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BREAKING THE BARRIERS

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IMAGE CREDIT: ROB APPLEBY, WILDSPY/GRIFFITH UNIVERSITY



ABSTRACT

Lack of a detectable effect of a new road and bridge on woodland birds

Construction of the Echuca Moama Bridge Project, including 5 km of new road and a bridge spanning the Murray River between the towns of Echuca and Moama, was completed in 2021. The project passes through woodland that supports the Victorian Temperate Woodland Bird Community (VTWBC), a threatened community under the Victorian Flora and Fauna Guarantee Act 1988. The population-level VTWBC target for the Project states that there is no reduction of >25% in detection rate (>80% confidence) of VTWBC species (or surrogates) >100 m from the new road at the Study Site. To assess this, three sampling grids comprising 79 fixed monitoring points spaced approximately 200 m apart were established in proximity to the Project (the Study Site) and at two control sites. All birds seen within a 5-minute period within a 50-m radius of each fixed monitoring point were recorded. Bird surveys were undertaken in autumn/winter and spring/summer in 2019 (baseline), 2020 and 2021 (during construction), and 2022, 2023 and 2024 (post construction). Between 3,223 and 4,004 birds were observed annually at the 79 monitoring points over the six-year period, with the average of 11.9 and 12.0 birds seen at each monitoring point in 2019 and 2024. There was a 16% increase in the total number of detections of core VTWBC species at the Study Site in 2024 compared to 2019, which equated to a relative decline of 57% once the increase at control sites were taken into account. However, the statistical significance of this result is less than the 80% threshold set for the Project, which means that there is insufficient certainty to attribute this result to the Project. The implications of these results for the Project and monitoring programs in general will be discussed.

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KEY TAKEAWAYS

There was no discernible effect of the road project on the presence or abundance of birds. Study design, including the collection of robust before data, and data from control sites, is critical.

SPEAKER BIOGRAPHY

Dr Rodney van der Ree is a National Technical Executive in Ecology at WSP Australia and an Adjunct Associate Professor at The University of Melbourne. He has international recognition for his expertise in urban ecology and transportation ecology and has undertaken research across Australia and internationally, including Africa, Asia, Europe and the Americas. He published the international award-winning "Handbook of Road Ecology" (Wiley, 2015), with 63 chapters by more than 100 authors from 25 countries. He has sat on expert advisory committees for the Victorian, Swedish, and New Zealand transport agencies and has >90 refereed scientific publications and hundreds of reports, presentations and media engagements. He is involved in the planning, implementation and evaluation of connectivity strategies on various types of linear and transport infrastructure, including roads, railways, transmission lines, pipelines and fences.