



Dr. Barry Kentish  
President – Brolga Recovery Group

Mt. Helen  
VIC 3350

Executive Officer  
Environment and Natural Resources Committee  
Parliament House  
Spring Street  
East Melbourne  
VIC 3002

December 20<sup>th</sup>, 2012

Dear Sir or Madam,

**Submission regarding Inquiry into Rural Drainage in Victoria**

I am writing to you in my capacity as President of the Brolga Recovery Group. This community based group is a sub-group of BirdLife Ballarat, a branch of the national organisation, BirdLife Australia.

This submission relates to the following terms of reference that will be addressed by the inquiry into rural drainage:

- *The historical basis for the establishment and operation of former drainage schemes including management arrangements; and*
- *The impacts of rural drainage, including on other land holders and the environment including waterways, wetlands, flora, fauna and water quality;*

The above criteria directly and indirectly affect the future conservation of Victoria's Brolga population.

### **1. Conservation of Victoria's Brolga population**

Brolga are listed under the Flora and Fauna Guarantee Act 1988. The Brolga Recovery group is dedicated to implementing the conservation objectives as outlined within the Department of Sustainability and Environment's Action Statement No. 119 – Brolga. These objectives are to:

- *“To ensure that wetland areas where Brolgas congregate are secured from environmental degradation and inappropriate disturbance;*
- *To protect existing breeding sites from modification and degradation;*
- *To restore a minimum of 50 former known breeding wetlands and other sites that have the potential to be breeding wetlands...”*

The Brolga Recovery Group is concerned that due consideration must be given to the specific environmental requirements of Victoria's Brolga population. Wetlands are essential to enable Brolgas to breed. Actions, direct or indirect, [such as drainage of wetlands and raised bed cropping] that jeopardise the long term permanence of wetlands and substantially alter the water flow within a wetland where Brolgas are likely to breed, will negatively influence breeding success reducing the population's long term viability.

The Department of Sustainability and Environment's Action Statement No. 119 – Brolga clearly identifies these concerns [p. 3].

*“They [Brolgas] are dependent on shallow, grass or herb-dominated freshwater wetlands for breeding, and permanent freshwater areas and a regular food supply at flocking sites.*

- *Activities that threaten the Brolga’s preferred breeding habitat include:*
  - *Drainage and modification of wetlands.*
  - *Alteration of flood regimes during the breeding season during the breeding season which can cause nest abandonment...*
  - *Use of wetlands for irrigation and/or re-use system.”*

Empirical evidence indicates that Victoria’s Brolga population is currently less than 500 birds. The recent decline in Victoria’s Brolga population is attributed to inappropriate land management. The future survival of this threatened population of unique birds is totally dependent on the long term security of specific water regimes for breeding sites. Inappropriate modification of wetlands through ill considered direct or indirect action, such as drainage and changes in water flow, will lead to the local extinction of breeding birds.

## **2. Climate change**

It was noted that there was no specific mention within the terms of reference of the effects of climate change on the management of future approaches to drainage within rural communities. Climate change informs all aspects of the terms of reference of the Inquiry into Rural Drainage in Victoria.

The Bureau of Meteorology

[<http://www.bom.gov.au/climate/change/acorn-sat/>] suggests that:

*“Australia has warmed by approximately 1°C since 1910. The warming has occurred mostly since 1950. The warming in Australian temperature data is very similar to that shown in international data and matches very closely warming seen in sea surface temperatures around Australia.”*

In addition:

*“The CSIRO and Bureau of Meteorology State of the Climate 2012 reports that:*

- *Australian annual average daily mean temperatures have increased by 0.9 °C since 1910.*
- *Global average mean sea level for 2011 was 210 mm above the level in 1880.*
- *Sea surface temperatures have increased by about 0.8 °C since 1910.*
- *The main cause of the observed increase in carbon dioxide concentration in the atmosphere is the combustion of fossil fuels since the industrial revolution.*
- *Australian average temperatures are projected to rise by 1.0 to 5.0 °C by 2070 when compared with the climate of recent decades.”<sup>1</sup>*

Climate change is affecting the water cycle in rural environments substantially influencing and altering management of agricultural

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<sup>1</sup><http://www.climatechangeinaustralia.gov.au/>

systems in Victoria. Any discussion that considers drainage in rural Victoria must consider the implications of climate change in Victoria.

Yours sincerely,

Barry Kentish – President – Brolga Recovery Group