

MRWA Vegetation Clearing Assessment Report

This guideline has been prepared to assist MRWA in addressing condition 7 "Assessment of Clearing Impacts" under Clearing Permit CPS 818.

For guidance on how to complete the form, refer to DEC completed reports (active permits) at http://203.20.251.100/cps_reports/.

1. AREA UNDER ASSESSMENT DETAILS

Proponent details

Proponent's name:

Contacts:

MRWA

Name: Peter Swanson

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Property details

Property:

Colloquial name:

Great Northern Highway: Section 1: SLK 6.34-12.56

Area under assessment

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:	Site Plan Attached
<1ha		Manual & mechanical	Road widening	X Yes <input type="checkbox"/> No

Avoidance/Minimise clearing

How have the clearing impacts been minimised?

- An Environmental Impact Assessment has been undertaken to identify all environmental issues.
- A spring flora survey has been undertaken to determine the existence of Declared Rare Flora (DRF) and Priority Flora (PF) as well as vegetation types and representativeness
- A habitat assessment and an opportunistic survey have been undertaken to identify the suitability of habitat and the possible presence of significant fauna.
- The road design has been amended to avoid impacts to an Environmentally Sensitive Area (ESA) eastern side of GNH 40m north of Cathedral Avenue. The site consists of a very old Nuytsia floribunda (WA Christmas tree) and a tree barrier will be erected to protect it from errant vehicles.
- Design concepts have been developed to prevent direct impact to the Swan River which is Bush Forever site 302 and a Conservation Category Wetland (CCW).
- The design has been developed to minimise disturbance to existing habitat/fauna corridors.

2. BACKGROUND

Existing environment and information

Description of the native vegetation under application

Site Visit Undertaken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Fauna / Flora Survey Undertaken	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Site Report Attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fauna / Flora Survey Report Attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Site Photos Attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other Relevant References Attached	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Vegetation Complex	Clearing Description	Vegetation Condition	Comment
Guilford and Swan Vegetation Complexs (Heddlie) Floristic Community 11 'wet forests and woodlands – well reserved, low risk in terms of conservation status (Gibson et al. 1994)	Within the GNH road reserve – majority on the western side. Existing vegetation is not representative of regionally significant vegetation. The majority of remnant vegetation remaining is associated with the Swan River and Susannah Brook.	Mostly non-native in a degraded condition	Adjacent land use is primarily agriculture

3. ASSESSMENT OF APPLICATION AGAINST CLEARING PRINCIPLES

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

Comments **Proposal is not at variance to this Principle**
The area *"is predominantly comprised of non-native, planted species with very few native plant species remaining"*. A search of the CALM database identified 32 species of significant flora occurring in the overall area, however none were identified during the flora survey of Section 1 (ATA Environmental 2004).

Methodology Spring Flora Survey
CALM (DEC) database search

(b) 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 indigenous to Western Australia.

Comments **Proposal is not at variance to this Principle**
A habitat assessment and an opportunistic survey have been undertaken to identify the suitability of habitat and the possible presence of significant fauna. The loss of vegetation, primarily from the western side, is not expected to significantly impact on any indigenous species. A number of fauna species of conservation significance are known to occur within the local area, however the majority of native vegetation in this area has been previously cleared.
It is expected that the impact of clearing on habitat connectivity will be minimal and will largely be ameliorated through a combination of minimising clearing and revegetation with appropriate native plant species.
The only real habitat connectivity that remains in the area is situated at the Swan River, where no clearing is proposed and the Susannah Brook, which is already transected by GNH.

Methodology Habitat assessment and opportunistic survey: Bamford Consulting Ecologists 2002

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

Comments **Proposal is not at variance to this Principle**
CALM's Threatened (Declared Rare) or Priority Flora database records several species of conservation significance (ie DRF and Priority Flora) known to exist in the vicinity, however none were identified during the vegetation and flora survey. As such none will be impacted by the proposal.

Methodology Spring Flora Survey
CALM (DEC) database search

(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.

Comments **Proposal is not at variance to this Principle**
No threatened ecological communities are known to occur within Section 1 and as such there will be no impact.

Methodology Search of DEC (CALM) Database

(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.

Comments **Proposal is not at variance to this Principle**

The majority of vegetation to be cleared as part of this project is comprised of planted species, with most of the original vegetation having been cleared previously. Of the small pockets of native vegetation that fall within the clearing limits, it is not considered that these are representative of the Guildford Vegetation Complex.

The only remnant vegetation of any significance that is proposed to be cleared is at Sussanah Brook. However, the extent of clearing here is minimal and would not be considered significant.

Methodology Spring Flora Survey
Gibson et al. 1994

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

Comments **Proposal is not likely to be at variance to this Principle**
The Swan River, which is mapped as a Conservation Category Wetland (CCW) occurs at the North end of the project. It is not anticipated that there will be any impact on the CCW with the project works. Agreement has been obtained from Swan River Trust to the outfall design at the Swan River and a site inspection revealed there was no native vegetation required to be cleared to accommodate the approved design.

Methodology Site inspection

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

Comments **Proposal is not at variance to this Principle**

Drainage design for this section of highway will now incorporate a fully kerbed alignment with culverts and drainage pits to ensure all road drainage is managed in such a way as to prevent any excessive scouring adjacent to the road. All disturbed areas such as side batter slopes adjacent to the road will be revegetated and mulched in accordance with the contract specifications.
Given the narrow linear nature of the proposed clearing and the intended land use, it is considered unlikely that the proposed clearing would cause significant on or off site land degradation. Extent of native vegetation clearing is < 0.1ha.

Methodology Site inspection

(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.

Comments **Proposal is not likely to be at variance to this Principle**
The highway upgrade is unlikely to have any impact on the System 6 Reserve (Swan River) or nearby Bush Forever Site 302. The only works in the vicinity of the Swan River comprises the oil spill capture unit, and associated outfall. No clearing of native vegetation is required to accommodate these structures.
A WA Christmas Tree, which is classified on the National Trust as a Special Environmental Area and the group of trees adjacent to it will be protected by realignment of the highway away from this area, including the provision of a safety barrier to protect errant vehicles.

Methodology Site inspection

(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.

Comments **Proposal is not at variance to this Principle**
Given the lack of native vegetation it is considered unlikely that the clearing as proposed would significantly impact surface or groundwater hydrology.
It is proposed that drainage flows to the Swan River be limited by restriction of outflow and storage in the pipe system. The system will discharge to a broad swale on the foreshore that will provide significant storage, as well as infiltration and treatment.

Methodology Site inspection

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

Comments **Proposal is not at variance to this Principle**
Given the small amount of native vegetation required to be cleared in this area, 0.1ha, the clearing of these isolated trees and pockets of vegetation would have no influence on the propensity of the area to flood. While the surrounding land is of very flat grade, the new road design, consisting of piped road drainage would channel any excess water away to the outfall point at the Swan River, thus improving on the current situation.

Methodology Site inspection

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

Methodology

4. SUBMISSIONS

If required have submissions been requested and addressed

Submission Requested from	Request Sent (Date)	Submission Received (Date)	Issues Raised / Comments Made
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5. ASSESSOR'S RECOMMENDATIONS

List of Principles seriously at variance, at variance or maybe at variance:	Recommendation:
	The principles have been addressed above as per the requirements of the MRWA Statewide Project Purpose Permit, in addition to having already undertaken a full Environmental Impact Assessment (EIA) for the area.
The clearing is not at variance with all but the two principles below.	Given the total area of native vegetation to be cleared in Section 1 (~0.1ha, which is less than 0.5ha), a revegetation plan is not required to be submitted to DEC and no ongoing reporting needs to be carried out.
Not Likely – Principle f: <i>growing in, or in association with, an environment associated with a watercourse or wetland</i> Principle h: <i>impact on the environmental values of any adjacent or nearby conservation area</i>	MRWA is committed to management measures, which will be incorporated in the contract documents, such as an Environmental Management Plan (EMP), including Dieback and Weeds management, as well as a revegetation strategy through the landscaping design of the project.

6. REFERENCES

Text in *italics* is directly quoted from the ATA Environmental Scientists 2004: 'Environmental Impact Assessment: Great Northern Highway: Section One: SLK 6.34-12.56' compiled for Main Roads.

Gibson, N., Keighery, B., Keighery, G., Burbridge, A. and Lyons, M. 1994: *A Floristic Survey of the Southern Swan Coastal Plain* compiled for the Australian Heritage Commission.

6.1 OFFICER PREPARING REPORT

Peter Swanson

(Note: site inspections have been undertaken and the majority of these responses compiled by PM Cameron Smith)

Position: Title: PEO
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MRWA
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Date