



# memorandum

TO Tim Carter FROM Lexi Hunter  
Carter Group Limited DATE 3 June 2026  
RE 531 & 535 Mill Road Residential Development Project – Avifauna Survey

## 1.0 Introduction

Carter Group Limited (CGL) engaged Pattle Delamore Partners (PDP) to undertake a desktop and physical avifauna survey in support of a Fast-track application for a proposed residential development at 531 and 535 Mill Road, Ohoka (the site).

This memorandum outlines the desktop survey results and field survey methodology and presents findings and recommendations relevant to the site.

## 2.0 Desktop Survey

A desktop survey was undertaken using the Global Biodiversity Information Facility (GBIF) database to review avian observations recorded within a 10 km radius of the site over the last 10 years (GBIF.org, 2026). A total of 69 species were identified, comprising of 26 introduced and 43 native species. Of the native species, 23 were classified as Not Threatened, 10 as At Risk, seven as Threatened, and three as Migrant or Coloniser (Robertson et al., 2021).

Many of the highly threatened species identified in the desktop survey, including Australasian bittern (*Botaurus poiciloptilus*; Threatened – nationally critical), white heron (*Ardea alba*; Threatened – nationally critical), and Australasian crested grebe (*Podiceps cristatus australis*; Threatened – nationally vulnerable), are wetland-associated species. Although wetland habitat is present on the site, it is not of sufficient size or quality to support these species in significant numbers for breeding or nesting. In unlikely scenarios, Australasian bittern may occasionally use the site's drainage channels for foraging while moving between higher value wetlands, but the site is highly unlikely to provide suitable nesting or breeding habitat.

## 3.0 5-Minute Bird Counts

### 3.1 Methodology

On 25 May 2026, a PDP terrestrial ecologist visited the site to undertake an avian survey. Five-minute bird counts (5-MBCs) were completed in accordance with the Department of Conservation's (DOC) bird count guidelines (Hartley & Greene, 2012).

Counts were undertaken at locations that provided sightlines across a range of microhabitats within the site, including pasture, edge planting, and farm buildings (Figure 1). All birds seen or heard during the survey were recorded. An additional bird count was undertaken at Ohoka Bush, a regenerating native forest located immediately east of the site (see Site 3 in Figure 1). Counts were undertaken in fine weather within two-hours of sunrise to ensure birds were at their most active and more easily detected.



**Figure 1:** Location of 5-minute bird count (5-MBC) locations at 531 & 535 Mill Road and Ohoka bush reserve.

Although birds are active year-round in New Zealand, peak activity typically coincides with the breeding and nesting season (August to February). As the survey was undertaken outside this period, seasonal migrants and any active nesting behaviour were unable to be observed.

### 3.2 Results

A total of 13 species were identified at the site, and six species were identified at Ohoka Bush Reserve. Of these, seven were native species, all of which had a conservation status of Not Threatened (Table 1).

Most birds were recorded around exotic tree stands on the site, with only paradise shelduck (*Tadorna variegata*), spur-winged plover (*Vanellus miles*), and magpie (*Gymnorhina tibicen*) observed within pasture areas. Welcome swallow (*Hirundo neoxena*) and rock pigeon (*Columba livia*) were witnessed roosting within farm structures under open roofing.

Birds recorded at the Ohoka Bush Reserve were mainly observed within a large eucalyptus stand adjacent to the reserve. Bird calls in this area were high, making it difficult to distinguish individual calls. Within the reserve itself, few birds were recorded and a stoat was observed actively hunting during the survey.

**Table 1: Species identified at 531 & 535 Mill Road, and Ohoka Bush Reserve. Native species have been highlighted.**

Common name	Species Name	Conservation Status (Robertson et al., 2021)
Magpie	<i>Gymnorhina tibicen</i>	Introduced
Paradise Shelduck	<i>Tadorna variegata</i>	Not Threatened
Swamp harrier	<i>Circus approximans</i>	Not Threatened
Fantail	<i>Rhipidura fuliginosa</i>	Not Threatened
Welcome swallow	<i>Hirundo neoxena</i>	Not Threatened
Spur winged plover	<i>Vanellus miles</i>	Not Threatened
Blackbird	<i>Turdus merula</i>	Introduced
Rock pigeon	<i>Columba livia</i>	Introduced
Tui	<i>Prothemadera novaeseelandiae</i>	Not Threatened
California quail	<i>Callipepla californica</i>	Introduced
Common starling	<i>Sturnus vulgaris</i>	Introduced
Bellbird	<i>Anthornis melanura</i>	Not Threatened
Finch sp.	<i>Fringillidae sp.</i>	Introduced
Silver eye	<i>Zosterops lateralis</i>	Not Threatened

### 4.0 Conclusions

The site supports some avian habitat, particularly within tree stands and around farm structures, with most birds recorded in these areas rather than within pasture. Paradise shelduck were abundant within pasture, which is typical for the species. Welcome swallow and rock pigeon were observed roosting within farm structures.

The desktop survey identified a range of notable species within the wider area, however many of these are associated with higher value wetland habitats and braided riverbeds. These habitats are not present on the site in sufficient quality to support regular use for breeding or nesting. Native species recorded during the site field survey were all classified as Not Threatened. The adjacent Ohoka Bush is likely to provide higher value habitat for forest-associated species than the site itself.

Overall, while some habitat is present on the site, it is of low ecological significance. Its removal is therefore unlikely to significantly disrupt habitat connectivity within the wider area. In addition, the proposed landscape treatment plans (Appendix A), which include planting species such as tōtara, cabbage tree, and broadleaf, will provide replacement habitat and may create a long-term gain in habitat for some species of bird.

## 5.0 References

GBIF.org User. (2026). *Occurrence Download* (p. 13331) [Text/tab-separated-values, application/zip]. The Global Biodiversity Information Facility. <https://doi.org/10.15468/DL.8X6V9R>

Hartley, L., & Greene, T. (2012). *DOCDM-534972 Birds: Incomplete counts—Five-minute bird counts v1.0*. <https://www.doc.govt.nz/documents/science-and-technical/inventory-monitoring/im-toolbox-birds-incomplete-five-min-counts.pdf>

Robertson, H. A., Baird, K. A., Elliott, G. P., Hitchmough, R. A., McArthur, N. J., Makan, T. D., Miskelly, C. M., O'Donnell, C. F. J., Sagar, P. M., Scofield, R. P., Taylor, G. A., & Michel, P. (2021). Conservation status of birds in Aotearoa New Zealand, 2022. *Department of Conservation*.


## 6.0 Limitations

This memorandum has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Carter Group Limited. PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the memorandum. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This memorandum has been prepared by PDP on the specific instructions of Carter Group Limited for the limited purposes described in the memorandum. PDP accepts no liability if the memorandum is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

© 2026 Pattle Delamore Partners Limited

Prepared by



**Lexi Hunter**

Ecologist

Reviewed and approved by



**Jarred Arthur**

Technical Director - Ecology

## LANDSCAPE TREATMENT A

Along Whites and Bradleys Road, a 10m wide vegetation buffer combined with a 15m building setback from the site boundary, is proposed to ensure a 'rural-character' is maintained at the edges of the proposed development. This is further combined with a post and rail fence or post and wire fence, with the installation of solid fencing along these boundaries not permitted. It is also proposed for a 2.5m wide shared gravel path to run the full length of both roads to support active transport.

The planting is to consist of the following species planted at 1m centres to achieve a minimum height of 5m once established:

- (a) Kōhūhū/black matipo (*Pittosporum tenuifolium*);
- (b) Tarata/Lemonwood (*Pittosporum eugenioides*);
- (c) Shrubby Toraro (*Muehlenbeckia astonii*);
- (d) Tōtara (*Podocarpus totara*);
- (e) Ti Kōuka / cabbage tree (*Cordyline australis*);
- (f) Kōwhai (*Sophora microphylla*);
- (g) Kahikatea (*Dacrydium dacrydioides*);
- (h) Harekeke/NZ Flax(*Phormium tenax*);
- (i) Prostrate Kōwhai (*Sophora prostrata*);
- (j) Miki Miki (*Coprosma virescens*);
- (k) Koromiko (*Veronica salicifolia*);
- (l) Toe toe (*Austroderia richardii*);
- (m) Kāpuka/broadleaf (*Griselinia littoralis*); and
- (n) Korokio (*Corokia* sp.).

## LEGEND

- A** Future residential development setback from Whites Road / Bradleys Road by a minimum of 15m.
- B** 10m landscape corridor to consist of native plant species.
- C** 1.2m high post and rail or post and wire fencing along road boundaries.



**A. WHITES ROAD BOUNDARY TREATMENT (BOUNDARY TREATMENT A)**

## LANDSCAPE TREATMENT B

Landscape Treatment B involves the retention of the existing shelter belts (Tree Groups 67, 69 and 78 identified in the Treetech Tree Report) running along the southern boundary of the Site and planting a 6m wide strip landscape strip consisting of (or a mix of) the following trees to achieve a minimum height of 5m with trees once established at a maximum spacing of 2m:

- (a) Pine (*Pinus radiata*);
- (b) Arizona cypress (*Cupressus arizonica*);
- (c) Lawson's Cypress (*Chaemaecyparis lawsoniana*);
- (d) Lombardy Poplar (*Populus nigra*);
- (e) Tōtara (*Podocarpus totara*);
- (f) Tarata/Lemonwood (*Pittosporum eugenioides*);
- (g) Harekeke/NZ Flax (*Phormium tenax*);
- (h) Portuguese laurel (*Prunus lusitanica*); and
- (i) Kāpuka/broadleaf (*Griselinia littoralis*).

## LANDSCAPE TREATMENT D

Landscape Treatment D is proposed along Whites Road where the road reserve adjoins to a proposed stormwater management area. Landscape Treatment D is to be continuous with Landscape Treatment A, and includes post and rail/ post and wire fencing, a 2.5m wide shared gravel path and a landscape strip. The landscape strip will be 3m wide, as opposed to the 10m wide planting proposed as part of Landscape Treatment A.

The planting is to consist of the following species planted at 1m centres to achieve a minimum height of 5m once established:

- (a) Kōhūhū/black matipo (*Pittosporum tenuifolium*);
- (b) Tarata/Lemonwood (*Pittosporum eugenioides*);
- (c) Shrubby Toraro (*Muehlenbeckia astonii*);
- (d) Tōtara (*Podocarpus Totara*);
- (e) Kahikatea (*Dacrydium dacrydioides*);
- (f) Harekeke/NZ Flax (*Phormium tenax*);
- (g) Miki Miki (*Coprosma virescens*);
- (h) Koromiko (*Veronica salicifolia*);
- (i) Toe toe (*Austroderia richardii*);
- (j) Kāpuka/broadleaf (*Griselinia littoralis*); and
- (k) Korokio (*Corokia sp.*).

## LANDSCAPE TREATMENT C

Landscape Treatment C is positioned to create a buffer between the development area and the existing village properties on the southern side of Mill Road (290 Bradleys Road; 344 Bradleys Road; 507 Mill Road; 547 Mill Road; and 401 Whites Road). The planting consists of a single row of any of the following species along the shared internal boundaries to achieve a minimum established height of 4m once established and a width of 2m, with planting at a maximum spacing of 1.5m:

- (a) Portuguese laurel (*Prunus lusitanica*);
- (b) Tarata/Lemonwood (*Pittosporum eugenioides*);
- (c) Kōhūhū/black matipo (*Pittosporum tenuifolium*);
- (d) Kāpuka/broadleaf (*Griselinia littoralis*);
- (e) Kanuka (*Kunzea ericoides*); and
- (f) Mānuka (*Leptospermum scoparium*).

