

**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: 30617

PVP request number: 8989

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 proposed minor variation improves or maintains environmental outcomes by creating a mosaic of vegetation states across the landscape in accordance with the intention of the Assessment Methodology (EOAM). The minor variation is required to allow management of a species that regenerates densely following disturbance, changes the structure of a vegetation community and is within its natural range in an area where the species is behaving invasively.

Strict adherence to the Assessment Methodology in this particular case is unreasonable and unnecessary because:(i) Belah (*Casuarina cristata*) meets the criteria of being invasive in the area to be managed; (ii) dense regeneration of Belah has resulted in high density of the species in the area to be managed; (iii) and the landform in the area to be managed is similar to the landforms in other areas where Belah is listed as an Invasive Native Species. At least 20 stems per hectare under 20cm dbh and all stems above 20cm dbh will be retained in the managed areas as required by the Assessment Methodology.

Description of the proposed clearing:

The proposed clearing involves the management of Invasive Native Scrub Species on a property in the Mulga Lands IBRA region in Western CMA. Belah is invasive in the region, and the species is acting invasively at the site (see table below for details). Belah is listed in the Western CMA for the Darling Riverine Plains and Brigalow Belt South IBRA regions. The property where Belah will be managed is located in the Mulga Lands IBRA region and contains similar landforms and vegetation types as areas in the Darling Riverine Plain and Brigalow Belt South IBRA regions where Belah is listed as an invasive native species.

The clearing types proposed are the following clearing types available under the Assessment Methodology

- a) burning;
- b) clearing of individual plants with no disturbance to groundcover;
- c) clearing of individual plants with minimal disturbance to groundcover;

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:

The Environmental Outcomes Assessment Methodology (EAOM) defines invasive native species as follows:

Invasive native species for the purposes of this Chapter means a plant species that satisfies the following criteria:

- 1) The species is listed in Table 7.1 in respect of the Catchment Management Authority Area or the Catchment Management Authority Area and IBRA region to which the clearing proposal relates; **and**
- 2) In the opinion of the relevant Catchment Management Authority (or an officer of that Authority who is responsible for making this assessment), the species satisfies the following criteria for acting invasively:
 - (a) the species is invading plant communities where it has not been known to occur previously, **or**
 - the species is regenerating densely following natural or artificial disturbance, **and**
 - (b) the invasion and/ or dense regeneration of the species is resulting in change of structure and/ or composition of a vegetation community, **and**
 - (c) the species is within its natural geographic range.

Species are listed in Table 7.1 according to the following criteria:

- (a) the species invades plant communities where it has not been known to occur previously, **or** the species regenerates densely following natural or artificial disturbance, **and**
- (b) the invasion and/ or dense regeneration of the species results in change of structure and/ or composition of a vegetation community, **and**
- (c) the species is within its natural geographic range.

The minor variation for this PVP is the variation for Belah in this particular case to be considered and managed as an invasive native species, as it is consistent with the criteria for listing invasive native species in Table 7.1.

Reasons for recommending the proposed minor variation: *(include evidence that the minor variation will improve or maintain environmental outcomes)*

Flora and fauna require a range of densities to provide a diversity of habitats. Homogenous, dense areas of invasive native scrub lack habitat diversity and do not provide a range of habitats for native flora and fauna (Hassall & Associates et al., 2006) The Belah in this case is causing a change in vegetation structure and resulting in a homogenous habitat that does not provide the range of habitats required for native biodiversity. The average density of Belah at the site is 390 stems per hectare. Managing the the Belah in this case provides beneficial environmental outcomes by creating a mosaic of vegetation types across the landscape and restoring vegetation structure and composition.

Belah is currently listed as an invasive native species in the Darling Riverine Plains and Brigalow Belt South IBRA regions of the Western CMA. The vegetation at the site where

Belah will be managed is of a vegetation type and species composition and density common on the Darling Riverine Plains.

The table below outlines the reasons why Belah is invasive in the region (consistent with the criteria for listing an invasive native scrub species in Table 7.1 in the EOAM) and why Belah is acting invasively at the site where it is to be managed (consistent with the criteria for acting invasively in the EOAM).

<p>Species</p> <p>The species invades plant communities where it has not been known to occur previously <u>OR</u> the species regenerates densely following natural or artificial disturbance</p>	<p>Belah (<i>Casuarina cristata</i>)</p> <ul style="list-style-type: none"> • The area proposed to be cleared has regenerated densely with an average of 390 stems per hectare of Belah. The area was originally woodland with scattered Belah trees. The Belah is now very dense and most plants have not matured due to the density of stems. • The Belah at the site is in a dense stand of uniform age. • Belah can be an invasive species and often regenerates and invades other vegetation communities (Queensland Parks and Wildlife Service <i>Poplar Box & Belah Woodland Regional Ecosystem 11.13.17</i>).
<p>the invasion and/ or dense regeneration of the species results in change of structure and/ or composition of a vegetation community</p>	<ul style="list-style-type: none"> • The area proposed for management was once open woodland and is now a thick shrubland with a high density of small stems of Belah and other Invasive Native Species • The dense stand of Belah at the site has resulted in substantial changes in structure (loss of structural diversity) and composition (loss of groundcover) of the vegetation community. • Data collected from the site shows there is an average of 253 Belah plants per hectare under 20cm dbh and 137 stems per hectare over 20cm dbh. The data collected indicated the regeneration of Belah is much more dense than what was there previously.
<p>the species is within its natural range or distribution</p>	<ul style="list-style-type: none"> • Belah grows across most of the Western Catchment, including the northern floodplains area. It is a widespread tree throughout all of western NSW, except for the south-eastern parts of the region (Cunningham <i>et al.</i> 1992).

Minor variation

The minor variation for PVP request no. 8989 (the particular case) is the variation of Table 7.1 for Belah (*Casuarina cristata*) to be an invasive native species in the Mulga Lands IBRA region as it is in other IBRA regions in the Western CMA. No stems over 20cm dbh can be cleared and the clearing types are limited to a-c.

References

Cunningham, GM; Mulham, WE; Milthorpe, PL and Leigh, JH (1992) *Plants of Western New South Wales*. Inkata Press.

Hassall & Associates, Briggs, S. and Norman, P., 2006. *Documenting the Science Behind the Invasive Native Scrub Tool*. A report prepared for the Central West Catchment Management Authority, Dubbo.

Queensland Parks and Wildlife Service *Poplar Box & Belah Woodland Regional Ecosystem 11.13.17* (QPWS Nature Conservation Extension Unit).