

SPOKEN STATEMENT – Jean-Marie Jack

1. My full name is Jean-Marie Louise Jack I am employed by the Canterbury Regional Council (Council) as Team Leader of Land Ecology within the Science Group. My qualifications and experience are provided in my full statement of evidence.
2. My evidence provides information and advice related to the actual and potential effects of the proposed activities on terrestrial ecology including wetland habitats.
3. I have visited many of the river environments to which these proceedings relate and am familiar with some areas of the drainage network. My evidence relies on my knowledge of these environments, a desktop review for information and the applicant's reports.
4. Wildlands Consultants provided the s.42A officer with a collation of desktop surveys of indigenous terrestrial vegetation, invertebrate, lizard, bat and avifauna values associated with the project area and describes potential effects of spraying on these values¹. I generally agree with these descriptions and potential effects. My evidence further described ecological values and means to manage potentially adverse effects on terrestrial ecology, particularly relating to riverbirds and lizards.
5. My evidence identifies significant ecological values within the project area environments. At a broad scale these include the braided river ecosystems, and at a finer scale include discrete sites of indigenous vegetation, wetlands, and habitats.
6. Riparian areas of rivers and drains may hold significant ecological value, particularly those less modified and adjoining wetland habitats. In places drains may offer habitat to native species which have otherwise been displaced from historic habitats and provide important habitat to swamp specialist birds.
7. These ecological values, particularly in braided rivers, are seriously threatened by weed encroachment, and the use of herbicides provides an efficient means to address this threat. Indigenous vegetation and habitats are however sensitive to herbicides, and maintaining inventories of these values is necessary to ensure the potential adverse effects of herbicides is managed.
8. The potential effects of aerial vs ground operations will differ with regards to their associated spray operations. Ground operations may cause damage to vegetation with vehicle access, trampling, clearance of access tracks or disturbance to fauna. Aerial

¹ Wildland Consultants Ltd. (Wildlands). 2024. Technical ecological advice for Environment Canterbury agrichemical spray consent application. Contract Report No. 6914a Wildlands. January 2024.

operations will avoid these associated potential effects, or in the case of disturbance be of only short duration.

9. Impact management relies on pre-spray processes involving both remote (desktop) assessments and ground-based surveys for locating areas of ecological value to enable avoidance or otherwise appropriately manage adverse effects.
10. While Council holds inventories of these values, further information on their current occurrence, particularly for indigenous vegetation and lizard habitat, would be required to determine their presence within any spray area. Braided rivers are also dynamic, therefore inventories for these areas will need to be updated regularly. Inventories of information can be used to inform spray operations so that potential effects can be managed appropriately.
11. Confirming and maintaining at least a representative and spatially distributed number of indigenous vegetation and fauna sites within the receiving environments, including waterway and drain margins, could further mitigate the effects of some habitat loss from spray operations, including cumulative effects.
12. In addition to spatial inventories, where necessary ground- and aerial-based pre-spray surveys for avifauna and lizards as well as seeking current occurrence information from relevant agencies, would mitigate potential effects of spray operations on these species.
13. With regards to disturbance of braided river riverbed-nesting birds, I consider the potential disturbance effect of an aerial spray operation on these species to be very low, while that of a ground operation if occurring within suitable habitat to be low. Ground based operations occurring within the core nesting season warrants a pre-works survey using standard conditions, while similarly timed aerial operations warrant pre-flight checks for known colonial nesting sites, and or aerial pre-spray flight surveys.
14. Swamp specialist birds including bittern, marsh crane and spotless crane are known to be present within wetlands adjoining some of the drainage networks including the Halswell Canal and Styx Drain. Disturbance of these species during the nesting season (August – February) should be avoided through pre-work surveys of suitable habitats and or liaison with those conducting any current monitoring.
15. If these impact management actions are implemented then significant adverse effects on indigenous vegetation and habitats could be avoided, mitigated, or remedied.
16. To achieve this, having in place information systems which inventory ecological values and the ability to receive advice and use that information to adjust spray operations to avoid indigenous vegetation and habitats is important.