Report under the NV Act 2003 in relation to a Minor Variation (Clause 27 of the Native Vegetation Regulation 2005)

This report has been prepared by a Level 3 Accredited Expert for the purposes of Clause 27(4) of the Native Vegetation Regulation 2005.

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Summary

I am of the opinion that:

a) a minor variation to the Assessment Methodology would result in a determination that the proposed clearing will improve or maintain environmental outcomes (other than a variation that is not allowable under this clause), and
b) strict adherence to the Assessment Methodology is in the particular case unreasonable and unnecessary.

The minor variation is to (i) allow for clearing type d (paddock scale treatment with nil to minimal disturbance to soil and groundcover) to be utilised for controlling the INS species River Red Gum (*Eucalyptus camaldulensis*) which is acting invasively, and (ii) increase the maximum dbh limit of stems to be cleared to 30 cm dbh for the INS species River Red Gum which is acting invasively.

The extent of Invasive Native Scrub (INS) on the property (Lots 29 and 30) is one hundred and eighty four (184) hectares (ha). The area of INS to be treated is one hundred and forty seven (147) ha [with 20 ha retained in patches within the 147 ha area], and the area of INS to be retained is 37 ha. The INS is situated on a floodplain with a slope of less than 0.5%. The land is dominated by a River Red Gum community. The River Red Gum trees have regenerated densely and are behaving invasively across the area. On average there are one thousand five hundred and fifty (1550) River Red Gum trees per hectare. Within the area proposed for Invasive Native Scrub (INS) treatment, River Red Gum are relatively dense in the size class above 20 cm diameter at breast height (dbh) up to 30 cm dbh. There are approximately 200 River Red Gum trees per hectare greater than 20 cm dbh up to 30 cm dbh (Table 1), and approximately 80 River Red Gum trees per hectare above 30 cm dbh throughout the area subject to INS treatment (Table 1).

Native groundcover species have diminished in the area proposed for treatment due to the presence of the non native weed species Lippia (*Phyla nodiflora*) which has competed for soil moisture and nutrients. Lippia occurs densely in areas across the area for INS treatment. Treating the INS (River Red Gum) at paddock scale (with nil to minimal disturbance to soil and groundcover) and increasing the maximum dbh of stems to be removed to 30 cm dbh will encourage native groundcover species and suppress the Lippia, thereby increasing the condition of the native vegetation community. The condition of the River Red Gum community, including groundcover and native species richness will be substantially improved by applying the minor variation.

Strict adherence to the Assessment Methodology in this particular case is unreasonable and unnecessary because of the preponderance of Lippia combined with the high densities of River Red Gum species in the area to be treated. Groundcover needs to be encouraged to suppress the Lippia. By treating the INS a mosaic of vegetation states with open woodland and native groundcover, and denser areas of River Red Gum will be created by: (i) retention of all River Red Gum trees above 30 cm dbh; (ii) retention of 37 ha of INS (20% of INS extent) plus a further 20 ha of INS in patches across treatment area; (iii) restoration of native groundcover; and (iv) retaining all other native vegetation as required by the EOAM.

After the INS is cleared from the vegetation community, the resultant vegetation structure will be an open woodland with native groundcover and patches of dense native vegetation.

Description of the proposed clearing:
The proposed clearing involves the management of INS in the Darling Riverine Plains Interim Biogeographical Regionalisation Area (IBRA) within the Central West CMA Area. The INS species in the area to be managed is River Red Gum. The River Red Gum is behaving invasively throughout the areas proposed to be managed as INS on the property.

The minor variation is to allow for INS clearing type d (paddock scale treatment with nil to minimal disturbance to soil and groundcover) to be utilised in the INS area and increase the maximum dbh limit of clearing to 30 cm dbh for River Red Gum.

The following provisions apply:

a) the initial clearing of INS does not exceed 37 hectares (20% of the extent of invasive native species on the property), and

b) additional blocks of 20% (or less) of the extent of INS on the property may be cleared if the CMA is satisfied that land that was initially, and then previously, cleared by this method has achieved a groundcover of greater than 50% of which 75% is native groundcover, up to a maximum of 69% (127 ha) of the INS area on the property (Lots 29 and 30); and

c) an additional 20 ha of INS will be retained in patches across the treatment area (ie: in the 147 ha); and

d) all River Red Gum trees greater than 30 cm dbh will be retained; and

e) all hollow bearing River Red Gum trees will be retained; and

f) appropriate herbicide will be spot sprayed and targeted to control Lippia; and

g) the machinery used to treat the INS will be washed down with appropriate chemical to manage Lippia and prevent it spreading elsewhere on or off the property.

The proposed minor variation does not relate to any of the following aspects of the Assessment Methodology:

a) riparian buffer distances or associated offset requirements,
b) classification of vegetation as likely habitat for threatened species,
c) classification of a plant species as a threatened species or a component of an endangered ecological community,
d) classification of the condition of vegetation,
e) classification of the vegetation type or landscape type as over-cleared,
f) the assessment of the regional value of vegetation.

Details of the proposed minor variation:
Under the Environmental Outcomes Assessment Methodology (EOAM) and within the Central West Catchment Management Area (CWCMA), River Red Gum that is acting invasively may be treated by the following methods: a) burning; b) clearing of individual plants with no disturbance to groundcover (for example, chemical spot treatment or ringbarking); and c) clearing of individual plants with minimal disturbance to groundcover (for example, grubbing), and the maximum dbh to be cleared is 25 cm (applying judgement of the CMA).

The minor variation is to allow River Red Gum that is acting invasively to be cleared at paddock scale with nil to minimal disturbance to soil and groundcover (clearing type d) and to increase the maximum dbh limit of clearing to 30 cm dbh. The potential for land and water degradation is minimal, due to the heavy soil type and minimal to nil slope.

Twenty percent (20%) [37 ha] of the INS extent will be permitted to be treated at any one time. After this time, vegetation staff from the Central West CMA will be required to inspect the site and be satisfied the treated area has achieved greater than 50% groundcover, of which 75% is native groundcover. Once this is achieved, a further 20% may be treated. After each 20% parcel of INS is treated the CMA need to be satisfied the specific minimum groundcover requirements are achieved before further INS may be treated. Up to a maximum of 69% of the INS extent on the property (Lots 29 and 30) may be treated. Twenty percent (20%) of the INS extent will be retained, and 10% of the 80% of INS in the treatment area (15 ha) plus an additional 5 ha of INS in the treatment area will be retained in patches).

Reasons for recommending the proposed minor variation:
The density of River Red Gum is high in the INS area on the property (Lots 29 and 30) and the groundcover is dominated by the exotic weed Lippia which is difficult to control without groundcover competition. By utilising clearing type d, the Lippia in the River Red Gum community will be controlled through greatly increasing intensity and extent of competition by native groundcover species. Clearing type d is required to allow the INS to be treated on a sufficient scale to encourage native groundcover to the degree and extent required to control the Lippia. The minor variation will improve the richness and abundance of native groundcover species in the treated area, thus suppressing Lippia and increasing biodiversity. A mosaic of vegetation states including open woodland and more dense patches of River Red Gum will be created. Thus, the minor variation will improve or maintain environmental outcomes and strict adherence to the Assessment Methodology is unreasonable and unnecessary in this case.

Minor variation
The minor variation is to allow for paddock scale treatment with nil to minimal disturbance to the soil and groundcover (clearing type d) to be utilised for the treatment of River Red Gum INS and to increase the dbh limit for clearing to 30 cm dbh for River Red Gum INS.

Table 1

Site	Species	Stems per Ha 0-10 cm	Stems per Ha 11-15 cm	Stems per Ha 16-20 cm	Stems per Ha 21-25 cm	Stems per Ha 26-30 cm	Stems per Ha 31-35 cm	Stems per Ha > 35 cm	Total Stems per Ha
1	Red River Gum	1425	475	300	125	75	25	0	2425
2	Red River Gum	850	375	100	100	125	100	0	1650
3	Red River Gum	1000	725	225	200	50	50	75	2325
4	Red River Gum	425	125	25	150	75	25	25	850
5	Red River Gum	500	100	150	100	75	0	25	950
6	Red River Gum	275	0	0	25	150	25	75	550
7	Red River Gum	300	125	75	50	175	100	50	875
	Av per size class	682	275	125	107	104	46	36	1550

Note: Total Av stems per ha = 1550