



WILDFLOWER SOCIETY OF WESTERN AUSTRALIA (Inc)

1/02/2022

Department of Water and Environmental Regulation
Prime House
8 Davidson Terrace
Joondalup WA 6027

By email

Re: CPS 9524/1 – Shire of Esperance – Various Roads

The Wildflower Society of WA (the Society) recommends to the Department of Water and Environmental Regulation (DWER) that the Clearing Permit application (CPS 9524/1), applied for by Shire of Esperance for various road improvements, should not be granted as it does not provide sufficient information of the flora and fauna within the affected areas or take into account the intent of the State in establishing wide road reserves. Additionally, there is no account take of the Threatened Ecological Communities, threatened flora and fauna and any impacts are not identified, avoided, minimised, mitigated nor counterbalanced offset. This project may also need referral to the Commonwealth Department of Agriculture, Water and the Environment should it impact on Matters of National Environmental Significance.

Wide Road Reserves

Road reserves wider than 20 m were established by the Government from the 1960's to protect the natural heritage of this State as it promoted the diversity of its flora. Within the widened road reserve, a 20 m corridor only was provided for establishment and maintenance of the road within the road reserve. It was understood that roadsides wider than 20m were required need to sustain a viable roadside vegetation. As a consequence of the road reserve widths in excess of 20 m and up to 1 km wide can be found in the Wheatbelt and Southwest of Western Australia.

This was reinforced in the late 1970's when the Road Verge Conservation Committee (later called the Roadside Conservation Committee) completed a study of roadside widths and their capacity to sustain roadside vegetation. This study found that roadsides of less than 30 m in width could not withstand the edge effects arising from road maintenance, adjacent agricultural activities and the spread of weeds. Some activities, such as runoff from adjacent land uses increased the width required to withstand edge effects.

The road reserve was not set aside for the winning of road construction materials or creation of excessively wide road structures. The engineering cross-sections identified here provide for road clearance widths that are very conservative and more akin to a highly trafficked rural highway, which these roads are not.



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In the area covered by this permit application, many of the road reserves are wide (between 60 and 200 m wide and provide linkage between the coastal areas through the south coast kwongan sandplains and mallee-woodlands to the Great Western woodlands. They provide a network of corridors linking reserved land and remnant bushland and combine with the major waterway systems to provide a viable system for movement of fauna and vegetation transects for study of the variability of flora with the changes in the climatic and physical environment. Watson (Ref.1) made reference to the value of the river systems in this region when discussing the role of corridors in nature conservation, as did many others in relation to roadsides in the same reference collection.

The extension of clearing for road development and for extraction of road construction materials narrows the width of vegetation and erodes the value of the roadsides for nature conservation.

Road Standard Proposed

The Society suggests that typical road cross-sections required for the roads identified in this clearing application can be reduced to 20 m maximum by reducing:

- The overall running surface of the road - 6.0 m
- The shoulder – 1.0m sealed then 0.5m unsealed giving an overall space requirement of 3.0 m
- Batters to 1:4 foreslope to a width of 3.0m, 1:3 fill and 1:3 backslope to a width of 3.0m then 1:2.
- A 1.0m depth to base of the table drain provides sufficient drainage with the frequency of table drains used by the Shire in this area.

Using these design standards will allow containment of the road within a 20 m cleared zone. The ability to fit into this envelope can also be enhanced by widening the road on one side downslope of the existing road as widening in fill does not require development of an upstream drain and its backslope. This application does not appear to have considered that option. The widening on wide side also allows the retention of a wide band of vegetation on one side of the road, where the road is located in the centre of the road reserve.

The Society contends that the extent of clearing for road widening can be reduced and the Shire of Esperance should be requested to adopt a more sensitive approach to road design to reduce the clearing requirements to a maximum of 20 m. No road construction materials should be allowed to be won from within the road reserve or adjacent reserves. All existing borrow (steal) pits should be rehabilitated as a condition of any approval. The cost of acquiring these materials from adjacent farmland should be borne as a cost of road construction or maintenance.

Information Provided in the Application

The information provided in this application is insufficient to judge the impact of the proposed works on the flora and fauna of the areas. This issue is common with many road widening applications made by Shire Councils and was recently raised with the Director-General as it results in DWER staff having to produce lengthy reports to justify the clearing, when it is the proponents responsibility.



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No flora and fauna study is provided to enable assessment of the impact of the proposed clearing on Threatened Ecological Communities, Matters of National Significance, Priority Ecological Communities, Priority Species or the impact of clearing on the individual vegetation communities present from a local or regional perspective.

The Society is aware that these features do exist in the areas proposed for clearing and include:

- Eucalypt woodlands of the Western Australian Wheatbelt
- Proteaceae dominated kwongan shrublands of the southeast coastal floristic province of Western Australia
- Great Western Woodlands.

The records of flora collection density in the region correlate well with the records of threatened species. Much of the area over which the clearing proposed in this application occurs has a low (2-10 records/10km²) density so the likelihood of unrecorded presence of threatened species is high (Ref. 2).

In Ref. 2, it is noted that a number of threatened flora species have significant populations in roadside vegetation and so are threatened by roadworks.

Phytophthora fungus is present in the Esperance region but there is no indication of its presence/absence at any of the sites or discussion of the susceptibility of the flora to this threatening species. Roadworks and construction material movement are common causes in the spread of this fungus, particularly when offshoot drains are installed as visually evident in many of the road sections proposed for upgrade in this application.

Before any further assessment of this permit application, the Society believes the Shire of Esperance should be requested to complete multi-season flora and fauna surveys for each site and include discussion on the presence/absence of Threatened Ecological Communities, Matters of National Significance, Priority Ecological Communities, Priority Species and the impact of clearing on the individual vegetation communities present from a local or regional perspective.



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<http://www.wildflowersocietywa.org.au/>

References:

1. Watson, J.R. (1991). The identification of river foreshore corridors for nature conservation in the South Coast Region of Western Australia. In Nature Conservation 2 – the role of corridors, Saunders D.A. and Hobbs R.J. (eds), Surrey Beatty and Sons Ltd, Chipping Norton, NSW.
2. Gilfillan, S., Mitchell, P., Newell, J., Danks, A. & Comer, S. (2009). South Coast Threatened Species and Ecological Communities Strategic Management Plan, Department of Environment and Conservation, Albany.