

**BEFORE INDEPENDENT HEARING COMMISSIONERS**

**IN CHRISTCHURCH**

**TE MAHERE Ā-ROHE I TŪTOHUA MŌ TE TĀONE O ŌTAUTAHĪ**

**IN THE MATTER** of the Resource Management Act 1991

**AND**

**IN THE MATTER** of the hearing of submissions on Private Plan Change 23 Whisper  
Creek, Spencerville to the Christchurch District Plan

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**STATEMENT OF PRIMARY EVIDENCE OF DR ANTONY BRUCE SHADBOLT ON  
BEHALF OF CHRISTCHURCH CITY COUNCIL**

Dated: 16 April 2026

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## **EXECUTIVE SUMMARY**

1. My name is Dr Antony Bruce Shadbolt. I am employed as Team Leader – Parks Biodiversity.
2. I have prepared this statement of evidence on behalf of the Christchurch City Council (the Council) in respect of matters arising from the submissions and further submissions on Private Plan Change 23 Whisper Creek, Spencerville to the Christchurch District Plan (the District Plan; PPC23).
3. My evidence addresses the ecological characteristics of the site and the role of wet grasslands, ephemeral wetland areas and the Pūharakekenui–Styx River corridor in supporting bird species associated with Brooklands Lagoon and the wider Styx catchment.
4. While the site currently contains pastoral grassland habitats and riparian habitat used by resident and seasonal bird species, the structure planning framework associated with the proposal has the potential to provide significant ecological enhancement. In particular, through restoration of the Pūharakekenui–Styx River margins, farm drains, stormwater treatment wetlands and improved ecological connectivity.
5. Subject to appropriate design and ecological management through subsequent resource consent processes, these measures have the potential to result in ecological outcomes that are comparable to, or better than, the existing pastoral land use.

## **INTRODUCTION**

6. My name is Dr Antony Bruce Shadbolt. I am employed as Team Leader – Parks Biodiversity. My qualifications and experience are covered below.
7. My evidence addresses the ecological characteristics of the site and the role of wet grassland, ephemeral wetland areas and the Pūharakekenui–Styx River corridor in supporting and managing indigenous bird species associated with Brooklands Lagoon and the wider Styx catchment.
8. In preparing this evidence I have reviewed:
  - a. PPC23 Application, including Appendix H – Ecology and Appendix H(i) – Ecological Map;
  - b. Christchurch District Plan Site of Ecological Significance site significance statement for the Styx River (SES/LP/23; and

c. Relevant Submissions and Further Submissions.

9. I am authorised to provide this evidence on behalf of the Council.

## **QUALIFICATIONS AND EXPERIENCE**

10. I hold the qualifications of National Diploma in Amenity Horticulture (NDH), a Bachelor of Landscape Architecture (BLA honours), and both a Masters (MForSci honours) and Doctoral Degree in Forestry Science that focused on ecological restoration, wildlife management, and wildlife behaviour in modified habitats.

11. I have been involved in ecological restoration across Ōtautahi Christchurch for more than 25 years, particularly throughout the Pūharakekenui-Styx River Catchment where I have led land protection, riparian and native forest restoration projects.

12. I have been Council's MoU delegate partner on the Styx Living Laboratory Trust for over 20 years and through my Council role and association with the Trust I have a very thorough understanding of the Pūharakekenui-Styx River catchment, its values, and the issues it faces.

## **CODE OF CONDUCT**

13. While this is a Council hearing, I have read the Code of Conduct for Expert Witnesses (contained in the 2023 Practice Note) and agree to comply with it. Except where I state I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

## **SCOPE OF EVIDENCE**

14. My statement of evidence addresses the following matters

- a) Ecological characteristics, bird species, and habitats of the site;
- b) Potential ecological effects of development; and
- c) Management considerations for bird populations.

15. I address each of these points in my evidence below.

## **SITE ECOLOGICAL CHARACTERISTICS**

16. My description of the site characteristics is informed by a site visit, the ecological assessment prepared for the applicant, information provided through the Council's biodiversity review and RFI process, and more than 25 years involvement in Pūharakekenui–Styx River planning and development.
17. The site forms part of the wider ecological landscape associated with the Pūharakekenui–Styx River system and the nearby coastal wetland environments of Brooklands Lagoon.
18. The site is currently characterised by a combination of pastoral grassland, low-lying wet grassland areas, intermittent wetland features and willow-dominated riparian habitats associated with the Pūharakekenui–Styx River and associated drainage channels. The majority of the land is currently used for pastoral grazing, with vegetation dominated by exotic grassland species typical of grazed farmland in the Lower Styx catchment.
19. These habitats support both resident wetland birds and seasonal bird populations, particularly during autumn and winter when birds move between feeding areas and nearby wetland environments such as Brooklands Lagoon. Some bird species utilise the site opportunistically as part of wider daily or tidal movements between the lagoon, river margins and surrounding grassland habitats, while others - including paradise shelduck, pūkeko, spur-winged plovers, and herons reside at the site permanently.
20. Within this pastoral landscape there are a number of low-lying areas that experience periodic ponding or seasonal wet conditions. These areas function as ephemeral or intermittent wetlands and can provide habitat for a range of indigenous bird species, particularly waterbirds and wading birds that utilise shallow wetland environments and open grassland feeding areas. Species typically include pūkeko, paradise shelduck, mallard, white-faced heron, pied stilts, South Island pied oystercatcher, spur-singed plover and southern black-backed gull
21. The applicant's ecological assessment identifies that the riparian margins of the Pūharakekenui–Styx River and associated waterways are generally vegetated with a mix of exotic woody vegetation, including willow species and other common riparian weeds. While these areas are modified, they still support indigenous wetland plant species and also provide structural habitat and ecological connectivity along the river corridor, supporting bush bird movement and use of the wider Styx catchment. Bush bird species recorded here include bellbird, silvereye, fantail, grey warbler, shining cuckoo, kereru, NZ falcon, and NZ Kingfisher.
22. Numerous other bird species occur within the adjacent Pūharakekenui–Styx River corridor. This river corridor forms part of a wider ecological network that supports

both waterbirds and terrestrial bird species and provides an important movement corridor through the lower Styx catchment.

23. As well as species listed in paragraphs 19 - 21 above, waterbirds using the Pūharakekenui–Styx River corridor include NZ Scaup, Grey Teal, Paradise Shelduck, Black Swan, Canada Geese, Grey Duck, Mallard, Australasian Coot, Pūkeko, Black Cormorant, Pied Cormorant, little Cormorant, White-faced heron, Australasian Bittern, Marsh Crane, Spotless Crane, etc.
24. Parts of the site comprise lowland wet grassland habitats that extend across property boundaries and connect with similar habitats on neighbouring land. This continuity of habitat contributes to a broader open landscape used by wetland-associated bird species.
25. Additional habitat features across the site include small boggy depressions, drainage channels and riparian vegetation along the river margins and drains. These areas contain wetland plants such as rushes and sedges in places and contribute to the diversity of habitats present within what is otherwise a modified pastoral landscape.
26. The western portion of the site is located on slightly elevated sandy soils associated with historic dune systems. This area tends to be drier and is generally of lower ecological value compared with the wetter portions of the site, although species such as the New Zealand pipit have been recorded utilising these areas seasonally.
27. Accordingly, bird species associated with the Pūharakekenui–Styx River corridor and surrounding environments should be considered where vegetation removal, habitat modification or increased disturbance may occur within the site or along the river margins, including during the construction phase.
28. In my view, the ecological value of the site for birds relates both to its function as part of the wider Styx River and Brooklands Lagoon ecological system, and as a standalone habitat for some species.

## **POTENTIAL ECOLOGICAL EFFECTS OF DEVELOPMENT**

29. Because development will be limited to the upper terrace areas, I generally agree with Virdis Environmental Consultants Ecological Impact Assessment in that the development site contains 'limited terrestrial values' for indigenous vegetation but does provide habitat for indigenous birds. I note however that these avifauna values are mostly limited to the lower floodplain and river corridor that will not be developed.

30. Ecological values associated with wet grassland habitats and bird use of the site could potentially be affected by habitat modification, increased human disturbance, increased predator presence, and recreational activity including dogs.
31. In particular, disturbance of wet grassland habitats and areas of seasonal ponding may influence the use of the site by waterbirds and wading birds that currently utilise these areas opportunistically and/or as year-round residents.
32. Contiguous wet grassland habitats on the low floodplain are particularly relevant as they connect with neighbouring wetland areas to the north, and the wider Pūharakekenui-Styx River corridor.
33. I also agree with the conclusions of Ecological Impact Assessment that – based on the ODP - the plan change will be able effectively manage adverse effects on the natural environment through the existing planning provisions and policy framework within the Christchurch District Plan and Canterbury LWRP. I agree that any potential adverse effects can be adequately mitigated through appropriate stormwater design, fauna management plans, restoration and riparian planting, and detailed design.
34. Maintaining these existing habitats, or restoring them through appropriate ecological design, would represent a positive ecological outcome for bird species utilising the site and the wider landscape.

## **MANAGEMENT ISSUES RELATING TO BIRD POPULATIONS**

35. Development may result in bird flocking issues on grassed areas, particularly where large areas of open grassland are located immediately adjacent – or near to – large areas of open water such as stormwater facilities on site. Accordingly, development should anticipate bird presence and consider management approaches that avoid widespread culling.
36. Species likely to be present include Canada geese, black swan, paradise shelduck and pūkeko. While Canada geese are introduced and may be managed as nuisance species, black swans, paradise shelduck and pūkeko are native gamebirds that are protected except during the brief gamebird season.
37. Indigenous bird species likely to visit the site are the same as those also inhabiting the Pūharakekenui–Styx River corridor and Brooklands Lagoon. These birds make seasonally and daily tidal-influenced movements and Council does not want displaced as part of localised bird management on the site.

## **DESIGN AND MITIGATION CONSIDERATIONS**

38. Development design should seek to minimise conflict between bird populations and land uses while recognising the ecological context of the Pūharakekenui-Styx River corridor and its environs.
39. This may include, increasing planted shrubland and wetland vegetation, and maintaining buffers around sensitive habitats. The ODP offers generous reserve widths and a wide river corridor that will be easily able to accommodate these buffers.
40. The proposed Outline Development Plan (**ODP**) provides opportunities for ecological enhancement, including restoration of the Pūharakekenui–Styx River margins, stormwater treatment wetlands and improved ecological connectivity along the river corridor.
41. Along the river corridor, as wide a reserve as possible – as shown on the ODP - is desirable for managing wildlife and mitigating potential human impacts (e.g. recreation) on wildlife using both the river corridor and pasture areas.

## **RESPONSE TO ECOLOGY RFI COMMENTS**

42. The ecology-related RFI raised matters including the potential value of pasture and ephemeral wetlands for waterbirds and waders, ecological values associated with the Pūharakekenui–Styx River corridor, and the possible presence of indigenous plant species along the river.
43. The RFI also noted potential impacts on waders and waterbirds, including the potential for increased disturbance from human activity, dogs and predators.
44. The applicant's response states that many of these matters will be addressed through subsequent stages of the project, including subdivision, land-use and regional resource consent processes where the detailed design of stormwater basins, waterways and walkways will occur.
45. The lower terrace area is currently used for pastoral grazing and riparian margins are predominantly vegetated with exotic species. Urban development is not proposed within this area under the plan change.
46. The applicant has indicated that the proposal provides opportunities for ecological enhancement, including restoration of the Spencerville Drain and the Pūharakekenui–Styx River margins, the creation of stormwater treatment wetlands

and the potential restoration of central open space areas to wetland or other compatible open space uses.

47. While a number of the matters raised in the RFI relate to detailed design considerations that will be addressed through future consent processes, they highlight ecological values that should be recognised and appropriately managed as the design progresses.
48. As per Paragraph 33, I believe that based on the proposed reserve locations and widths depicted in the ODP, the plan change will be able to effectively manage adverse effects on terrestrial ecology and avifauna through the existing planning provisions and policy framework.

## RESPONSE TO SUBMISSIONS

49. Thirty-four submissions were received related to ecology.
50. Submitters S9.1, S14.1, S20.1, S22.1, S23.1, S28.1, S34.1, S35.1, S36.1, S37.1, S41.1, S49.1, S51.1, S54.1, S55.1, S63.1, S65.1, P70.1, P71.1, S75.1, S41.1, and S46.1 opposed the development based on perceived negative impacts on the Pūharakekenui-Styx River. Throughout most of its length, the ODP shows residential and commercial lots and their associated infrastructure being set back 400 - 500 m from the Pūharakekenui-Styx River. Only one short section (approximately 100 m) of development interface at the extreme eastern end of the subdivision is within 150 m of the river. Therefore, I believe the ODP provides an unusually high degree of separation from the river corridor and effectively mitigates adverse effects on wildlife using the river and its environs.
51. I also note that the ODP shows a proposed reserve buffer along the true left bank of Pūharakekenui River corridor that has an average width of approximately 150 m and a large area of reserve along the true right bank. Combined, these reserve parcels offer significant opportunity for long-term ecological restoration that helps to achieve Councils visions (Styx Vision 2000 – 2040) for a **‘viable spring-fed river ecosystem’** and for a **‘source to sea experience’** through the creation of a source to sea urban reserve network and walkway.
52. These reserve parcels are critical links in this reserve and walkway network, and their generous widths are important for 1) buffering the effects of development on wildlife using the river corridor, 2) buffering the effects of users of the source to sea walkway on avifauna using the pasture areas, and 3) buffering the effects of users of the walkway on avifauna using the Pūharakekenui River corridor.
53. Submitter S46.1 supported the development only if the developer established a substantial native greenbelt between the proposed development and the existing Spencerville settlement, providing a clear visual and ecological separation that

allows for wildlife corridors and passive recreation. I note that the ODP shows an approximately 125 m wide recreation and/or stormwater reserve between the development and the Spencerville settlement. Such reserves are typically well-landscaped with urban forest and wetland buffers which will offer a good degree of buffering for wildlife using both the grazed pasture and the river corridor.

54. Submission S75.3 sought alternate relief by re-zoning the lower terrace HFHMA and ponding areas as “Conservation” zoning, and to widen the riparian corridor to a minimum of 20m). As-per paragraph 48 (above), I note that the average width of the proposed reserve corridor throughout most of its length is 150 m.

55. As noted in the previous section (Response to RFIs), the plan change itself does not impact on the Pūharakekenui-Styx River nor it's wildlife. The proposal conversely creates the potential for significant ecological benefits through stormwater basins, Spencerville drain restoration, and Styx margin restoration, whilst maintaining the potential for the central open space area to also be restored to wetland or a compatible open space activity in the future.

| Topic                                                                                                                                                                                                                                                                                                  | Submission                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Decision sought |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>Ecology</b><br><br><u>Support</u> - Extensive Styx River margin zone; Public access to the Styx River, and Ecological restoration.<br><br><u>Oppose</u> - Nature and wildlife; Compromise Styx River and riparian margin; Impact native inanga & other wildlife; and Vague ecology risk assessment. | S25.1 SLLT; and S58.1 D Tipple.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Support         |
|                                                                                                                                                                                                                                                                                                        | S59.3 OMS (Support where the ODP facilitates place-based ecology learning).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Support in part |
|                                                                                                                                                                                                                                                                                                        | S18.1 Z Duan (Minimum riparian buffer – 10m to 20m); S25.2 SLLT (Developer enters into partnership with the Trust); S25.3 SLLT (A robust avian management plan is developed and implemented); S25.4 SLLT (the intermittent wetlands are monitored for size and area coverage prior to earthworks commencement, and assessed against the CRPS Sites of Ecological Significance criteria); S25.5 SLLT (Mitigate sediment, monitor and enhance fish habitats); S25.6 SLLT (Lizard Management Plan); S26.7 SLLT (mitigate light spill on ecosystems and Styx River); S25.8 SLLT (Retain the 5m wide native landscape strip); S25.11 SLLT (Fencing and signage to manage dogs to protect habitats); S69.1 ECan (Pending an ecology impact assessment that demonstrates consistency with CRPS Policy 9.3.1 and Appendix 3); | Neutral         |
|                                                                                                                                                                                                                                                                                                        | S9.1 M Pierce; S14.1 SRA S19.1 M van Valkenburg; S20.1 D Riwaka; S22.1 D Elkington; S23.1 R Howison; S28.1 D Parker; S30.1 L Bennett; S31.1 Angela; S32.1 C Elkington; S34.1 D Ling; S35.1 R Ennor; S36.1 H King; S37.1 M Skelly; S41.1 M Gilmore; S49.1 N Hough; S51.1 G Lowe; S54.1 J Lowe; S55.1 MWFT; S57.1 J Hawkins; S63.1 J Burns; S65.1 C Faithfull; S68.1 L Maurice; S70.1 ORS; S71.1 K & A Buxton; and S75.1 J Messerly.<br><br>S46.1 A Hicks (Accept only if significant conditions address preservation of natural values); S46.2 A Hicks (Accept only if greenbelt & landscape buffer to support wildlife & recreation are provided); S75.3 J Messerly (Alternate relief - Rezone the lower terrace HFHMA and ponding areas as “Conservation” zoning, widen the riparian corridor to a min. of 20m and   | Reject          |

| Topic | Submission                                                       | Decision sought |
|-------|------------------------------------------------------------------|-----------------|
|       | relocate the stormwater basins outside of the high hazard area). |                 |

## CONCLUSIONS

56. The site currently contains wet grassland habitats, pastoral land, and the Pūharakekenui-Styx River corridor that are utilised by resident and seasonal bird species.
57. These habitats are functionally connected to the wider Pūharakekenui–Styx River corridor and the Brooklands Lagoon environment.
58. The plan change itself does not impact on the Pūharakekenui-Styx River nor it's wildlife. Conversely it creates the potential for significant ecological benefits through stormwater basins, Spencerville drain restoration, and Styx margin restoration, whilst maintaining the potential for the central open space area to also be restored to wetland or a compatible open space activity in the future.
59. While development has the potential to modify existing habitats, the ODP requirements create significant opportunities for ecological restoration and enhancement, particularly along the river corridor and through the creation of wetland and stormwater treatment areas.
60. Subject to appropriate design and ecological management through subsequent consent processes, the proposal therefore has the potential to deliver significant positive ecological outcomes compared with the existing pastoral land use, while also offering options to mitigate any human recreation impacts on wildlife using the site.