Neds Corner Road Construction Project

Shire of Esperance

Spring Survey Report - November 2017

EXECUTIVE SUMMARY

CPS 7487 is an application from the Shire of Esperance to Clear Native Vegetation for a 10.2km section of road upgrades. The permit area is along Neds Corner Road from Cascade Road to Mills Road.

The Shire of Esperance originally applied to clear 9.6 hectares of native vegetation within Neds Corner Road Reserve (PIN: 11642046), Cascade for the purpose of road widening and construction (reference CPS 7487/1). This application was received on 17 February 2017. A preliminary flora survey was submitted in February 2017. On 7 August 2017, the Shire of Esperance requested to amend the application area from 9.6 hectares to 2.55 hectares of native vegetation. On 31 August DWER wrote to Shire of Esperance notifying them that "a flora survey targeted at these species undertaken at the appropriate time of the year will determine whether the proposed clearing will impact on these flora species. Please note that should rare or priority flora be identified additional survey of surrounding areas to determine population size will also be required".

INTRODUCTION

The Shire of Esperance plans to upgrade Neds Corner Road from Cascade Road to Mills Road in the 2017-2018 financial year. This is a major transport route to the Cascade CBH grain receival facility and thus gets a high amount of trucks and other traffic.

The survey is part of our compliance obligations for the purpose of clearing native vegetation to construct the road. Neds Corner Road is approximately 75km north-east of Esperance, south of the Cascade townsite on the south coast of Western Australia. The current road is 23m wide and the gazetted road reserve is 125m.

The survey has been undertaken in accordance with the Environmental Protection Authority (EPA) Technical Guidance, Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia (2016). The survey is restricted to an area 5m either side of the existing road alignment, except where rare flora was located, and the entire road reserve was surveyed.

Figure 1: Location of Neds Corner Road

METHODOLOGY

Desktop study

The desktop survey was carried out in February 2017, and initial reconnaissance field survey was conducted at that time to determine the presence and extent of the nationally listed threatened ecological community (TEC) 'Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia'. This spring survey is a follow up targeted flora survey looking for threatened and priority flora that were not able to be identified during summer due to lack of flowering material.

Field investigation

The field survey was conducted in accordance with the Environmental Protection Authority's Technical Guidance, Flora and Vegetation Surveys for Environmental Impact Assessment 2016. The survey was carried out over 3 days by Julie Waters who has a Bachelor of Environmental Science (Hon) with and over 15 years' experience conducting flora surveys (including 10 years in the local area).

Prior to the survey existing populations of the five rare species identified in the desktop survey were visited to determine habitat requirements. Specimen data notes from WA Herbarium was also consulted for each of the species. The spring survey was survey effort comprised of driving slowly down Neds Corner road and systematically searching 5 meters each side of the road in all potentially suitable habitats for each of the species.

Where Declared Rare Flora was located the full extent of the population was surveyed. Herbarium specimens were collected and submitted to DBCA for future lodgement at WA Herbarium and Rare Flora Report Forms were completed. Sites were marked with DRF roadside markers.

Where priority flora was located the full extent of the population was surveyed. Herbarium specimens were collected and submitted to DBCA for future lodgement at WA Herbarium and Rare Flora Report Forms were completed. In the case of *Melaleuca simils* where the Esperance district Herbarium does not have a specimen any likely plants of this species were collected as if they were the priority one species for later identification.

RESULTS

Desktop study

The Declared and endangered flora list (DEFL) database search and liaison with the Esperance DPaW District Flora Officer resulted in several known Priority Flora species and sites within a ten kilometre radius of the site (Table 1). The site had 5 Priority Flora species recorded within a ten kilometre radius of the survey area. The Declared Rare Flora species *Conostylis lepisospermoides* has an old record (1978) on the junction of Mills and Neds Corner Road. *Eucalyptus stoatei* has a record (2003 on the corner of Cascades Road and Neds Corner Road.

Taxon	TF	P1	P2	P3	P4
**Conostephium sp. Cascade*		2			
**Conostylis lepisospermoides*	2				
**Daviesia pauciflora*				1	
**Eucalyptus stoatei*					1
**Melaleuca similis*		1			
Thomasia pygmaea					
Scaevola archeriana					
Opercularia rubiodes					
Eremophila chamaephila					

Table 1: Priority flora sites within a 10 km* and 20km radius radius

FLORABASE RECORD: PERTH 00999687

Conostylis lepidospermoides
Haemodoraceae

Vegetation: In species-rich low heath with scattered emergent mallees including Eucalyptus tetragona 2 - 3 m tall.
Site Description: Flat plateau, grey-brown fine sand over laterite.
Frequency: uncommon.
Locality: 24 km NE of Munglinup, at the intersection of Mills Road and Ned's Corner Road
Location: -33.583°, 121.067° (GDA94)
Location (DMS): 33° 35′ 0.0″ S 121° 4′ 0.0″ E (GDA94)
State: WA
Collector: Hopper, S.D. **Coll No:** 1149
Collection Date: 1 October 1978
Conservation Code: T

Determinavit: S.D. Hopper **Date:** 12 February 1987
Origin: PERTH
Duplicates to: AD CANB K MEL NSW
Record Basis: Preserved Specimen
Type Status: Isotype

FLORABASE RECORD: PERTH 07344430

Eucalyptus stoatei
Myrtaceae

Plant Description, Notes: Mallet to 5.5 m high.
Locality: CR3; Corner Cascades Road and Neds Corner Road E of Ravensthorpe
Location: -33.367°, 121.117° (GDA94)
Location (DMS): 33° 22′ 0.0″ S 121° 7′ 0.0″ E (GDA94)
State: WA
Collector: Landcare Services **Coll No:** LCS 10224
Collection Date: 9 December 2003
Conservation Code: 4

Confirmavit: M.E. French **Date:** *2006*
Origin: PERTH
Duplicates to: AD
Record Basis: PreservedSpecimen

RESULTS

Field Flora Survey (TF and PF)

Existing known Rare flora sites within project area

1) *Conostylis lepidospermoides* (DRF)- Intersection of Mills Road and Ned's Corner Road

The last DBCA survey of this known location of *Conostylis lepidospermoides* was conducted in September 2013. During this survey 6 plants were observed. Plants were only located on the south-west of the intersection.

Habitat on the north and east sides of the intersection was again searched extensively in spring 2017, however still the 2013 location south-west of the intersection was the only place plants were located. This area is excluded from the planned roadworks having already been bituminized previously so this population will not be impacted upon as part of this project.

2) *Eucalyptus stoatei* (P4) - Corner Cascades Road and Neds Corner Road

This was collected in 2003, however the Herbarium record has no details on the numbers of this species at the site. During this survey it was determined that this species covers a large area. It extends 1.5km south down Neds Corner Rd from Neds Corner- Cascade Rd intersection. Plants along extend along Cascade road in both directions. Density of plants is very high (2 per square meter). This population would be in the tens of thousands or greater and most likely only branches will need to be trimmed as part of the roadworks.

New populations of rare flora

Conostylis lepidospermoides (DRF)

A new population of this species was found 3.3km south of Cascade townsite on Neds Corner Road. Plants located over 300m stretch of road. 1 plant on west side, 6 on east side – 7 plants total. This area will not be widened to avoid impacting upon this species. Rare Flora report forms have been sent to DBCA along with specimens for Lodgement at WAHerb. These have also been sent to DWER.

Davesia pauciflora (P3)

Approximately 3km south of Cascade townsite on Neds Corner Road. Plants located over 650m stretch of road. 10 plants in total. Some of these were old plants, much larger than other descriptions of the species (Florabase description 0.3-0.8 m high). Two of these plants are likely to be removed as part of the construction project as they are edge of road. Being such large plants (and a high soil seed bank) and generally Daviesa's being disturbance opportunists this roadwork may be

beneficial to the population and induce recruitment. Rare Flora report forms have been sent to DBCA along with specimens for Lodgement at WAHerb. These have also been sent to DWER.

Davesia pauciflora located on Neds Corner Road twice as high as the Florabase description.

CONCLUSION

The proposed road construction project on Neds Corner Road will result in the clearing of approximately 2.55 hectares of native vegetation. There will be no impacts on Declared Rare flora *Conostylis lepidospermoides.* However two priority species of flora will be impacted upon. *Davesia pauciflora* will be impacted upon, and two plants will likely be removed as part of this project. *Eucalyptus stoatei* will be impacted upon however the impacts will be negligible on this very large population.

Some of the roadside vegetation includes areas of the Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia threatened Ecological Community. 1.97 hectares of the proposed clearing area are part of the Threatened Ecological Community "Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia". Whilst the proposal will reduce the extent of the ecological community by 1.97ha, it will not significantly impact on other criteria eg: fragment or increase fragmentation of the ecological community, as the road already passes through it and there is still vegetation remaining in the transport corridor. No existing fauna transport corridors will be removed entirely.

Appendix 1 Conservation status descriptions

Definitions of conservation codes given to declared rare and priority flora.

KJ Atkins, 15 July 1998, Department of Conservation and Land Management

TF: Threatened Flora – Extant Taxa

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

P1: Priority One – Poorly Known Taxa

Taxa that are known from one or a few (generally less than five) populations, which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, or the plants are under threat, e.g. from disease, grazing by feral animals. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.

P2: Priority Two – Poorly Known Taxa

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

P3 Priority Three – Poorly Known Taxa

Taxa that are known from several populations, and the taxa are believed to be not under immediate threat (i.e. not currently endangered), either due to the number of known populations (generally more than five), or known populations being large, and either widespread or protected. Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.

P4 Priority Four – Rare Taxa

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

Note: The need for further survey of poorly known taxa is prioritised into the three categories depending on the perceived urgency for determining the conservation status of those taxa, as indicated by the apparent degree of threat to the taxa on the current information.