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Thankyou for the opportunity of input into the land use issues paper. Perhaps contrary to the general perceptions alluded to in the issues paper, the area of interest in this submission covers particular forests in the Bateman Bioregion on the south coast of NSW. The NSW Scientific committee has recently made a final determination regarding Koalas in the area stating-

" . . The Committee's rejection of this nominated koala population does not imply that the longterm viability of this Vulnerable Species is not at high risk of extinction in the medium-term future. Koalas in the area of the nominated population are threatened by ongoing degradation in the quality of their habitat because of extensive canopy dieback, clearing due to rural residential development and commercial forest harvesting. Further measures are needed to mitigate these threatening processes and provide for the recovery of this iconic species in south-east NSW and elsewhere in its range. (12 Dec 2007)

The 'extensive canopy dieback' refers to two major forms of eucalypt decline and mortality. On hills and slopes dieback associated with dry weather (DAD), first recorded during 1998 and 2002-2004 and particularly since the early 1990's, in gullies and along streams associated with Bellminers (BMAD). The extent of dieback and tree mortality, often as high as two thirds of stands, could mean these forests rather than a sink, are for all practical purposes, a carbon source. Changes to forest structure and species distribution, particularly the loss of species previously capable of the sequestering the most carbon, is likely to have significant adverse environmental impacts beyond the extinction of Koalas.

When the potential biophysical impacts resulting from climate change are added to these known conditions, the design and implementation of policy mechanisms to encourage adaptation and mitigation seems well overdue. Currently, the Australian Greenhouse Office classifies any 'woody' vegetation over 2 metres in height as 'forest', although the loss of 'tall eucalyptus' forests would seem far more likely to be contributing to climate change. Clearly, the capacity of land managers to demonstrate carbon sequestration is a fact as opposed to an illusion should be verifiable and a necessary requirement for participation in any emissions trading scheme.

The local economy is almost totally dependant on tourism and in keeping with community expectations, as indicated in the attachment (pasted below), the Friends of the Five Forests (FOFF) have proposed implementing an adaptive forest and catchment management system to assist in initiating forest restoration options. In the first instance a 12 month period of research and development is proposed largely to gather relevant data. Such management frameworks provide the capacity to minimise costs, while increasing the potential to allow the introduction of small emitters and importantly small sequesters. As indicated in the attached executive summary, low impact silviculture in conjunction with slow pyrolysis technology that produces 'agri-char' is being considered as the most appropriate means of increasing soil carbon levels, Water Holding Capacity and fertility. Minimising 'broad-acre' burning is also proposed to aid in reducing the uncertainty about negative soil impacts resulting

from previous biomass removal. These measures will assist in simplifying measuring biomass sequestration, removal and subsequent return of 'agri-char'.

From this perspective FOFF are supportive of policy mechanisms that encourage the introduction of scientifically based adaptive management frameworks capable of acknowledging and addressing aspects of global uncertainty at a local level.

Yours Sincerely,

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### Executive Summary

Poor land management that reduces soil fertility is considered to be the major cause of deforestation and desertification in many countries. At a global level, loss of soil carbon to the atmosphere is increasing human malnutrition and uncertainty about the rate of climate change.

Due to political decisions public forest managers in Australia are not required to consider relevant science or community concerns about the effects their management has on the public forest estate generally and soils in particular.

Located in a traditional Aboriginal language area, within the Bateman Bioregion of southeast New South Wales, Friends of the Five Forests management and research proposals require implementing a 'best practise' forest and catchment management system<sup>1</sup> that ensures adequate scientific and community input.

High-density Koala populations became extinct on agricultural land a century ago in the bioregion and decreasing health in remaining forests, associated with reducing soil fertility, has left only one remaining low-density population. The evidence indicates there is a direct relationship between inappropriate forest management practises and reducing soil fertility<sup>2</sup>.

The intention, through an initial five-year project, is to initiate a recovery program for the Five Forests Koalas, while re-establishing community confidence in Government land management.

Initial aspects of the proposal to be implemented in the first year include a Social Impact Assessment, an energy audit, the introduction of appropriate silviculture and the establishment of 'protected areas' to increase species diversity.

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<sup>1</sup> Koehn, J.D., Brierley, G.J., Cant, B.L., Lucas, A.M. (1999) : *River Restoration Framework*, A report for the National Rivers Consortium.

Bormann, B. D. and Keister, K.R. (2004) *Options Forestry: Acting on uncertainty*, Journal of Forestry 102: 22-27

<sup>2</sup> Tulau, M. (1997) *Soil Landscapes of the Bega-Goalen Point 1:100,000 Sheet*: Department of Land and Water Conservation, GPO Box 39, Sydney, NSW 2001.

Encouraging local community participation and ownership including the mapping of local knowledge<sup>3</sup> are fundamental to the proposals. Scientifically based and environmentally sensitive silviculture will restore forest structure and tree species diversity. The silviculture in conjunction with slow pyrolysis technology will increase actual and potential carbon sequestration and soil fertility, while adding value to non-commercial species, generating local employment and reducing dependence of fossil fuels.

Reducing the area of 'non-productive' lands, integrating feral animal control and increasing opportunities for a recovery of Koalas and other native species required to restore forest health are combined within the concept of 'community empowerment'.

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<sup>3</sup> Andrews, P. (2006) *Back from the Brink- how Australia's landscape can be saved*, Australian Broadcasting Corporation, GPO Box 9994, Sydney, NSW, 2001.