

Form A **Minor Variation to Property Vegetation Plan Assessment**
issued under Part 5 Clause 27 of the *Native Vegetation Regulation 2005*

Case Number: **1667**

PVP type : Development

Proposed development

To clear 33 hectares of chenopod shrubland for horticultural development and create a 230 hectare reserve of Black Box, Redgum and Chenopod Shrubland. Black Box and Redgum both being priority vegetation communities for Conservation Reserves in the LMD CAP.

Minor Variation

Made on (date) _____
The date of the signature below.

The accredited expert is 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.

Minor variation made to the following Assessment Methodology :

Biodiversity and Threatened Species

Salinity

~~Land and Soil~~
~~Water Quality~~

Reasons for Minor Variation See Attachment No 1

Assessment Protocols Not applicable

Accredited Expert

Noel Hayward

(Biodiversity and Threatened Species, Salinity, Land and Soil, Water Quality)

Signed

Original signed 31 August 2006

Date

**General Manager
Lower Murray Darling
Catchment Management
Authority**

Paul Dixon

Signed

Original Signed 31 August 2006

Date

Note 1. Details of this minor variation are required by Clause 29 Regulations to be published and any reports made publicly available.

Attachment 1 – Reasons for Minor Variation

The development proposal is to partially clear 33 hectares of chenopod shrubland for horticultural development and create a 230 hectare reserve of Black Box, Redgum and Chenopod Shrubland, Black Box and Redgum both being priority communities for Conservation Reserves in the LMD CMA CAP. The development will use best management practice including computer controlled and monitored drip irrigation and use of indigenous chenopod species as mid-row groundcover. A drainage and irrigation management plan (DIMP) approved by DNR is a pre-requisite to ensure drainage and salinity are correctly managed.

The existing chenopod shrubs will be maintained between rows and enhanced if necessary by direct seeding of native *Atriplex spp.* as a mid-row cover crop to suppress weeds, and to minimize erosion and deep drainage.

The proposal has also been designed to avoid and protect any of the Black box trees in the area which may provide breeding habitat for the Pink Cockatoo, Grey Falcon, Black Breasted Buzzard and Regent Parrot.

This assessment has been carried out using the EOAM methodology and resulted in green light for the Biometric tool with the use of offsets for all categories except Landscape Value.

The threatened species tool provided a green light to nine of the 12 threatened species after offsets being applied. The other three species, the Grey Falcon, Black-breasted Buzzard and Western blue-tongued lizard provided a red light to clearing.

The Salinity Offsets and Incentives (SOI) Tool also gave a red light on the grounds that the *“proposed vegetation cover on the offset site cannot provide enough recharge reduction to offset the impact of clearing”*..

The reasons for the opinion of the Accredited Expert in respect of the Minor Variation are based on the following assessment in each area.

1. LANDSCAPE VALUE

The concentric circles of the PVP Developer show a 70% loss of vegetation cover in the 10 hectare ring and 40% in the 100 hectare ring which cannot be offset, leading to a red light for Landscape value and thus the biometric tool.

Loss in vegetation cover is referred to as "percent native vegetation cover in the landscape" (within circles of 1.75 km radius or 1000 ha, 0.55 km radius or 100 ha, and 0.2 km or 10 ha radius) in the BioMetric Version 1.8 Operational Manual.

The 1000 hectare circle retains greater than 70% native vegetation cover.

It is considered that the “improve or maintain” test will be met for Landscape value and that it is unreasonable and unnecessary to offset the loss in vegetation cover from clearing in the 10 ha and 100 ha circles, and a minor variation applied to approve the PVP on the grounds that *“strict adherence to the assessment Methodology is in the particular case unreasonable and unnecessary”* for the following reasons.

1. The proposed development is in a predominantly intact landscape.
2. The Mitchell Landscape (Scotia Sandplains) in which the proposal is located is only 2% cleared,
3. The vegetation community (chenopod shrubland) is shown by PVP Developer as zero (0) % cleared, and
4. The clearing has no impact on connectivity value which remains high, and does not have any impact on the important corridors between the riverine area and the rangeland communities.

2. THREATENED SPECIES

The accredited expert is of the opinion that better data is available that more accurately reflects local environmental conditions compared to the data in the approved database for the Lower Murray Darling Catchment as described below.

Grey Falcon

A review of the DEC Threatened species data base and other data showed:

1. There will be no loss of breeding habitat of the Grey Falcon, the loss being restricted to foraging habitat as no trees will be removed.
2. There will be no impact on the breeding population of the Grey Falcon in the area.
3. The estimated percentage increase in population that can be expected in response to a proposed management action, in the same CMA subregion of the adjoining CMA and also adjacent to the Darling River are significantly higher as follows:

Management actions	Lower Murray Darling	Adjoining CMA
Domestic stock grazing exclusion	2	5
Feral and/or native herbivore control/exclusion fencing	0	5
Maintain or re-introduce natural flow regimes to wetlands	0	1
Retention of all dead (and alive) timber	2	5
Strategic stock grazing	0	1
Supplementary planting (for use in "Moderate to good condition" vegetation)	0	1
Total	4	18

There is no evidence to indicate the same responses would not occur in the proposal area.

An overall response of 15% has therefore been used in the proposal area.

4. Whilst the Threatened Species tool does not include the Black Box Woodland as habitat in the LMD region, the threatened species database shows it occurring in Inland Floodplain Woodlands in each of the adjoining CMA's.

Inland Floodplain Woodland is described as being an overstorey of *Eucalyptus largiflorens*, occasionally with *E. macrocarpa*, with an understorey and groundcover of *Chenopodium nitrariaceum*, *Rhagodia spinescens*, *Enchylaena tomentosa*, *Atriplex nummularia*, *A. semibaccata*, *A. leptocarpa*, *Muehlenbeckia florulenta*, *Chamaesyce drummondii*, *Oxalis perennans*, *Boerhavia coccinea*, *Einadia nutans*, *Centipeda cunninghamii*, *Alternanthera denticulata*, *Carex inversa*, *Agrostis avenacea*, *Sclerolaena tricuspsis* and *Calotis scapigera*, many of which were identified during the site assessment.

It is therefore considered that the Grey Falcon will occur in or use the Black Box offset. An additional area of 50 hectares (50% of the Black Box community) has therefore been included.

Black-breasted Buzzard

1. There will be no loss of breeding habitat of the Black-breasted Buzzard, the loss being restricted to a minor loss of foraging habitat, as no trees will be removed.
2. There will be no impact on the breeding population of the Black-breasted Buzzard in the area

- The Black-breasted Buzzard spends much time on wing, soaring, gliding, or low quartering in search of its prey of; medium-sized mammals (such as young rabbits), birds, large lizards, and nestlings of other birds including raptors. The loss therefore of 33 hectares of foraging habitat in an intact landscape containing over 2 million hectares of chenopod shrubland is will have negligible impact.
- The estimated percentage increase in population that can be expected in response to a proposed management action, in the same CMA Subregion of the adjoining CMA and also adjacent to the Darling River showed significant higher responses as follows

Management actions	Lower Murray Darling	Adjoining CMA
Domestic stock grazing exclusion	2	1
Feral and/or native herbivore control/exclusion fencing	0	1
Application of ecological fire management	0	1
Retention of all dead (and alive) timber	2	5
Strategic stock grazing	0	1
Supplementary planting (for use in "Moderate to good condition" vegetation)	0	1
Total	4	10

There is no evidence to indicate the same responses would not occur in the proposal area.

An overall response of 9% has therefore been used in the proposal area.

Western Blue-tongued Lizard

- Whilst the Threatened Species tool does not include Black Box Woodland as habitat in the LMD region, the threatened species database shows it occurring in Inland Floodplain Woodlands in at least one adjoining CMA's.

Inland Floodplain Woodland is described as being an overstorey of *Eucalyptus largiflorens*, occasionally with *E. macrocarpa*, with an understorey and groundcover of *Chenopodium nitrariaceum*, *Rhagodia spinescens*, *Enchylaena tomentosa*, *Atriplex nummularia*, *A. semibaccata*, *A. leptocarpa*, *Muehlenbeckia florulenta*, *Chamaesyce drummondii*, *Oxalis perennans*, *Boerhavia coccinea*, *Einadia nutans*, *Centipeda cunninghamii*, *Alternanthera denticulata*, *Carex inversa*, *Agrostis avenacea*, *Sclerolaena tricuspis* and *Calotis scapigera*, many of which were identified during the site assessment.

- The Threatened species data base describes the Western-blue tongue as inhabiting plains, swales, ranges and sometimes dunes of loamy or clayey/sandy soils vegetated by woodlands, especially mallee, shrublands (including chenopods), heaths or hummock

grasslands. Preferred vegetation type appears to be mixed mallee/triodia communities. The proposed development area is dominated by Chenopods.

The nominated Black Box offset area also contains a significant groundcover (shrubs) layer of Chenopod Species, at approximately 25 -30% of the cover as the development area.

It is therefore considered that the Western Blue-tongued Lizard will occur in or use the Black Box offset. An additional area of 50 hectares (50% of the Black Box community) has therefore been included.

3. SALINITY

The accredited expert is of the opinion that better data is available that more accurately reflects local environmental conditions and current best management practise when compared to that used in the approved SOI Tool.

1. The SOI Tool does not consider the impact of reduced drainage resulting from a Drainage and Irrigation Management Plan (DIMP).

The *Water Management Act 2000* (NSW) requires the Department of Natural Resources (DNR) has to assess a water transfer before issuing a water use licence.

To get DNR approval, irrigation managers need to be able to show how their management practices and technologies minimise impacts on the environment via their DIMP, which matches the irrigation system, crop requirements and management practices to their farm's soil and water resources, to reduce adverse impacts on the environment, including soil salinisation, waterlogging, nutrient pollution, rising groundwater tables, and water quality degradation are some of these impacts.

A drainage and irrigation management plan (DIMP) approved by DNR is a pre-requisite to clearing occurring to ensure drainage and salinity are correctly managed.

2. Adoption of current best management practise is not recognised by the SOI Tool

The development will use best practice including computer controlled and monitored drip irrigation and use of indigenous chenopod species as mid-row groundcover. The existing chenopod shrubs will be maintained between rows and enhanced if necessary by direct seeding of native *Atriplex spp.* as a mid-row cover crop to minimize deep drainage.

It is therefore concluded that the “improve or maintain” test will be met for Salinity and a minor variation applied to approve the PVP on the grounds that “*strict adherence to the assessment Methodology is in the particular case unreasonable and unnecessary*”.

REFERENCES

Threatened Species, populations and ecological communities of NSW

<http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/index.aspx>

The Action Plan for Australian Birds 2000

By Stephen T. Garnett and Gabriel M. Crowley, Environment Australia, 2000

Distribution, Status, Movements and Breeding of The Grey Falcon Falco Hypoleucos

Penny D. Olsen & Jerry Olsen, CSIRO Division of Wildlife and Rangelands Research

Black-breasted Buzzard Kite - Hamirostra melanosternon.

The Hawk Conservancy Trust

Evaluation of Indigenous species of Saltbush used as a cover crop at Banrock Station in SA,

CRCV Viticare Trials, PIRSA

Operational Guidelines for Applying Of a Minor Variation to Landscape Value,

Lower Murray Darling CMA