



260 Franklin Street,
Adelaide SA 5000

Phone: (08) 7127 4630
Fax: (08) 8231 9773

Email: ncssa@ncssa.asn.au

Website: www.ncssa.asn.au

ABN: 40 538 422 811
GST registered

Mr Jason Irving
Manager Policy and Planning
Department for Environment and Heritage
GPO Box 1047
ADELAIDE SA 5001

29th January 2010

Dear Jason,

Re: Seeking a Balance: Conservation and resource use in the Northern Flinders Ranges

The Nature Conservation Society of South Australia (NCSSA) is a community based, not for profit organisation with a diverse membership drawn from all parts of the State. The Society's primary objective is to "foster the conservation of the State's wildlife and natural habitats through effective scientific research and education".

Since it's inception in 1963, the NCSSA has taken an active role in the protection of South Australia's natural resources and the Society continues to run a variety of highly regarded biodiversity conservation projects. These projects target critical gaps in knowledge and action and include: improving the understanding of biodiversity within the community; on-ground action towards the recovery of threatened flora; supporting land managers to restore habitat on private and public land; collecting and communicating high quality scientific and technical information; and contributing to the formation and review of natural resource management policy.

The Society has a long history of ecological research in the Flinders Ranges and has substantial contribution to the biodiversity data sets that are available for the Gammon Ranges National Park, through the report *Gammon Ranges National Park: Flora and Fauna Survey, and Vegetation Monitoring, 1993 -1995*.

The Nature Conservation Society welcomes the opportunity to comment on this document and trusts that the seriousness of the statements made in the following submission will be communicated to the highest levels within DEH and PIRSA.

For further information please contact the Society's Conservation Ecologists, Georgina Mollison and Annie Bond on (08) 7127 4630 or via email at georgina.mollison@ncssa.asn.au or anthelia.bond@ncssa.asn.au

Yours sincerely,

Georgina Mollison
Conservation Ecologist

Introduction

The Nature Conservation Society has grave concerns regarding the processes and scientific methodologies used to develop the document, *Seeking a Balance: Conservation and resource use in the Northern Flinders Ranges*. In particular the Society has concerns about the validity, transparency and accountability of the methods utilised to produce this report and the adequacy and appropriateness of the data used to determine the proposed management zones. This document has omitted a variety of critical and essential steps that form the basis of an unbiased and scientifically sound planning document.

There is minimal evidence to support the assessment and zoning process undertaken as part of this project. There is little reference to any risk or Multi Criteria Analysis (MCA) assessment within the project methodology which is arguably a critical step of the assessment process in order to identify the preliminary zoning recommendations proposed.

A Multi Criteria Assessment process would have allowed for robust risk based evaluation of zoning options against common and agreed criteria which are intrinsically linked to the biodiversity, landscape, prosperity and other associated values. The methodology in the documentation only refers to spatial analysis whereby existing data (some inconsistent and dated) has been spatially represented (not analysed) to determine management zones. This does not appear to be a transparent and defensible assessment framework that would gain strong stakeholder 'buy in' as a process leading to outcomes with potentially significant consequences and direct threats to the values of the region.

The undertaking of a robust and objective MCA process would facilitate the removal of individual bias from the assessment and lead to a structured consensus of outcomes.

Public, peer, industry and scientific acceptance of project outcomes such as those proposed should be backed by a robust and transparent assessment process which at this time is not evident and is compromised by extensive subjectivity.

Specific Comments

Government legislation and current policies

- While the importance of refining the existing management and regulatory framework within the Development Plan for the Flinders Ranges is discussed in this document, discussion of the Governments current biodiversity strategies and programs within the region are noticeably absent.

The Plan must address:

- How the amended management zones will impact on the connectivity of the Flinders and Olary Ranges Corridor as Arkaroola Wilderness Sanctuary falls within the 'NatureLinks' boundary.
- How all of the proposed management zones and conditions will adhere to and or contribute to the 'No Species Loss' Strategy.
- How the document will work in with, compliment or otherwise aid the *Arid Lands NRM Strategy*, in particular the region wide priority actions and the Flinders and Olary Ranges conservation priorities.
- How will the proposed management zoning influence the 'Bounceback' ecological project.

- The presence and extent EPBC listed species and species listed under the National Parks and Wildlife Act 1972 within the region.

Landscape

- The landscape assessment undertaken as a key input into this project is not backed by evidence of a clear and proven methodology and as such appears to be a flawed model for landscape assessment, therefore its relevance for this type of planning document is questionable. In the absence of a clear and relevant methodology, its suitability for inclusion as source data for this project should be reviewed.

A number of serious issues and discrepancies arise from this survey:

- The quality of the photographs used obviously affected the rating of the photos by the volunteers undertaking the survey.
- The criteria for assessing landscape value is flawed and unreliable as Arkaroola was assessed at a time when it had experienced 10 years of drought and most of the 600 square kilometre sanctuary was bypassed.
- People's perception of scenic values is subjective. It would appear difficult to accurately measure this in such a survey.
- It is too speculative to base the measure of landscape quality on the outputs of subjective and inconsistent web based photo comparisons, where the participants may not have been aware or advised of the ultimate purpose and intent of the survey.

Biodiversity

- The title of the summary page "Building on existing knowledge" is a statement that is profoundly ironic when you consider that to date very little ecological research has been conducted by DEH within Arkaroola Wilderness Sanctuary. In fact the last and only recorded vegetation surveys conducted for quadrats within the Sanctuary were undertaken in 1988, while limited fauna trapping sites and bird survey sites were only visited twice between 1988 and 1996 and have not been revisited since in any formal capacity.

With this in mind and to enable the Society to better understand the assessment process and the data quality, quantity and source on which the assessment was based we would like to view the data sets that were considered for the following themes:

- Threatened ecological communities and species
 - Endemic ecological communities and species
 - Species and communities at risk
 - Significant landscape values; and
 - Wilderness quality.
- The biodiversity values map is a gross misrepresentation of the biological values of the region. The lack of ecological research within the region and the subsequent limited ecological data available should not be represented as a lack of biological values. This is clearly misleading and an unfair comparison when compared to the extensive data available on mineral prospectivity.
 - The limited biological analysis undertaken is based solely on species, and point locations rather than considering ecological communities, connectivity requirements, landscape scale conservation, habitat and ecosystem function. This is unacceptable for an area of such unique biological assets.

- The document should address the vulnerably listed Flyspecked Hardyhead (*Craterocephalus stercusmuscarum stercusmuscarum*) as this species is known to be present within the Sanctuary, therefore a specific biological survey for this species should be undertaken before any of the proposed management zones are finalised. *The Action Plan for Freshwater Fishes* (2009) states that “there is no long-term data to assess population trends for the species, but its limited distribution, extreme isolation in desert habitat, and specific known habitat makes it susceptible to local losses. While currently listed as Vulnerable any indication or observed, inferred or projected decline or fluctuation in the habitat and population would qualify the species for the Critically Endangered category. The hydrology of unique local freshwater habitat requires further investigation to ensure long-term sustainability and presence, with any major water extractions in the region a likely serious potential threat (e.g. mineral exploitation).” The Plan also clearly states that DEH is one of the key organisations responsible for the conservation of this species.
- This document fails to adequately address and provide protection for the Spidery Wattle (*Acacia araneosa*). It does not mention that this species has an extremely restricted distribution or that the species is listed as vulnerable under the EPBC Act (Threatened Species Scientific Committee, 2008).
- The distributions of populations of the Yellow-footed Rock-wallaby (*Petrogale xanthopus xanthopus*) are not adequately addressed in this document, particularly considering this species is listed as Vulnerable under the EPBC Act (*Threatened Species Scientific Committee (2008)*) and under the National Parks and Wildlife Act (1972). The current proposed management zones have the potential to disconnect populations with essential habitat and put at risk the excellent ecological recovery work of the ‘Bounceback’ program.

Wilderness

- Due to the remote nature of much of the Arkaroola Wilderness Sanctuary and the lack of published scientific research on the region it is impossible to determine that Mawson Plateau is the only area worthy of being identified as having very high wilderness values.
- The Society questions whether DEH and the WAC have assessed the whole property for its wilderness values.
- The Society would like to see the criteria used by DEH to assess the wilderness values of the Arkaroola Wilderness Sanctuary.

Cultural

- This document neglects to discuss in any worthy detail any aspect of the aboriginal heritage of the region. This is an insult to the Adnyamathanha People who have strong cultural and spiritual links to the land, water and native flora and fauna of the region. The Society would like to be advised of what consultation has taken place or is planned with the traditional owners of the region to ensure that their values and cultural links to the area are addressed and maintained within the assessment. We also request advice regarding when DEH will be undertaking a cultural assessment in relation to the proposed changes to the management zones.

Geoscience

- The document rightly acknowledges that Arkaroola contains many geological monuments that are unique to science and are of international significance. The Society questions why such significant locations such as Mount Gee and Mount Painter are zoned as management access

zone 2a, when it is extremely unclear what exploration activity is proposed to be acceptable under a 'low impact' or 'minimal disturbance' classification.

Landscape Quality Map

- As previously stated this map appears to be derived from a landscape assessment process with a problematic methodology that may have provided flawed data. Its relevance and suitability to be included in this project assessment is not clear.
- The legend is confusing and leads the reader to believe that much of the mapped area is of very low landscape quality or has no value according to landscape quality. This is an assumption that is misleading and untrue. How can this data be conclusive and a true representation of the broader region when the landscape assessment was restricted a limited number of areas.
- There is no description of the assessment scoring method used for this map to provide the reader with an understanding of the meaning of the colour coding other than reference to 'high' for the top colour. To clearly understand what the map is displaying, the reader needs to know the basis of the scoring, how the scores were developed and the weightings given to the criteria behind the scoring. (This is common to all the spatial maps presented in the document).

Biodiversity Values Map

- The Society would like to view the data and rationale used to produce this map.
- The legend is confusing and leads the reader to believe that much of the mapped area has very low biodiversity values or has no value according to its biodiversity values.
- There appears to be insufficient biodiversity data available to produce this map considering that much of Arkaroola has never been surveyed and there have only been 2 visits to biodiversity survey sites on the property by DEH between 1988 and 1996 and no recorded visits since.
- The Society would like to know how an area of high biodiversity value was quantified.

Mineral Prospectivity, Mineral Occurrences and Mines

- The legend needs some explanation between the different categories of deposits that are mapped for the region.
- The legend fails to include that many of the diggings and mines recorded on the map would have been mined prior to 1950, the inclusion of these mines misrepresents the total number of deposit types on the property and fails to include that ecological recovery would have naturally taken place in some of these areas over the past 60 years.
- The quantity of data used for this component appears to be dis-proportionally significant when compared to the data available and utilised for environmental assessment component.

Zoning and Conditions

- The Society approves of the inclusion of an access zone 1, in which no mineral exploration or resource development access will be accepted.
- The document should include clear and industry accepted definitions for subjective terms such as "high impact", "low impact" and "minimal disturbance" which are used in the explanations of the access zones.

Proposed Management Zones Map

- The Society approves of the inclusion of Mawson Plateau and Freeling Heights as access zone 1, but believes that there are many other areas of biological, cultural, wilderness and landscape value that have been overlooked and unfairly excluded from protection within access zone 1 areas.

- In developing the proposed management zones, the Society would like to know if any attributes other than those three value maps included in the document were taken into account.
- The reader needs to be provided with a combined map which overlays the value regions depicted in the previous value maps to be able to make an informed decision about the suitability and location of the proposed management zones in relation to landscape values, biodiversity values and mineral prosperity.
- The map does not give the reader sufficient information to be able to accurately assess the exact boundaries of the management zones.
- There is no mention of buffer zones for significant biological, geological or cultural areas anywhere in the document and it appears that zones other than access zone 1 actually adjoin the Vulkathunha – Gammon Ranges National Park.
- There needs to be an access zone 1 buffer included around the Vulkathunha – Gammon Ranges National Park to ensure that mining activities do not infringe over the Park boundary or impact the park through exploration activities that may not be able to be contained exactly within the dedicated site (air pollution, dust, run off, noise etc).
- The Society questions if a buffer zone has been incorporated into the access zone 1 around Mawson Plateau and Freeling Heights and if so it would like to be informed of the width of this buffer and the scientific rationale for using such a distance.

Water Resources

- The Society is extremely concerned that this document fails to mention the impact that the proposed management zones and mining could have on the precious water resources of the region, including surface and groundwater systems and the connectivity and utilisation of these for biological and other processes within the region.

Summary

The distinct lack of detail and scientific data available in this document raises very real concerns over the validity of the management zones proposed in this plan and the assessment process that has led to their development. The Society is concerned that the outcomes of this project may lead to the unfair and unjustified approval and acceptance of mining and exploration activity within key areas of environmental, cultural and biodiversity significance that have not been adequately represented in the assessment process. The acceptance of this is likely to compromise and threaten in the long term the significant values of this unique and irreplaceable environmental asset.

The Society recommends that the whole document should be reviewed including concerns about the validity, transparency and accountability of the methods utilised to produce this report and the adequacy and appropriateness of the data used to determine the proposed management zones. The Society is confident that if these points are addressed in a scientific and unbiased manner the resulting document will conclusively prove that long term ecological monitoring should be initiated within the Sanctuary and that ultimately the whole of Arkaroola Wilderness Sanctuary should be protected from future mining threats.

Summary of Requests

Biodiversity

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Cultural

- The Society would like to be advised of what consultation has taken place or is planned with the traditional owners of the region to ensure that their values and cultural links to the area are addressed and maintained within the assessment. We also request advice regarding when DEH will be undertaking a cultural assessment in relation to the proposed changes to the management zones.

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References

Baulderstone, C., Owens, H. Possingham M. & Possingham, H, (1999) *Gammon Ranges National Park: Flora and Fauna Survey, and Vegetation Monitoring, 1993 – 1995*, The Nature Conservation Society of South Australia Inc., Adelaide.

Hammer, M., Wedderburn, S. & Van Weenen, J. & Native Fish Australia (SA) & South Australia. Dept. for Environment and Heritage (2009), *Action plan for South Australian freshwater fishes / authors: Michael Hammer, Scotte Wedderburn and Jason van Weenen* Native Fish Australia (SA) Inc., Adelaide.

Threatened Species Scientific Committee (2008gh). *Commonwealth Conservation Advice on Acacia araneosa (Spidery Wattle)*. [Online]. Department of the Environment, Water, Heritage and the Arts. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/20767-conservation-advice.pdf>.

Threatened Species Scientific Committee (2008df). *Commonwealth Conservation Advice on Petrogale xanthopus xanthopus (Yellow-footed Rock-wallaby (SA and NSW))*. [Online]. Department of the Environment, Water, Heritage and the Arts. Available from:
<http://www.environment.gov.au/biodiversity/threatened/species/pubs/66646-conservation-advice.pdf>.