southern side of Curtis Street showing native understorey and weeds.