
From: [REDACTED]
Sent: Wednesday, 29 August 2012 4:00 PM
To: EHPP Landscapes & Ecosystems Section Mailbox
Subject: Native Vegetation Regulation

Dear Sir or Madam,

I appreciate that the deadline for Public Consultation is over but I feel it would be remiss of me not to attempt to put forward the following views as I know of many land-managers in the same position as me.

I applied for a Property Vegetation Plan (PVP) almost three years ago and it has only been in the last 2 months that the CMA has started the ball rolling. I have a problem with the spread of Cypress Pine, both black and white, into what was previously a Grassy Box Woodland.

I believe that invasive White Cypress Pine is both a great problem as well as an asset, for future harvest. It is a problem as it is a monoculture which denudes the soil surface of grasses and litter to control erosion and is non-productive for agricultural purposes and with the density of the trees they are unable to grow into a harvestable log for timber production. If these trees are encouraged to grow, by thinning, they will be able to grow and eventually be of harvestable size and quality and therefore a great asset.

Regrettably, in the current and proposed legislation, there is no provision to allow this to happen. Under a PVP you are able to reduce the number of trees back to 20 trees per hectare but you are unable to "harvest" the trees in a sustainable way as trees larger than 25cm diameter cannot be harvested. Alternatively, a Private Native Forest (PNF) PVP could be obtained but under that we have to maintain the landscape as a Cypress Pine Forest and in so doing allow a continual regeneration of pines.

The process required under either PVP is not sustainable financially or for the environment. My aim is to return these areas of Invasive Native Scrub (INS) back to its original condition with as little detrimental impact on the environment and if possible by generating an income rather than a cost.

As I stated earlier, this is naturally a Grassy Box Woodland landscape and I think it should not be turned into a pine plantation under a PNF PVP. A standard PVP does not allow the removal of trees over 25 cm diameter, so thinning and then allowing the remainder to grow to harvestable size is also not an option. This only allows us the option to use a standard PVP and clear-fell, stack and burn (leaving 20 trees per ha) release CO2 with burning and destroy all future assets of millable timber.

Solution:

I believe that we should have the ability to gradually reduce the density of the current scrub to about 6 meter spacing (this is what forestry does) to allow the remaining trees to grow to harvestable size and, over many years, return the landscape to a mixture of cypress and grassy box woodland. **To achieve this we would need a combination of the two PVP's, as, at the moment, neither would allow this on its own.**

I don't know which is the best method of returning this land to its original state so trials could be conducted to determine the most suitable methodology.

I think that turning the thinnings into biochar and allowing the remainder to grow into millable timber would probably be the best option.

Below is a précis of the methodology.

- *Thin pines to a density of approx. 5-6 meter spacing (280-400/ha) using a feller buncher (which cuts trees, on a rubber tracked skid steer or excavator) to take out the biggest thinnings (>20cm) for timber production, smaller thinnings, tree heads and reject large trees for on-site biochar production and very small (whip-stick) slashed back onto the ground.*
- *This will allow greater grass and understory growth.*
- *Biochar to be either returned to the soil or sold to cover harvest costs.*
- *Soil carbon testing to determine effects.*
- *Further thinning would take place reducing the density and increasing growth rate of remaining trees.*
- *Eventually, the final harvest would take place bringing the final tree density, with a combination of box/eucalypt and pine, of 20 trees per ha (23 meter spacing).*
- *Admittedly, this is a long term project and final harvest would probably take place in 50 years time.*

I also put an application into the Federal Government's, Action on the Ground programme with the object of determining the best way of handling INS and in particular Cypress Pine, which was unsuccessful. At that stage I couldn't find what I thought would be a suitable on-farm biochar plant. I now think there is but I believe there should be some experimentation on the effects, costs and returns of all the different techniques. **I am putting forward these ideas as under current legislation I may be unable to legally do it.**

Below is the summary of methodology I submitted to Action on the Ground.

The project will implement several management techniques to thin Cypress regrowth in controlled management plots of approximately 5 ha each. Techniques to be employed include:

- 1. Control – with no active management*
- 2. Traditional/widely used method of use of a bulldozer :*
 - o Knock down and stack trees for burning. (burn winter 2013)*
 - o Soil disturbance with clearing action.*
 - o All large and non-cypress trees are retained.*
 - o Cost of dozer est. \$1050/ha (Soil Conservation Service estimate)*
- 3. Bulldozer:*

- o Knock down trees and let lie in situ. Some tree roots will remain in the ground and therefore not a total kill of fallen trees.*

- o Some soil disturbance.*

- o Leave remnant cypress and non-target trees at approx. 6m spacings.*

- o Cost of dozer est. \$1050/ha*

4. Bulldozer:

- o Knock down trees and let lie in situ. Some tree roots will remain in the ground and therefore not a total kill of fallen trees.*

- o Conduct a cool burn of fallen timber and debris(winter 2013).*

- o Some soil disturbance.*

- o Leave remnant cypress and non-target trees at approx. 6m spacings.*

- o Cost of dozer est. \$1050/ha*

5. Mulcher:

- o Fell and mulch trees into soil.*

- o Soil disturbance.*

- o Leave remnant cypress and non-target trees at approx. 6m spacings.*

- o Cost of mulcher est. \$1.00/sq m \$10,000/ha (Mega Mulchers Pty Ltd Tooradin Vic.)*

6. Mulcher

- o Fell and mulch trees into soil.*

- o Conduct a cool burn of debris(winter 2013).*

- o Soil disturbance.*

- o Leave remnant cypress and non-target trees at approx. 6m spacings.*

- o Cost of mulcher est. \$1.00/sq m \$10,000/ha (Mega Mulchers Pty Ltd Tooradin Vic.)*

7. Mulcher

- o Fell and semi-mulch trees but leave debris on top of soil.*

- o Some soil disturbance.*

- o Leave remnant cypress and non-target trees at approx. 6m spacings.*

- o Cost of mulcher est. \$0.70/sq m \$7,000/ha*

8. Mulcher:

- o Fell and semi-mulch trees but leave debris on top of soil.*

- o Conduct a cool burn of debris(winter 2013).*

- o Some soil disturbance.*

- o Leave remnant cypress and non-target trees at approx. 6m spacings.*

- o Cost of mulcher est. \$0.70/sq m \$7,000/ha*

9. Feller Buncher - Fell trees individually:

- o Fell trees and let lie in situ.*

- o Little soil disturbance.*

- o Leave remnant cypress and non-target trees at approx. 6m spacings.*

- o Cost of Felling est. \$0.70/sq m \$7,000/ha*

10. Feller Buncher – Fell trees individually:

- o Fell trees and let lie in situ.*

- o Conduct a cool burn of fallen timber and debris(winter 2013).*
- o Some soil disturbance.*
- o Leave remnant cypress and non-target trees at approx. 6m spacings.*
- o Cost of felling est. \$0.70/sq m \$7,000/ha*

Prior to any treatments on any plot the following monitoring will take place:

- 1. Monitoring sites, 25meters X 25 metres will be established in each management plot with visually similar soil type, ground cover (type and density) and tree number and size.*
- 2. Soil carbon tests will be carried out using the sampling and analytical methods developed by the Soil Carbon Research Program.*
- 3. Record number and size of selected trees, at 6m spacings, on monitoring site.*
- 4. A step-point monitoring site, as defined by the Central West Catchment Management Authority, will be set up to record type of ground cover, capping, evidence of live organisms, evidence of soil movement, evidence of annuals, evidence of perennials, litter, bare ground, canopy and other observations pertinent to the site. The monitoring will also include aspects of the Holistic Management methodology to record, distance to closest perennial, evidence of animals, type of litter and age of plants.*
- 5. The Dubbo Field Naturalists have also been asked to conduct a survey of flora and fauna to determine current wildlife activity and future changes.*

Post/during treatment the following will occur:

- 1. Fencing of the boundary of the project site to control feral and native animal impact on the site (uncontrolled grazing).*
- 2. Install and maintain fire breaks around perimeter of site and each plot.*
- 3. Fencing of individual management plot to facilitate possible managed grazing in the third year. Livestock will be introduced if conditions are suitable after assessment under Holistic Management principles.*
- 4. Cool burn selected plots in the winter of 2013.*

Outputs:

- 1. Monitoring of each site will take place prior to treatments to establish a baseline. Before 30/06/12*
- 2. Monitoring will be conducted in March of 2013, 2014 and 2015 to determine changes in:*
 - o Soil carbon - May 2012 and May 2015. (Soil Carbon Research Program methodology)*
 - o Ground cover (type and density).*
 - o Change in grazing ability using planned grazing and/or feed assessment. (Holistic Management methodology)*
 - o Soil erosion.*
 - o Diversity of Flora and Fauna.*

o Growth of remnant cypress trees.

3. A cost benefit analysis will be completed to determine:

o The costs of each treatment.

o Cost v's increase in soil carbon.

o Cost v's increase in grazing ability.

o Cost v's estimated return from harvestable trees into the future.

Outcomes:

This project will demonstrate the management options which can result in improved economic and ecological landscape health by:

1. Providing a case study recording the project details and results.

2. Determining the best treatment to return carbon to the soil.

3. Field day demonstrations of project activities and monitoring results.

4. Linking this project to similar projects dealing with invasive scrub in other regions.

5. Encouragement of similar trials for on-farm biochar/charcoal production.

5. Encouragement of other land-managers to seek alternate treatments for invasive scrub which are more sustainable.

7. Access to digital copies of the project results.

Thank you for allowing me to present this as I believe that it is important to be able to work with nature rather than continually fight it. I also believe that encouragement is more important rather than threats of legal action. My discussions with the EPA representative for the Forestry PVP left me with little desire to investigate this direction further as his approach was more to do with penalties rather than positives.

Thank you once again and I look forward to an outcome which is good for the environment as well as allowing us land-managers an ability to maintain our existence. If you have any feedback on these ideas I would appreciate any comments.

Yours sincerely

Scott Tourle



DUBBO NSW 2830

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