

**BEFORE THE AUCKLAND UNITARY PLAN INDEPENDENT HEARINGS PANEL**

**IN THE MATTER** of the Resource Management Act 1991 and  
the Local Government (Auckland  
Transitional Provisions) Act 2010

AND

**IN THE MATTER** of Topic 081b and 081c Rezoning and Precincts  
(Geographic Areas)

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**JOINT STATEMENT OF DYLAN VAN WINKEL AND SARAH WELLS  
ON BEHALF OF  
THE LONG BAY-OKURA GREAT PARK SOCIETY  
AND  
OKURA ENVIRONMENTAL GROUP**

**Weiti Precinct and Okura  
Ecological Effects**

**10 February 2016**

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## **SUMMARY OF EVIDENCE**

1. This is a joint evidence statement by Sarah Wells and Dylan van Winkel on behalf of the Okura Environmental Group and the Long Bay – Okura Great Park Society.
2. The purpose of this report is to provide ecological evidence on the effects of development on terrestrial ecology in relation to submissions on the proposed Weiti Precinct and Okura development.

## **INTRODUCTION**

3. This is a joint statement by Sarah Wells and Dylan van Winkel. We provide an introduction to ourselves below;

*Sara Wells*

4. My name is Sarah Jane Wells.
5. I am an Ecologist with ten years' experience in marine and terrestrial ecology and conservation in New Zealand. I maintain on-going collaborations with universities, Crown Research Institutes, Auckland Council, and Auckland Zoo, with expertise in behavioural ecology and conservation biology. My primary areas of focus have been in avian ecology and also terrestrial biodiversity monitoring.
6. I graduated from Massey University with a PhD in Ecology in 2014. I have also worked as an Ecologist contractor for Auckland Council, Auckland Zoo, and Bioresearches Consultancy Ltd since 2011. This work involved conducting biodiversity surveys of forest areas in the Auckland region, population monitoring of native avifauna, and conducting bird counts to assess the impacts of development and conservation measures on relative abundances of native species.
7. I have been involved in many conservation projects in New Zealand during the past ten years. These include:
  - Assessing the effect of marine reserves on abundance of triplefins and snapper around Goat Island
  - Monitoring long-term trends in shellfish populations around the Auckland area

- Investigation of the extent of pig-rooting in the Waitakere Ranges for Auckland Council
  - Kakariki, saddleback and pateke translocations
  - Banding New Zealand storm petrels (*Oceanites maorianus*) to determine the location of their breeding colony
8. My research findings have been published in international peer-reviewed journals and presented at international conferences. I also have much experience writing scientific reports for New Zealand governmental and non-governmental organisations, such as Auckland Council, the Department of Conservation, and community and island restoration groups.

*Dylan van Winkel*

9. My name is Dylan van Winkel. My qualifications include a B.Sc (Zoology and Physiology), P.G.Dip.Sci. (Entomology), and M.Sc. (Conservation Biology) (Honours) from Massey University. I am currently a Senior Ecologist/ Herpetologist at Bioresearches Group in Auckland.
10. My career spans a decade of work in the fields of ecology and conservation, including work on a variety of ecologically focussed projects both in New Zealand and abroad.
11. I have designed and implemented survey and monitoring programmes for both New Zealand governmental and non-governmental organisations, such as the Department of Conservation, Regional Councils, and community and island restoration groups, as well as undertaken biodiversity inventories in three other countries.
12. I have worked with a variety of taxa, including land snails, terrestrial invertebrates, amphibians, reptiles, birds, and long-tailed bats.
13. I am the primary consultant herpetologist to the Ministry for Primary Industries' (MPI), and am tasked with carrying out species determinations and risk-assessments on foreign reptiles and amphibians detected at, or post, New Zealand border. I have also provided expert advice on herpetofauna incursion programmes and legal compliance issues.
14. I have a good understanding of the New Zealand Wildlife Act (1953), Resource Management Act (1991), and associated protocols, and have experience as an expert ecological witness for local hearings.

15. My professional contributions include over 50 scientific publications and management reports, on subjects including invasive species threats, wildlife conservation and management, biodiversity surveys and inventories, and ecological impact assessments. I have provided independent peer reviews for published manuscripts in New Zealand and international scientific journals, as well as scientific reference material and books. I am currently the Editor for the New Zealand Herpetological Society.

## **ECOLOGICAL VALUES OF THE OKURA SCENIC BUSH RESERVE**

16. The Okura Scenic Bush Reserve (116.37 ha) represents a large patch of established native forest with high biodiversity and ecological value. The Reserve is one of the last remaining intact stands of coastal broadleaf and kauri forest in Auckland, rendering its protection and restoration a candidate as a regional ecological priority.
17. The large forest fragment, lying on the east coast of the North Shore—north of Long Bay and south of the Whangaparaoa Peninsula—offers a significant asset in terms of provision of habitat for a range of “Not Threatened” and “At Risk” native species, as well as a critical linkage, as a dispersal pathway for plants and animals, within the North-West Wild-link forest fragment network.
18. Biodiversity monitoring within Okura Bush has revealed the presence of four species of protected native lizards, including three “At Risk-Declining” species (e.g. *Naultinus elegans*, *Mokopirirakau granulatus*, and *Oligosoma ornatum*). At least one other “At Risk” lizard species, *Dactylocnemis pacificus*, is expected to be present, but may only persist at low density as a result of predatory pressure from mammalian predators.
19. The avifaunal diversity is high as indicated by the presence of at least 29 of terrestrial birds (12 natives and 17 exotics), including a high abundance of tui, grey warbler, fantail, shining cuckoo, and kereru. A small remnant population of tomtits is also present and Okura Bush offers one of few remaining areas of mature native forest to support this species in the region.
20. The vegetation values are high, and showcased by the presence of significant stands of mature kauri (large stands of kauri still remain unaffected by kauri dieback), kohekohe, puriri, taraire, rimu, and kahikatea; many of these trees are hundreds of years old. Future monitoring of vegetation is likely to reveal a plethora of regionally rare native flora given the age and relative inaccessibility of much of the forest thus far.

21. The coastal zone and estuary provides important habitat for a variety of migratory birds, as well as breeding grounds for the “Nationally Vulnerable” New Zealand dotterel.

## **IMPACT OF DEVELOPMENT ON ECOLOGICAL VALUES**

22. The adverse impact of urban development on forest fragments is well known and encompasses a range of indirect and direct effects; many of which cannot be effectively mitigated.
23. The clearance of vegetation—including the clearance of vast areas of exotic pine forest to the north and adjacent to Okura Bush—and the development of housing areas will have effects on the integrity of the native forest through edge effects (e.g. exposure to weeds, more rapid soil desiccation as a result of increased sunlight and wind exposure, disruption to existing plant composition and structure, etc), an influx of pest mammals into the forest, light and noise pollution, heightened human activity, and accelerated erosion and associated sedimentation.
24. Mitigating such effects is unlikely to be easily achievable given the scale and sensitivity of the existing environment, lack of resources and effective compliance (particularly governmental), and a low commitment to environmental protection from developers in the adjacent area.
25. Any further development and/or intensification in the Weiti Precinct (i.e. development over and above 550 houses) and on the southern coastline of the Okura Estuary will have considerable ecological impacts. This will put further pressure on the sensitive ecosystems of the Okura Bush and its margins.
26. Therefore, protection of Okura Bush, one of the last biodiverse remnant patches of native forest in the Auckland Region, will only be possible through considerate planning and a ‘less is more’ attitude towards any future urban development near Okura Bush.

## **CONCLUSION**

27. We conclude that the proposed urbanisation of Okura and, the proposed further development over and above the 550 houses currently allowed for in the Operative Auckland Plan in the Weiti Precinct will have significant adverse effects on the ecological values of the Okura Bush Scenic Reserve.