



## Submission Re: Bosworth Road Bypass

Friends of the Gippsland Lakes, Parks & Reserves (FoGL) has serious concerns in relation to the impact the proposed Bosworth Road bypass would have on the Macleod Morass Reserve and its significant ecology and wildlife. With over 100 bird species, including migratory waders and a number of endangered species using it, this area is extremely important, as supported by its inclusion in the Gippsland Lakes RAMSAR site. Other fauna, for example frogs, including the critically-endangered green and golden bell frog, and flora are also of significance in this Reserve. For these reasons, FoGL views Macleod Morass as an extremely important area for maintaining, and hopefully enhancing, biodiversity that must be protected from ecological threats such as roads and traffic noise.

**The Management Plan for Macleod Morass<sup>1</sup>:** The Macleod Morass management plan, adopted in 2005, lists as a key management direction and strategy: ***"Maintaining the unique and diverse nature and biodiversity of the Wildlife Reserve in accordance with the Ramsar Convention"*** (p iv).

Following on from this stated strategy, the management plan clearly questions any future development of Bosworth Road as a major bypass due to its close proximity to the significant Macleod Morass wetlands:

***"Any use of Bosworth Road as an alternate heavy vehicle route may pose a threat to the ecological integrity of the Morass and potentially place reserve visitors at risk"*** (p25).

***"Encourage the EGSC to investigate more appropriate heavy vehicle alternate routes, away from areas of ecological significance"*** (p 27)

**Negative impact of roads and traffic noise on wildlife:** Increasingly, scientific research is indicating that busy roads, in particular near areas of conservation significance, are detrimental to wildlife<sup>2,3</sup>. Danger to wildlife due to collisions with vehicles is always a concern, but of even greater significance is the negative impact of traffic noise. Research undertaken here in Victoria raises issues about the negative impact of busy roads on a wide range of wildlife, including birds, mammals and frogs<sup>4,5</sup>. Recent research overseas<sup>2,6</sup> has shown that wildlife avoid or move away from noise sources, which could lead to abandonment of the Morass by some species. It also indicates that for those species which do stay, breeding may be severely compromised<sup>7,8</sup>. Birds, for example, have highly developed hearing which helps them identify predators, find food, and use their calls to communicate with partners, offspring and other birds<sup>9</sup> therefore significant extraneous noise can have serious negative impact on their viability<sup>3,9</sup>. Research indicates traffic noise can also impact negatively on frogs for similar reasons<sup>10</sup>.

**Impact of noise stress on humans:** The human species is living in a world where noise is an increasing issue that is impacting on both humans and wildlife<sup>11</sup>. A quiet environment where the natural world can be heard is becoming increasingly rare and has been shown to be advantageous to people recovering from stressful events<sup>12</sup>. The provision of such quiet places would seem essential and, except during the duck hunting season, Macleod Morass is one such quiet, peaceful, natural place.

**Walking Trail:** FoGL supports the proposal put forward by Bill Gamble to develop a walking trail from Macleod Street through to Macleod Morass as outlined in his submission. If implemented, this trail would enhance the natural environment and enable residents and visitors to experience a unique wetland environment in close proximity to the town. Clearly, a major vehicle bypass following Bosworth Road would severely compromise this proposal.

## References

1. Parks Victoria (2005). Macleod Morass and Jones Bay Wildlife Reserves Management Plan. Melbourne.
2. Fahrig, L, Rytwinski T (2009). Effects of roads on animal abundance: an empirical review and synthesis. Ecological Science, vol 14, issue 21.
3. Ecology and Society (2009). Special Feature: Effects of Roads and Traffic on Wildlife Populations and Landscape Function <http://www.ecologyandsociety.org/vol14/iss1/art29/>
4. Parris, KM & Schneider, A (2009), Impacts of traffic noise and traffic volume on birds of roadside habitats. Ecology and Society, 14(1): 29 (online)

- 5 Wilson, JN, Bekessy S, Parris KM, Gordon A, Heard, GW & Wintle BA (2013) Impacts of climate change and urban development on the spotted marsh frog, *Austral Ecology*, 38(1) 11-22
6. Barber, JR, Crooks, KR, Fristrup, KM (2010). The costs of chronic noise exposure for terrestrial organisms. *Trends in Ecological Evolution*, 25, 180-189. DOI:10.1016/j.tree.2009.08.002
7. Tennessen JB, Parks, SE & Langkilde T (2014). Traffic noise causes physiological stress and impairs breeding migration behaviour in frogs. *Conservation Physiology*, 2(1). 10.1093/conphys/cou032
8. McClure, CjW, Ware, HE, Carlisle, J, Kaltenecker, G & Barber, Jr (2013).. An experimental investigation into the effects of traffic noise on distributions of birds: avoiding the phantom road. *Proceedings: The Royal Society for Protection of Birds*. DOI: 10.1098/rspb.2013.2290 Published 6 November 2013.
9. Birkenhead, T (2012). *Birdsense: What It's like to be a Bird*. Sydney: Bloomsbury
10. Hamer AJ & Parris KM (2011).. Local and landscape determinants of amphibian communities in urban ponds. *Ecological Applications*, 21 (2), 378-390. DOI:10.1890/10-0390.1
11. Fristrup k ( 2015). Noise versus Nature: How we're upsetting America's Soundscapes:; nbcnews.com
12. Benfield, JA, Taff, D, Newman P & Smyth J (2014) Natural sound facilitates mood recovery from stress. *Ecopsychology* 6(3) 183-188. DOI: 10.1089/eco.2014.0028

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