

SCHEDULE 4 – NO TILL PASTURE CROPPING

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.

Accreditation number: 30619

PVP #DA reference number: **9123**

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 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.

Description of the proposed clearing: *(include details of the proposed clearing)*

The proposed clearing activity involves the treatment of Invasive Native Scrub (INS). The following native flora species are behaving invasively throughout the extent of INS on the property: Wilga (*Geijera parviflora*). The Landholder or Lessee, proposes to treat areas of INS (excluding areas of retention) by the full range of clearing types including clearing plants at a paddock scale with longer-term groundcover and soil disturbance [Treatment option F of Chapter 7 'Invasive Native Scrub Assessment' within the 'Environmental Outcomes Assessment Methodology (EOAM) under the Native Vegetation Act 2003, definition shown below].

If Schedule 5 is implemented on Lot 17 Deposited Plan 752863, also named 'White Elephant', the Landholder or Lessee, has proposed that 40% [40% equals to 103.69 hectares] of the INS Extent [INS extent equals 259.23 hectares] be permitted to be treated under clearing type (f), clearing plants at a paddock scale with longer-term groundcover and soil disturbance and that pasture cropping practices including no tillage (see definition under pasture cropping information) would be used ensuring adequate groundcover is maintained to prevent serious risk of erosion.

The Landholder or Lessee, proposes to establish the annual crops by sowing directly into native pastures using a no tillage (see definition under pasture cropping information) implement such as a disc seeding implement or narrow pointed.

The initial cultivation event or first pass will cause short-term soil disturbance to the treatment area. Subsequent treatments will be through the application of no tillage practices.

Details of the proposed minor variation:

A minor variation of the assessment methodology to allow an increase in the percentage area that can be treated under clearing type (f) (plants at a paddock scale with longer-term groundcover and soil disturbance). The percentage area that can be treated under clearing type (f) is limited in the

assessment methodology in order to limit the risk of soil erosion across large areas of land. The proposed clearing will decrease the risk of soil erosion by using minimum till practices to limit soil disturbance and maintain groundcover levels.

The minor variation will involve minimal cultivation. Pasture will be maintained at all times, hence plant species diversity will be maintained. Although there will be some soil disturbance during the initial treatment of INS which is consistent with the EOAM, subsequent practice of minimum tillage practices will have very little to nil soil disturbance of the treatment area.

Recommendation:

Through professional experience, consideration of the intent of the INS component of the EOAM (Chapter 7), and an understanding of conservation farming practices I consider that the minor variation will meet the 'maintain and improve' test in accordance with the Environmental Outcomes Assessment Methodology under the Native Vegetation Act 2003.

PASTURE CROPPING INFORMATION

Introduction

Pasture cropping is usually defined as the direct seeding of an annual crop into permanent perennial pasture using *No Tillage* techniques. Knockdown herbicides are sometimes used in pasture cropping to kill autumn germinating exotic weeds, but the perennial pasture will be also affected to some extent.

Objective

The objective of pasture cropping is to allow pasture cropping in low conservation value native grasslands (native pasture) under conditions that ensure minimal short term impact and long term improvement in their condition.

Definitions

- 1) **Pasture cropping** means minor clearing involving the direct seeding of crops into living native pasture using knock down herbicides at sub-lethal rates and *No Tillage* techniques.
- 2) **No Tillage Technique** means the direct seeding of crops into an undisturbed seedbed with soil disturbance only in the sowing rows.
- 3) **Low conservation value native grasslands** means native grasslands that are derived from grassy woodland communities such as the Western Slopes grassy Woodlands (Keith 2000) and contain only limited numbers of the original dominant native grasses. These degraded native grasslands occur widely across the western plains and comprise mainly Spear Grasses (*Stipa* spp.) and a number of hardy native forbs. A range of exotic grass species also persist in these communities.

If words and expressions used in the Policy are defined in the *Native Vegetation Act 2003*, those words and expressions have the same meaning as in that Act.

Native Vegetation Outcomes

Pasture cropping is intended to improve outcomes for native vegetation as follows:

- Increased native groundcover;
- increased abundance of native species; and
- Reduction in the abundance of competing annual exotic weeds.

These measures are likely to improve the condition of native vegetation on the land and prevent the long-term degradation of native vegetation on the land.

Other Long-term Environmental Benefits

Resulting from the improved outcomes for native vegetation, pasture cropping is intended to improve outcomes for other environmental values as follows:

- Improved native herbaceous biodiversity;
- Improved soil health;

- Reduced accession to water tables (through improved soil water utilisation); and
- Reduced annual exotic weeds (because of lower soil nitrate levels).

Pasture Cropping Methods

- Application of a single pre-sowing herbicide spray, either glyphosate (e.g. Roundup®) or paraquat + diquat (e.g. Sprayseed®). Glyphosate should not be used during the winter period where the predominant native grass species achieves their main growth.
- The herbicide should be applied after the first autumn frost at the rate recommended on the label for the control of annual exotic grass weeds prior to sowing.
- Sowing of the grain crop is to be achieved using No Tillage methods using either narrow sowing points with a maximum width of 25 mm, inverted 'T' point with a maximum width of 50 mm or a disc (coultter) seeder. Points should have shanks with a width of no more than 50 mm and should be set up according to manufacturers specifications to ensure minimum soil disturbance. Minimum row spacing is 300 mm.