

2 Important Areas for New Zealand Seabirds

Sites on Land

Rivers, estuaries, coastal
lagoons & harbours



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IMPORTANT AREAS FOR NEW ZEALAND SEABIRDS



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Contributors

The following individuals have contributed to the profiles in this document in a variety of ways, including supply of data and information about seabirds, and reviewing draft material, site profiles, species lists and site maps.

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Introduction

This report profiles individual Important Bird & Biodiversity Areas (IBA) identified for seabirds on rivers, coastal lagoons, estuaries and harbours. Note that inland breeding gulls, terns and shags (cormorants) have been included as 'seabirds' in the current programme and this report. See below - What is a seabird?

Important Bird Areas (IBAs) are sites that are recognised as internationally important for bird conservation and known to support key bird species and other biodiversity. The function of the IBA Programme is to identify, and help focus and facilitate conservation action for a network of sites that are significant for the long-term viability of naturally occurring bird populations, for which a site-based approach is appropriate. The IBA Programme is global in scale and more than 12,000 IBAs have already been identified worldwide, using standard, internationally recognised criteria for selection (see below).

The IBA programme's site-based approach presents a mosaic of locally identifiable sites that meet global criteria. Taken as a whole, the network provides a comprehensive overview of New Zealand's seabirds, including a greater understanding of seabird distribution, temporally and spatially – on land (breeding sites/colonies, moult and roosts) and at sea. Taken individually, or in regional sets, government agencies with environmental responsibilities, tangata whenua, non-governmental organisations, business, community groups and individuals can work together to ensure conservation values are retained.

For a detailed overview on the IBA programme for NZ seabirds, together with information about seabirds, please refer to Forest & Bird (2014)¹ via the Forest & Bird website:

www.forestandbird.org.nz/important-bird-areas

GLOBAL IBA CRITERIA

- A1. More than threshold numbers of one or more globally threatened species
- A2. More than threshold species complements of restricted-range species
- A3. More than threshold species complements of biome-restricted species
- A4. More than threshold numbers of one or more congregatory species, including:
 - A4i >1% of the biogeographic population of waterbirds
 - A4ii >1% global population of seabirds
 - A4iii >10,000 pairs, seabirds or 20,000 individuals, waterbirds
 - A4iv >Threshold numbers at migration bottleneck sites.

The IBA selection process follows the Ramsar Convention in stating that IBAs must meet threshold numbers in two-thirds of years for which there is adequate information. The system uses IUCN/BirdLife International threat rankings and taxonomy including common names.

Note: New Zealand has its own Threat Classification system administered through the Department of Conservation (DOC), and bird taxonomic group, the OSNZ Checklist Committee. These national classifications and listings are recognised in individual site profiles presented in the supplementary documents. Also, to avoid confusion in this advocacy document New Zealand common names are used with IUCN/BirdLife International names bracketed – e.g. Black (Parkinson's) Petrel, Chatham Island Taiko (Magenta Petrel), Orange-fronted (Malherbe's) Parakeet.

What is a seabird?

This report follows Taylor (2000)² in that common to all 'seabirds' some part of their life cycle is spent feeding over the open sea. This separates seabirds from waders that feed in the littoral zone or on shorelines and from species that regularly roost at sea such as ducks and swans. Seabirds have water resistant feathering (from oils in the preen gland) that enable

¹ Forest & Bird (2014). *New Zealand Seabirds: Important Bird Areas and Conservation*. The Royal Forest & Bird Protection Society of New Zealand, Wellington, New Zealand. 72 pp.

² Taylor, G.A. (2000a) *Action Plan for Seabird Conservation in New Zealand*. Department of Conservation, Wellington.

them to fully immerse in salt water. They have webbed feet that allow them to swim in water and can readily become airborne off the water. Most seabirds have short legs and powerful wings or flippers. All have bills with sharp hooks, points, or filters which enable them to catch fish, cephalopods, crustaceans, and plankton. Lastly, seabirds can drink saltwater and have physiological adaptations for removing excess salt.

IBA Sites on Land

Identifying a good number of the IBAs for New Zealand's seabirds was straightforward. The Bounty Islands, The Pyramid, Forty-Fours, Sisters (all Chatham Islands Group), Poor Knights Islands (Hauraki Gulf), and Macauley Island (Kermadec Islands Group) are good examples. Mainland sites present a more complex picture. Just south of Punakaiki is the only breeding area for Westland Petrel, but there are also significant breeding sites for Spotted Shag nearby. Sooty Shearwater, Little Penguin, White-fronted Tern and Black-backed Gull also breed there. In addition, the area is home for a significant population of Great Spotted Kiwi, a species of real conservation concern. So, when considering boundaries for IBA we either opted for the narrow approach and went for individual sites, or took a broader approach extending boundaries to include multiple species and sites, including terrestrial species. Elsewhere on the main islands individual sites include Hutton's Shearwater colonies in the mountain valleys of the Seaward Kaikoura Range and Fiordland Penguin colonies in South Westland and Fiordland. In the former case, a flyway component covers movement of birds to and from the colony that would otherwise not be included for any significant bird or biodiversity values.

All five island groups of the New Zealand Subantarctic islands are described by the United Nations Environment Programme as "the most diverse and extensive of all Subantarctic archipelagos" and were honoured with World Heritage Site status in 1998. They are also National Nature Reserves under New Zealand's Reserves Act 1977. The only remaining animal pest species on our Subantarctic islands are pigs, cats and mice on the main Auckland Island and mice on the Antipodes Islands. In considering the main Auckland Island, specific breeding sites were identified for Yellow-eyed and Eastern Rockhopper Penguins (multiple sites), Auckland Island Shag (multiple sites) and White-capped Albatross (SW Cape). Other trigger species, however, such as Antipodean (Gibson's) Albatross are scattered across the island but are poorly surveyed. Thus the whole of the island meets the criteria for an IBA, but with significant threats remaining. Other large islands with predators, for example, main Chatham Island, Rangiauria/Pitt Island and Aotea/Great Barrier Island, have been treated differently, with IBAs restricted to areas around individual or, in some cases, groups of breeding sites for particular threatened species (eg. Chatham and Pitt Island Shags, Chatham Island Taiko (Magenta Petrel), Black (Parkinson's) Petrel).

When identifying sites as IBAs it made sense to consider other bird species, that is, terrestrial, shore and water birds. Take Te Hauturu-o-Toi/Little Barrier Island, for example. From a seabird perspective, it is the only known breeding site for the New Zealand Storm Petrel, has something like 98% of the world's population of Cook's Petrel breeding there, and there is also a small but significant number of the endemic Black Petrel. Other seabird species are returning following eradication of predators. At the same time, the island is also the stronghold for endangered Hihi (Stitchbird), and is a vitally important refuge to a number of other threatened species introduced to the island such as Kakapo, Kokako, Saddleback and naturally-occurring species like the Long-tailed Cuckoo. A good number of other islands (or island groups) that fall in this category are the Snares and Campbell Islands Group, South-east Island (Chatham Islands Group) and Whenua Hou/Codfish Island. On the main islands, while the sites were chosen for seabirds, trigger species from other bird groups figure significantly, for example, sites for New Zealand Fairy Tern include New Zealand Dotterel; and Hutton's Shearwater include Kea. Similarly, sites for Black-fronted Tern and Black-billed Gull on rivers and in estuaries, lakes and lagoons include Wrybill, Black Stilt and Banded Dotterel. In some of these cases the IBA boundaries were extended to include wetlands for Australasian Bittern.

Monitoring

An integral part of any conservation management programme is monitoring. Population data needs to be kept up to date. Not only does monitoring help identify the need for particular conservation actions; we can also estimate their success. Importantly, particularly with long term monitoring, we can also discover trends which may assist in better planning of future conservation management. This is important as we grapple with the impacts of climate change and other real and potential threats.

The IBA Network

The IBA network for New Zealand will only be complete when sites are identified for all groups of birds. Birds capture people's imagination. They and their habitats are also indicators of other biodiversity. While ecosystems have increasingly taken priority in conservation management planning, iconic and highly threatened bird species (and we have no shortage of those) can help drive the sort of broad support we need to protect critical habitats. We all can play a role.

Defining IBA boundaries on land (seabirds)

The network of land-based IBAs for seabirds presented in this document are, for the most part, triggered by colony sites in terms of defining boundaries on land. An IBA is defined and delimited so that, as far as possible, it is:

1. Different in character, habitat or ornithological importance from surrounding areas:
 - exists as an appropriately managed area,
 - with or without buffer zones,
 - or is an area that can be managed in some way for conservation;
2. An area which provides the requirements of the trigger species while present, alone or in combination with networks of other sites.

In many cases, deciding where to put the IBA boundary is straightforward, often dictated by obvious habitat boundaries (e.g. island coastline) or guided by existing conservation land and reserve boundaries, land ownership or management boundaries, etc. In others, establishing where the edges should be located requires consultation and field work. As each site, and its local context, is unique, there are no fixed rules that can be applied, only guidelines. Similarly, there is no set maximum or minimum size for an IBA — what is biologically sensible has to be balanced against practical considerations of how best the site may be managed to the benefit of birds. Common sense needs to be used in all cases: what is most likely to be effective in conserving the site under prevailing conditions and circumstances, locally and nationally?

In places where there are no obvious breaks in habitat, simple, conspicuous boundaries such as roads or rivers may be used to delimit site edges. Where these are lacking or insufficient, features such as water catchment areas, ridges and hilltops, conservation land boundaries, contour lines, measures of remoteness from settlements or roads (as indicators of intactness of habitat or lack of disturbance), boundaries of ownership or administration and geographic occurrence of actual and potential threat can also be used to inform decisions. The habitat requirements of the key species at the IBA should be given the highest consideration when delimiting the site.

There is also no definitive answer regarding how to treat a number of small sites that are close to each other. Depending on the habitat requirements of the key species and the local situation and management, these could be considered as a series of individual small IBAs (assuming that each separately meets one or more of the selection criteria), a single IBA made up of several parts that are not joined to each other (e.g. Banks Peninsula, Catlins Coast, Northern Titi/Muttonbird islands), or as a single larger site containing the key areas and the intervening land/water lacking in ornithological significance (e.g. Otago Peninsula). Areas adjacent to or surrounding the area of interest may be included in the IBA, if that is appropriate. These 'buffer zones' may be needed to allow for the effective management of the whole area at the scale appropriate for maintaining the ecological character of the 'core' IBA. However, common sense has to be used to ensure that unjustifiably or disproportionately large additional areas are not included. Agreement of an IBA's boundary should be a consultative process, involving relevant parties, to try to ensure the most appropriate boundary is used and that it is supported by all relevant parties.

A number of estuary and harbour sites (e.g. Waipu, Mangawhai and Maketu Estuaries; Kaipara, Manukau and Bluff Harbours; Lakes Ellesmere and Grassmere) have been identified as IBA in this round; not only because they include breeding or post-breeding congregation sites for seabirds, but are also important sites for waders (e.g. Wrybill, NZ Dotterel), water fowl and wetland species (e.g. Australasian Bittern). In these cases, boundaries take in the whole area, including breeding and roost sites, foraging areas plus buffer zones, generally defined by conservation land (various categories), other reserve areas, and road and river lines.

IBA trigger species – population summary methodology

Population sizes were calculated for trigger species at IBA sites where multiple records were available. These estimates were uploaded into the World Bird & Biodiversity Database (WBDB) in addition to populations with only one record available. In addition to an overall record for each trigger species, records were summarised into yearly estimates to provide a more detailed track of each species and these are also entered into the WBDB.

The data available to assess population sizes of trigger species at each IBA site varied greatly in their survey frequency and approaches taken. The overall population summary of trigger species consisted of a minimum estimate, taken as the average of all available year estimates, and a maximum estimate, taken as the highest of the yearly counts. As such the maximum population estimate represents the greatest known potential of site to support trigger species' populations, which allows the importance of the site to not be lessened by any recent population declines. Whenever possible counts of breeding pairs or nests were used over counts of individuals. Where these were unavailable, but where there was indication of the species breeding at the site, counts of individuals were converted to an estimated number of breeding pairs by approximating 3 individuals to represent a single breeding pair.

For each year's estimate data was summarised to provide a single estimate for each species for each IBA. This required summarising multiple counts within the same year, and/or aggregating counts of different subsites within the same IBA. Year estimates were also calculated as a minimum and maximum estimate of counts within that year, with the minimum the average of these counts and maximum the highest count recorded. Methods to calculate these yearly estimates varied to fit the quantity and type of records available for each species at each site. Approaches taken roughly fell into three main approaches to fit to the different survey approaches taken for the following IBA types:

Harbours and estuaries (this report): Data was often available here with a high frequency within each year and within multiple subsites within the IBA, such as monthly counts at key survey points. Counts were mostly made of individuals, though any counts of pairs and/or nests were used if possible. As the counts were normally of individuals and repeated counting of the same birds may occur, the maximum values of any multiple counts recorded in the same day, month or year were taken. For yearly estimates the minimum estimate was calculated as the average of monthly counts (which themselves recorded the maximum recorded in a month) and the maximum was the highest count recorded in any month. Where species were seasonal visitors to an IBA, only the months with the highest abundance were used (which were kept constant over different years). This was to avoid the seasonally low counts reducing the population estimates.

Inland (braided rivers) (this report): The data available for river systems differed to other inland sites due to different survey approaches. Here counts were less frequently made, usually only once every few years and were more likely to record colonies of breeding birds. As counts were more often composed of nests and/or breeding pairs, and were often made in more discrete areas such as different river reaches within the same IBA, counts were often summed within the year assuming they would be more likely to record separate individuals. Where counts were more closely located counts were only summed if they were recorded within the same year. Otherwise the approach taken followed the inland approach of taking the maximum estimates were possible, with the overall trigger estimate minimum value as the average of yearly maximums and the maximum estimate the highest count recorded.

Coastal sites and Islands: These sites are covered in the companion report *New Zealand Seabirds: Sites on Land, Coastal Sites and Islands*. The Royal Forest & Bird Protection Society of New Zealand, Wellington, New Zealand (2015).

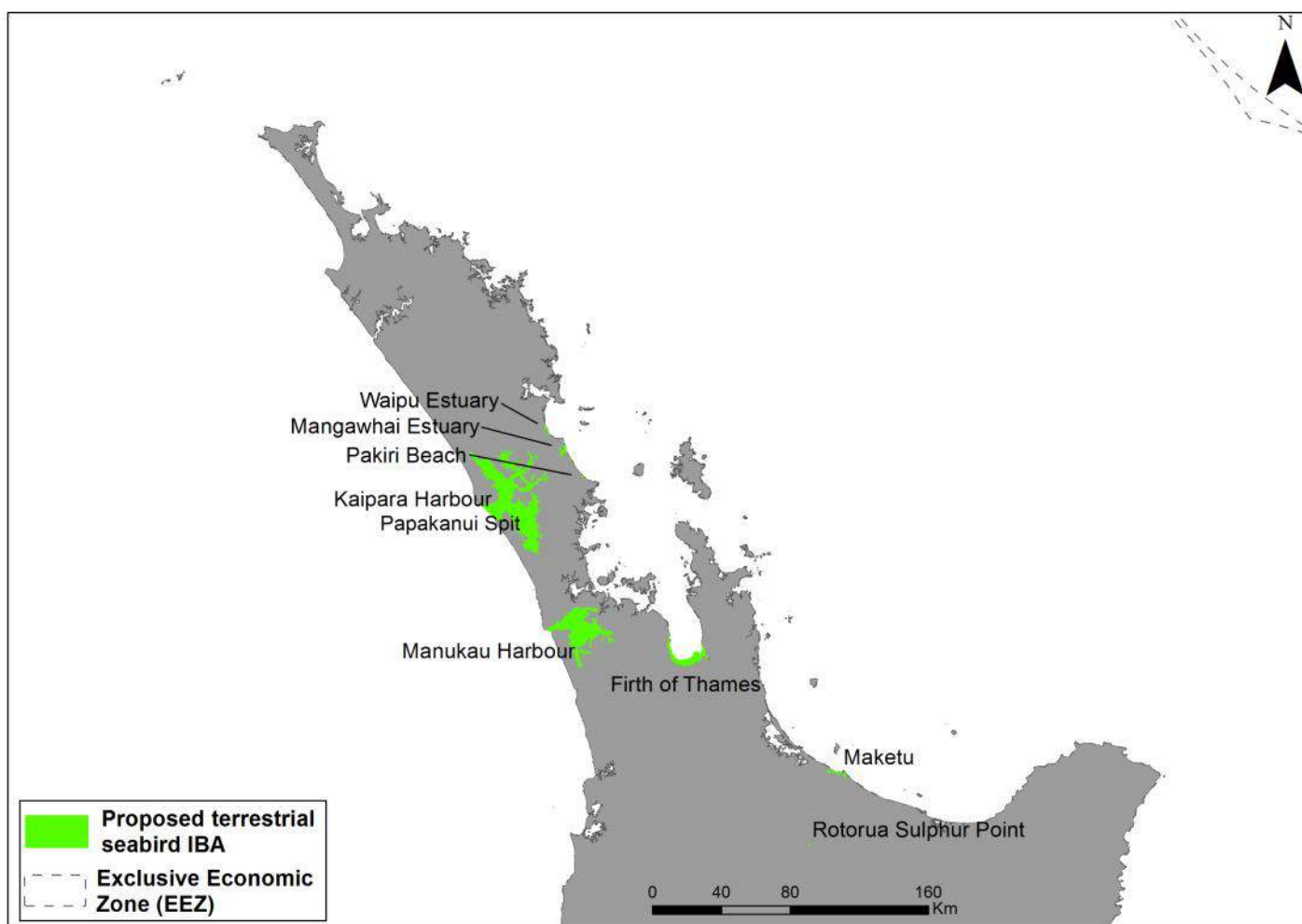
IMPORTANT BIRD & BIODIVERSITY AREAS FOR SEABIRDS - ON LAND

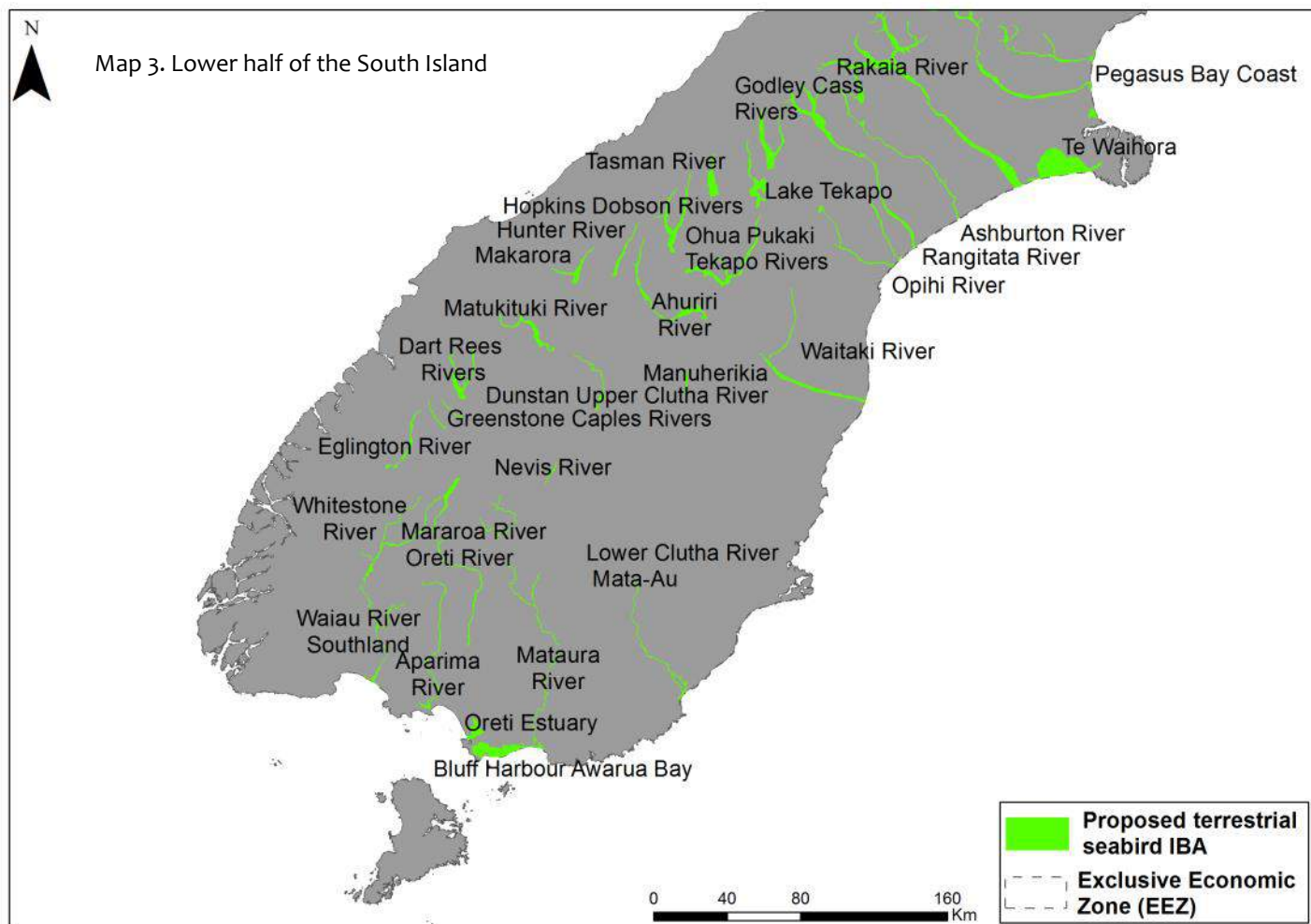
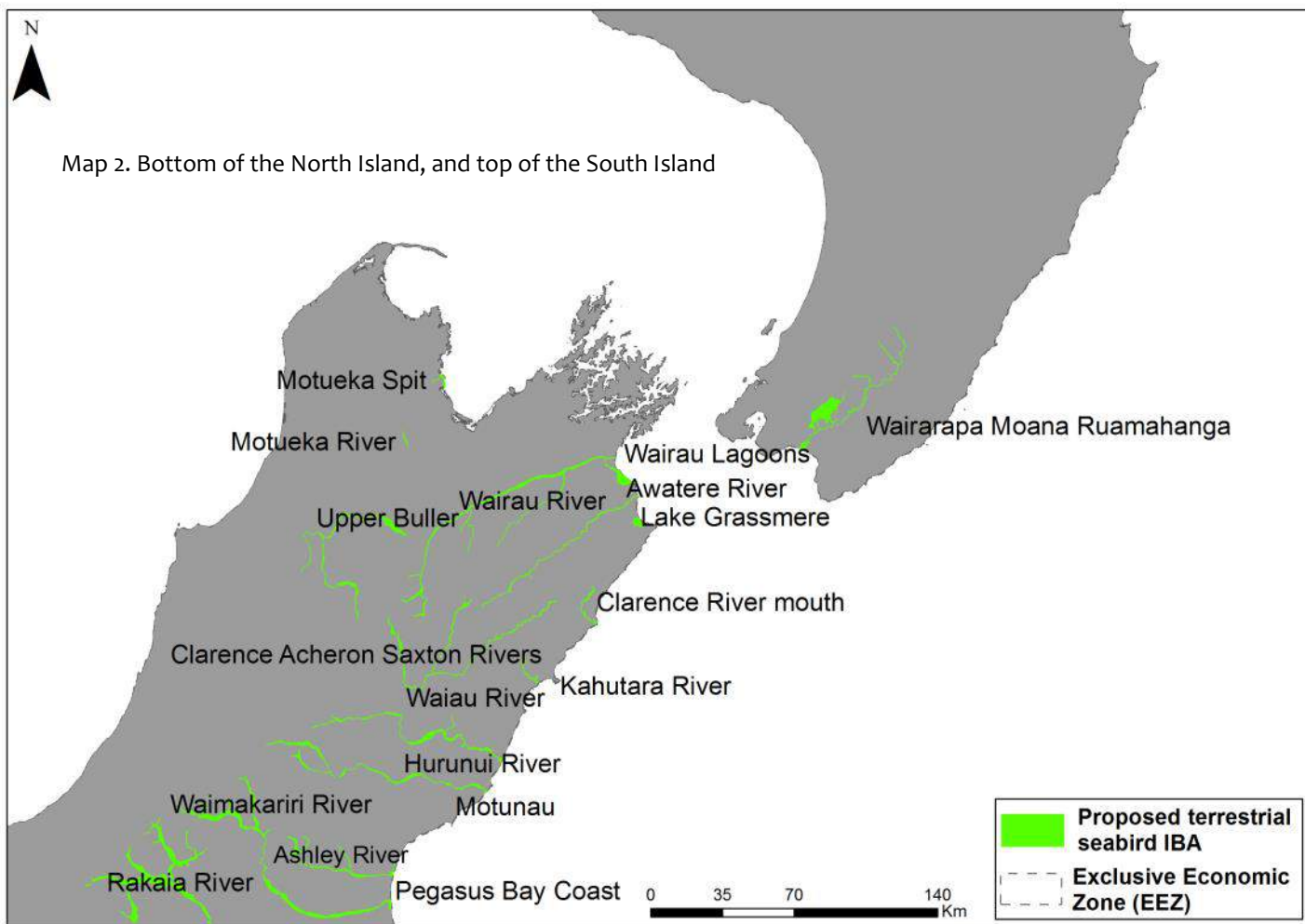
The New Zealand IBA Programme, currently focussing on seabirds, identifies 141 sites using the global IBA criteria for breeding and congregation sites on land.

The IBAs profiled in this document are for rivers, estuaries, coastal lagoons and harbours and are shown in the three maps below.

See also: Forest & Bird (2015). *New Zealand Seabirds: Sites on Land, Coastal Sites and Islands*. The Royal Forest & Bird Protection Society of New Zealand, Wellington, New Zealand.

Map 1. Northern North Island


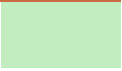




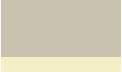
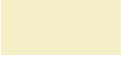














Site profiles



Map Legend

IBA Boundary	
Protected Area / Conservation Land	
Contours	
Property boundaries (land parcels)	
Roads (road parcels)	
Wildlife Refuge boundary, also suggested buffer areas (e.g. King Shag colonies)	
Mud	
Sand	
Rocky areas	
Mangrove	
Exotic forest (e.g. pine plantations)	
River	
Lake	
Swamp	
Scrub	
Scattered scrub	
Forest	
Snow	

NZ009	Waipu Estuary	North Auckland
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Location	New Zealand, North Auckland - Hauraki Gulf (mainland)
Central coordinates	35.994798°S, 174.483699°E
IBA criteria	A1, A4ii
Area	340 ha
Altitude	0 - 5m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
NZ Fairy Tern	Breeding	2010-2013	1-2	(A1, A4ii)	VU	Nationally Critical
NZ Dotterel (Northern Red-breasted Plover)	Breeding/ non-breeding	2010-2012	4-7	A1	NT	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

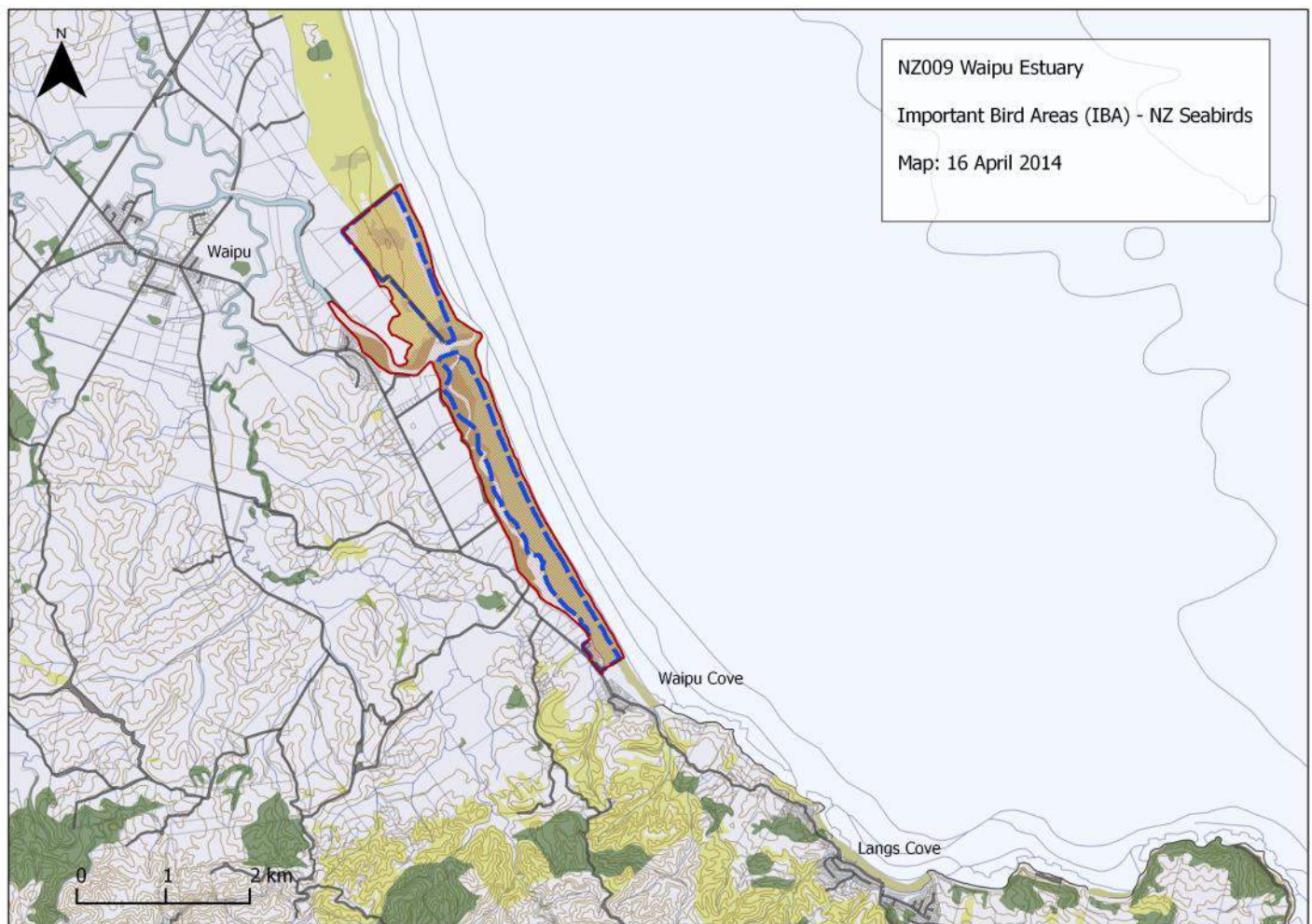
¹ The New Zealand Threat Classification System recognises subspecies and the NZ Fairy Tern is likely NZ's rarest taxon; hence its inclusion here and in subsequent sites.

Black-billed Gulls (EN) are present during non-breeding periods.

Ornithological information: Besides the trigger species the following are confirmed breeding or resident within the site: Paradise Shelduck, Australasian Harrier, Mallard, Banded Rail, Pukeko, Variable Oystercatcher, Spur-winged Plover, Caspian Tern, White-fronted Tern, NZ Kingfisher, Welcome Swallow, North Island Fernbird, Grey Warbler, Silvereye, Skylark. Other species recorded: Australian Pelican, Australasian Gannet, Black Shag, Pied Shag, Little Shag, Little Black Shag, White-faced Heron, Reef Heron, Royal Spoonbill, Cattle Egret, Black Swan, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Pacific Golden Plover, Turnstone, Red-necked Stint, Red (Lesser) Knot, Eastern Bar-tailed Godwit, Far-eastern Curlew, Southern Black-backed Gull, Red-billed Gull, Little Tern, Rock Pigeon, Ring-necked Pheasant, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, House Sparrow, Starling, Common Myna, Australian Magpie.

Protected area	Designation	Relationship with IBA
Waipu	Wildlife Refuge Reserve	Protected area contained with site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Estuary	Major
Marine Intertidal	Beach, Sand spit; Saltmarsh, rush	Major
Marine Coastal / Supratidal	Sand Dunes, marram grass, some Pingao revegetated areas	Major
Forest	Mangrove	Major
Artificial aquatic	Breakwater/groyne	Minor



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Majority/most of area/population (50-90%)	Slow but significant deterioration
Human intrusions and disturbance	Recreational activities by beach and estuary users - includes dogs.	Happening now	Majority/most of area/population (50-90%)	Imperceptible deterioration
Pollution	Run-off and sedimentation from adjacent properties and farmland.	Happening now	Some of area/ population (10-49%)	Imperceptible deterioration

References:

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ010	Mangawhai	Hauraki Gulf
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Location	New Zealand, Hauraki Gulf (mainland)
Central coordinates	36.086964°S, 174.596309°E
IBA criteria	A1, A4ii
Area	1001 ha
Altitude	0 -42m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
NZ Fairy Tern	Breeding		1-4	A1, A4ii	VU	Nationally Critical
NZ Dotterel (Northern Red-breasted Plover) ¹	Resident	2009-2012	43-47 individuals ²	A1	NT	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

¹ Both NZ Fairy Tern and Black-billed Gulls (EN) have nested at Te Arai.

² Resident population increases during non-breeding period.

Ornithological information: Besides the trigger species the following are confirmed breeding or resident at this site: Paradise Shelduck, Australasian Harrier, Banded Rail, Pukeko, Variable Oystercatcher, Spur-winged Plover, Caspian Tern, NZ Kingfisher, Welcome Swallow, North Island Fernbird, Grey Warbler, Silvereye, Ring-necked Pheasant, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling. Other species recorded: Australian Pelican, Australasian Gannet, Black Shag, Pied Shag, Little Shag, Little Black Shag, White-faced Heron, Reef Heron, Little Egret, Royal Spoonbill, Mallard, NZ Shoveler, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, Cattle Egret, Pacific Golden Plover, Turnstone, Red-necked Stint, Red (Lesser) Knot, Eastern Bar-tailed Godwit, Siberian Tattler, Little Tern, Black Swan, Rock Pigeon, Common Myna, Australian Magpie. NB: Shore Plover (EN) A1 - one recent record.

Protected area	Designation	Relationship with IBA
Mangawhai	Wildlife Refuge Reserve	Protected area contained with site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Estuary	Major
Marine Intertidal	Beach, Sand spit; Saltmarsh, rush	Major
Marine Coastal/Supratidal	Sand Dunes, marram grass, some Pingao revegetated areas; Coastal Brackish/Saline Lagoons	Major
Forest	Mangrove	Major
Artificial aquatic	Bridges, launching ramps	Minor



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by beach and estuary users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Mangrove clearance; associated channel dredging in harbour	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Residential and commercial development	Coastal development - mainly housing around the fringes of the harbour (relates to entry below); also potential marina development	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Run-off and sedimentation from adjacent properties and farmland.	Happening now	majority/most of area/population (50-90%)	Slow but significant deterioration

References:

Ismar, S.M.H., Trnski, T., Beauchamp, T., Bury, S., Wilson, D., Kannemeyer, R., Bellingham, M., Baird, K. 2013. Foraging ecology and choice of feeding habitat of the Critically Endangered New Zealand fairy tern, *Sternula nereis davisae*. *Bird Conservation International*.

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.



NZ011	Kaipara Harbour	North Auckland - West Auckland
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Location	New Zealand, North and West Auckland
Central coordinates	36.383881°S, 174.243456°E (Manukapua/Big Sand Island)
IBA criteria	A1, A4ii, A4iii
Area	782 sq km
Altitude	0 - 20m
Year of Assessment	2013

Populations of IBA trigger species:

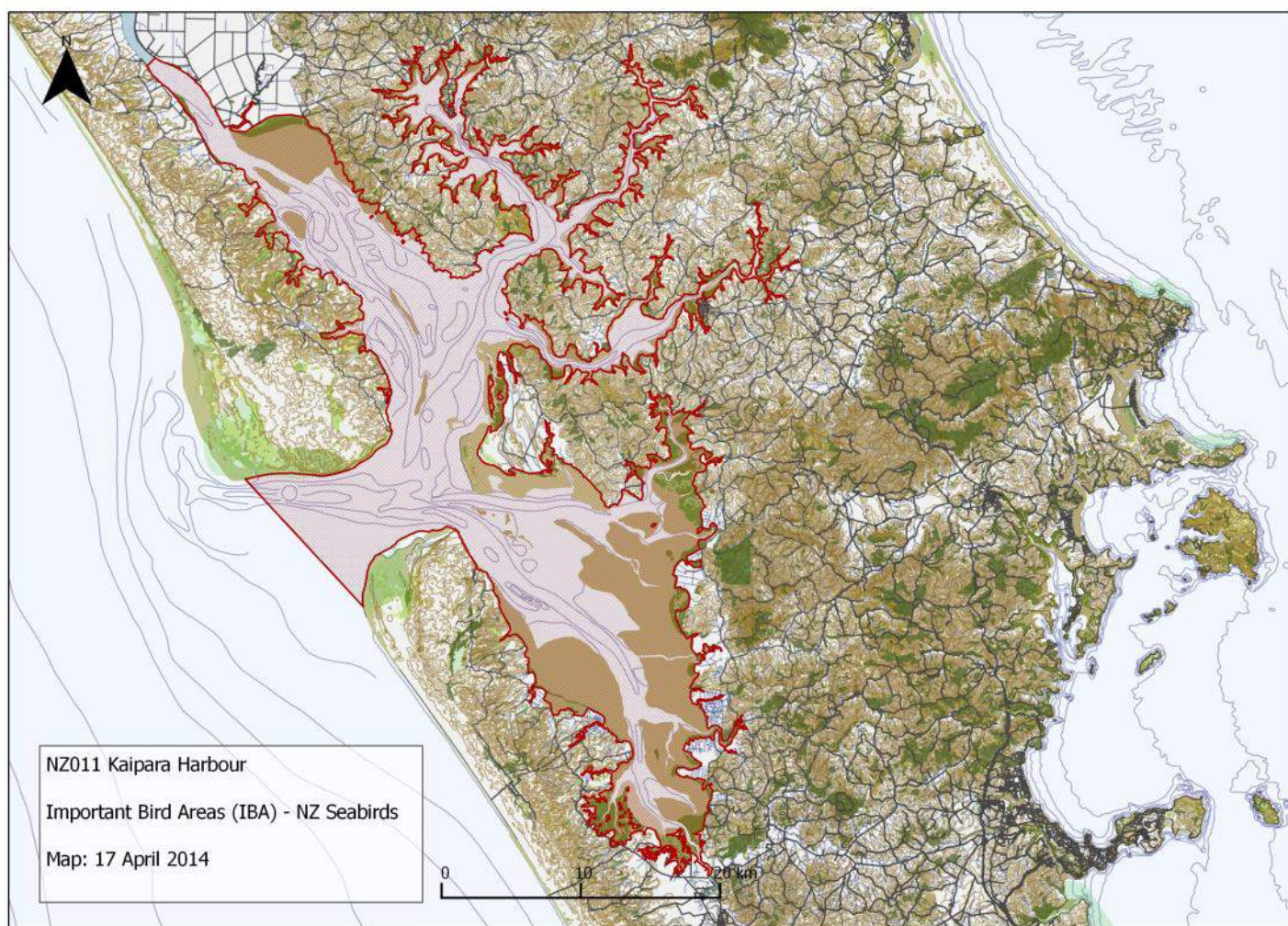
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
NZ Fairy Tern	Non-breeding ¹	1983-2013	2-40 (individuals)	A1, (A4ii)	VU	Nationally Critical
Black-billed Gull	Resident		No counts ²	A1	EN	Nationally Critical
Wrybill	Non-breeding	2009-2012	11-193	A1, A4i	VU	Nationally Vulnerable
NZ Dotterel (Northern Red-breasted Plover)	Resident	2009-2012	26-28	A1, A4i	NT	Nationally Vulnerable
South Island Pied Oystercatcher	Non-breeding	2009-2012	967-19,644	A4i	LC	At Risk - Declining
<i>Species group - shorebirds</i>			More than 20,000 individuals	A4iii		
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

¹ Fairy Terns breed at Papakanui Spit, South Kaipara Head (NZ012). Birds breeding on the Hauraki Gulf coast (Waipu, Mangawhai and Pakiri Beach) move to the Kaipara Harbour post-breeding. Failed breeders will also make this move.

² Black-billed Gulls are confirmed breeding at Rat Island and Waikiri Creek in the Kaipara Harbour. Post-breeding this species disperses to roost sites in many corners of the harbour including birds from Waionui Inlet, Papakanui Spit (A. Ha-braken pers. comm.).

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding or resident within the site's boundaries: Black Shag, Pied Shag, Little Shag, Little Black Shag, White-faced Heron, Reef Heron, Black Swan, Canada Goose, Cape Barren Goose, Paradise Shelduck, Mallard, Grey Teal, NZ Shoveler, NZ Scaup, Australasian Harrier, Banded Rail, Spotless Crane, Pukeko, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Californian Quail, Brown Quail, Ring-necked Pheasant, Peafowl, NZ Pigeon, Rock Pigeon, Barbary Dove, Eastern Rosella, NZ Kingfisher, Welcome Swallow, NZ Pipit, North Island Fernbird, Grey Warbler, NZ Fantail, Silvereye, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Common Myna, Australian Magpie. Other species recorded: Australasian Gannet, White Heron, Royal Spoonbill, Cattle Egret, Mongolian Dotterel, Pacific Golden Plover, Turnstone, Curlew Sandpiper, Sharp-tailed Sandpiper, Pectoral Sandpiper, Red-necked Stint, Far-eastern Curlew, Asiatic Whimbrel, Red (Lesser) Knot, Eastern Bar-tailed Godwit, Asiatic Black-tailed Godwit, Grey-tailed (Siberian) Tattler, Terek Sandpiper, Great Sand Plover, Lesser Sand Plover, Marsh Sandpiper.

NB: All major roost areas are included in the IBA.



Protected area	Designation	Relationship with IBA
Manukapua	Wildlife Management	Protected area contained within site
Tauhoa	Conservation Area	Protected area contained within site
Okahukua	Conservation Area	Protected area contained within site
Millefs Island	Scientific Reserve	Protected area contained within site
Tauhoa	Scientific Reserve	Protected area contained within site
Moturemu	Scenic Reserve	Protected area contained within site
Parakai	Conservation Area	Protected area contained within site
Southhead Road	Scientific Reserve	Protected area contained within site
Whakatu	Conservation Area	Protected area contained within site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Seagrass (Submerged); Estuaries	Major
Marine Intertidal	Beach, Sand and shell islands; Saltmarsh, rush	Major
Marine Coastal / Supratidal	Sand Dunes, marram grass, some Pingao revegetated areas	Major
Shrubland	Riparian areas - <i>Muehlenbeckia</i> , rush, bracken	Major
Forest	Mangrove	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by beach and estuary users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Mangrove clearance	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Pollution	Run-off and sedimentation from adjacent properties and farmland.	Happening now	majority/most of area/population (50-90%)	Slow but significant deterioration

References:

Baird, K., Ismar, S. M. H., Wilson, D., Plowman, S., Zimmerman, R., & Bellingham, M. 2013. Sightings of New Zealand fairy tern (*Sternula nereis davisae*) in the Kaipara Harbour following nest failure. *Notornis*, 60: 183-185

Gaskin, C.P. 2015. Statement of primary evidence of Chris Gaskin on behalf of the Environmental Defence Society Incorporated and Royal Forest and Bird Protection society of New Zealand Submission Numbers 4735 and 4848: Hearing Topic 23 - SEA and Vegetation Management 15 July 2015. file:///C:/Users/Chris-kiwi/Downloads/023%20Hrg%20-%20EDS%20and%20Royal%20Forest%20and%20Bird%20Protection%20Society%20(Chris%20Gaskin)%20-%20Primary%20Evidence.pdf

Ismar, S.M.H., Trnski, T., Beauchamp, T., Bury, S.; Wilson, D., Kannemeyer, R., Bellingham, M., Baird, K. 2013. Foraging ecology and choice of feeding habitat of the Critically Endangered New Zealand fairy tern, *Sternula nereis davisae*. *Bird Conservation International*.

Pulham, G.; Wilson, D. 2013 [updated 2015]. Fairy tern. In Miskelly, C.M. (ed.) *New Zealand Birds Online* www.nzbirdsonline.org.nz

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ012	Papakanui Spit	North Auckland - West Auckland
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Location	New Zealand, North and West Auckland
Central coordinates	-36.434473°S, 174.205313°E
IBA criteria	A1, A4ii
Area	18 sq km
Altitude	0 - 20m
Year of Assessment	2013

Populations of IBA trigger species:

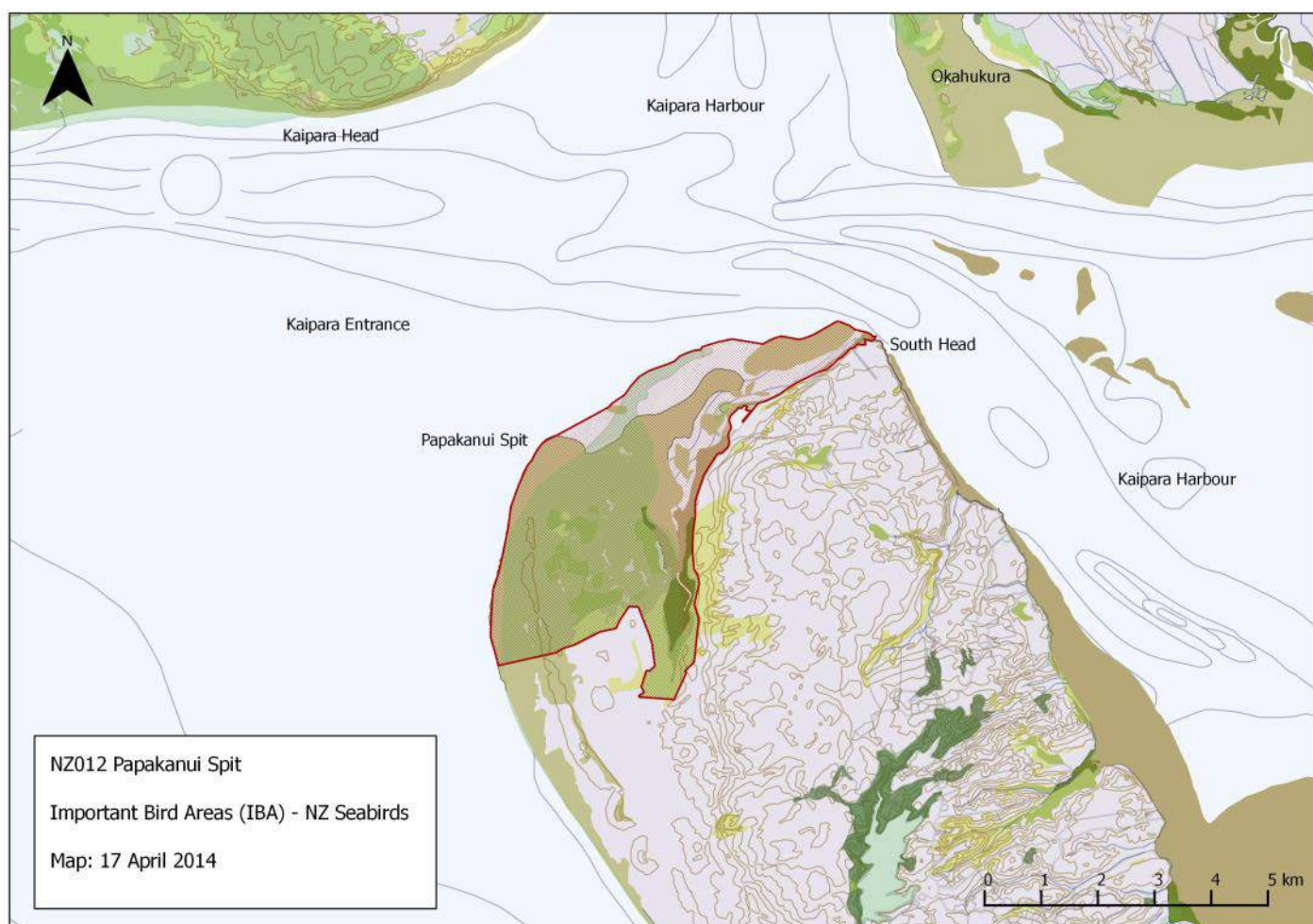
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
NZ Fairy Tern ¹	Breeding/ Non-breeding	1983- 2013	1-2	(A1, A4ii)	VU	Nationally Critical
Black-billed Gull	Resident	1995- 1997	4-12	A1	EN	Nationally Critical
NZ Dotterel (Northern Red-breasted Plover)	Resident	2009- 2012	48-60 (individuals)	A1, A4i	NT	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

¹ The New Zealand Threat Classification System recognises subspecies and the NZ Fairy Tern is likely NZ's rarest taxon; hence its inclusion here and in subsequent sites.

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding or resident within the site's boundaries: Black Shag, Pied Shag, Little Shag, Little Black Shag, White-faced Heron, Reef Heron, Black Swan, Paradise Shelduck, Mallard, Australasian Harrier, Banded Rail, Pukeko, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Californian Quail, Ring-necked Pheasant, Peafowl, Rock Pigeon, Eastern Rosella, NZ Kingfisher, Welcome Swallow, NZ Pipit, North Island Fernbird, Grey Warbler, NZ Fantail, Silvereye, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Common Myna, Australian Magpie.

Other species recorded: Australasian Gannet, White Heron, Royal Spoonbill, Cattle Egret, Mongolian Dotterel, Pacific Golden Plover, Turnstone, Curlew Sandpiper, Sharp-tailed Sandpiper, Pectoral Sandpiper, Red-necked Stint, Far-eastern Curlew, Asiatic Whimbrel, Red (Lesser) Knot, Eastern Bar-tailed Godwit, Asiatic Black-tailed Godwit, Grey-tailed (Siberian) Tattler, Terek Sandpiper, Great Sand Plover, Lesser Sand Plover, Marsh Sandpiper.

Protected area	Designation	Relationship with IBA
Papakanui	Conservation Area	Protected area contained within site
Ti Tree Island	Conservation Area	Protected area contained within site



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Beach, Sand and shell islands; Saltmarsh, rush	Major
Marine Coastal / Supratidal	Sand Dunes, marram grass	Major
Shrubland	Manuka/kanuka; bracken; Lupin, gorse (introduced)	Major
Forest	Mangrove	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by beach and lagoon users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Human intrusions and disturbance	Military exercises	Happening Now	Small area/few individuals (<10%)	Imperceptible deterioration
Climate change and severe weather	Storm driven waves and floods can wash through the NZ Fairy Tern nesting area.	Likely in short term (within 4 years)	Majority/most of area/population (50-90%)	Very rapid to severe deterioration

References:

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

NZ015	Pakiri Beach	Hauraki Gulf
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Location	New Zealand, Hauraki Gulf (mainland)
Central coordinates	36.241281°S, 174.721278°E.
IBA criteria	A1, (A4ii)
Area	85 ha
Altitude	0 - 5m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
NZ Fairy Tern	Breeding	2003-2015	1-2	(A1, A4ii)	VU	Nationally Critical
NZ Dotterel (Northern Red-breasted Plover)	Resident	2009-2015	18-19	A1	NT	Nationally Vulnerable

Ornithological information: Besides the trigger species the following are confirmed breeding or resident on the islands: Banded Rail, Spotless Crane, Pukeko, Paradise Shelduck, Variable Oystercatcher, Spur-winged Plover, NZ Kingfisher, Welcome Swallow, North Island Fernbird, Grey Warbler, Silvereye, Ring-necked Pheasant, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow

Other species recorded: Black Shag, Pied Shag, Little Shag, Little Black Shag, White-faced Heron, Reef Heron, Royal Spoonbill, Mallard, NZ Shoveler, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Turnstone, Little Tern, Rock Pigeon, , Starling, Common Myna, Australian Magpie.

NB: Shore Plover (EN) - one recent record.

Protected area	Designation	Relationship with IBA
Pakiri River Road	Scenic Reserve	Protected area contained within site

Area encompassing NZ Fairy Tern and some of the NZ Dotterel breeding sites are tape-marked with a warden on site during breeding season.

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Estuary	Major
Marine Intertidal	Beach, Sand spit; Saltmarsh, rush	Major
Marine Coastal/Supratidal	Sand Dunes, marram grass, some Pingao revegetated areas	Major
Shrubland	Riparian areas - <i>Muehlenbeckia</i> , rush, bracken	Major
Forest	Mangrove	Minor



Threats to the site (pressure) - IUCN Classifications

Threat Level 1	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Majority/most of area/population (50-90%)	Slow but significant deterioration
Human intrusions and disturbance	Recreational activities by beach and estuary users - includes dogs.	Happening now	Majority/most of area/population (50-90%)	Slow but significant deterioration
Climate change and severe weather	Storm driven waves and floods can wash through the NZ Fairy Tern nesting area, also the stream can change its course following flood events.	Likely in short term (within 4 years)	Majority/most of area/population (50-90%)	Very rapid to severe deterioration
Natural system modifications	Mangrove clearance; associated channel dredging in harbour	Happening now	Some of area/population (10-49%)	Moderate to rapid deterioration
Pollution	Run-off and sedimentation from adjacent properties and farmland.	Happening now	Some of area/population (10-49%)	Slow but significant deterioration

References:

Department of Conservation warden notes. Unpublished reports, NZ Fairy Tern Recovery Group.

Gaskin, C.P. 2015. Statement of primary evidence of Chris Gaskin on behalf of the Environmental Defence Society Incorporated and Royal Forest and Bird Protection society of New Zealand Submission Numbers 4735 and 4848: Hearing Topic 23 - SEA and Vegetation Management 15 July 2015. file:///C:/Users/Chris-kiwi/Downloads/023%20Hrg%20-%20EDS%20and%20Royal%20Forest%20and%20Bird%20Protection%20Society%20(Chris%20Gaskin)%20-%20Primary%20Evidence.pdf

NZ020	Firth of Thames	Hauraki Gulf
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Location	New Zealand, Hauraki Gulf - Coromandel
Central coordinates	37.180971°S, 175.323601°E (Miranda Bird Hide)
IBA criteria	A1, A4ii
Area	9558 ha
Altitude	0 - 3m
Year of Assessment	2013

Populations of IBA trigger species:

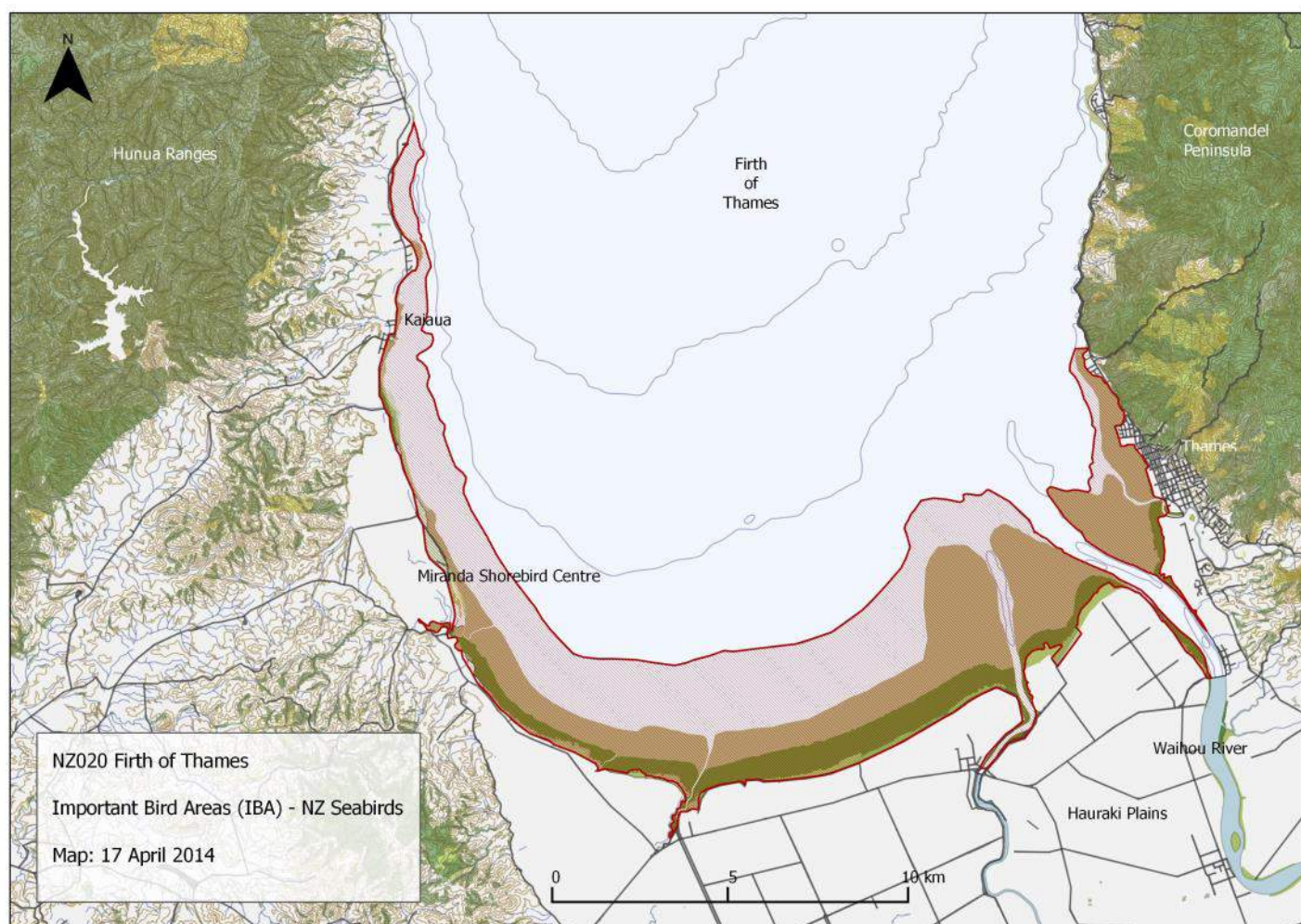
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1963-2013	85-320	A1	EN	Nationally Critical
Wrybill	Non-breeding	2009-2012	60-2,253 (individuals)	A1, A4i	VU	Nationally Vulnerable
South Island Pied Oystercatcher	Non-breeding	2009-2012	9,446-14,332 (individuals)	A4i	LC	At Risk - Declining
<i>Species group - shorebirds</i>			More than 20,000 individuals	A4iii		
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

Black Stilt (CR) A1 (non breeding - incl. hybrids) occasional visitor.

NZ Dotterel (Northern Red-breasted Plover) numbers do not meet either A1 or A4ii criteria

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding or resident: Australasian Gannet, Black Shag, Pied Shag, Little Shag, Little Black Shag, Spotted Shag, White-faced Heron, White Heron, Reef Heron, Black Swan, Canada Goose, Paradise Shelduck, Mallard, (Grey Duck), Grey Teal, NZ Shoveler, Australasian Harrier, Rock Pigeon, Barbary Dove, Spotted Dove, Eastern Rosella, Banded Rail, Pukeko, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, NZ Pigeon, Shining Cuckoo, Morepork, NZ Kingfisher, Welcome Swallow, NZ Pipit, North Island Fernbird, Grey Warbler, NZ Fantail, Silvereye, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, House Sparrow, Starling, Common Myna, Australian Magpie.

Other species recorded: Royal Spoonbill, Cattle Egret, Mongolian Dotterel, Pacific Golden Plover, Turnstone, Curlew Sandpiper, Sharp-tailed Sandpiper, Pectoral Sandpiper, Red-necked Stint, Far-eastern Curlew, Asiatic Whimbrel, Great Knot, Grey Plover, Red (Lesser) Knot, Eastern Bar-tailed Godwit, Asiatic Black-tailed Godwit, Hudsonian Godwit, Grey-tailed (Siberian) Tattler, Semi-palmated Plover, Terek Sandpiper, Arctic Skua, Pomarine Skua, Gull-billed Tern, Little Tern. The Firth of Thames is a Ramsar Site (Ref. NZ005).



Protected area	Designation	Relationship with IBA
Miranda Taramaire	Government Purpose Reserve (Wildlife Management)	Protected area contained within site
Miranda	Conservation Area	Protected area contained within site
Miranda Stream	Conservation Area	Protected area contained within site
Waitakaruru River Mouth	Marginal Strip	Protected area contained within site
Orongo Coast	Conservation Area	Protected area contained within site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Mud flats	Major
Marine Coastal/Supratidal	Shell and sand beaches; chenier (wave-driven shell and sand banks)	Major
Introduced vegetation	Pasture	Major
Shrubland	Muelhenbeckia, rush and salt marsh margins	Minor
Forest	Mangrove	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level 1	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Majority/most of area/population (50-90%)	Slow but significant deterioration
Human intrusions and disturbance	Recreational activities by beach and estuary users - includes dogs.	Happening now	Majority/most of area/population (50-90%)	Slow but significant deterioration
Climate change and severe weather	Storm driven waves and floods can wash through nesting area and roosts	Likely in short term (within 4 years)	Majority/most of area/population (50-90%)	Very rapid to severe deterioration
Natural system modifications	Shell mining	Happening now	Some of area/population (10-49%)	Moderate to rapid deterioration
Pollution	Run-off and sedimentation from adjacent properties and farmland.	Happening now	Some of area/population (10-49%)	Slow but significant deterioration

References:

Miranda Naturalists' Trust 2015 <http://www.miranda-shorebird.org.nz/shorebirds-at-miranda/black-billed-gulls>

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database (2013)

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ021	Manukau Harbour	South Auckland
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Location	New Zealand,
Central coordinates	37.045729°S, 174.803984°E
IBA criteria	A1, A4ii, A4iii
Area	374.6 sq. km.
Altitude	0 - 5m
Year of Assessment	2013

Populations of IBA trigger species:

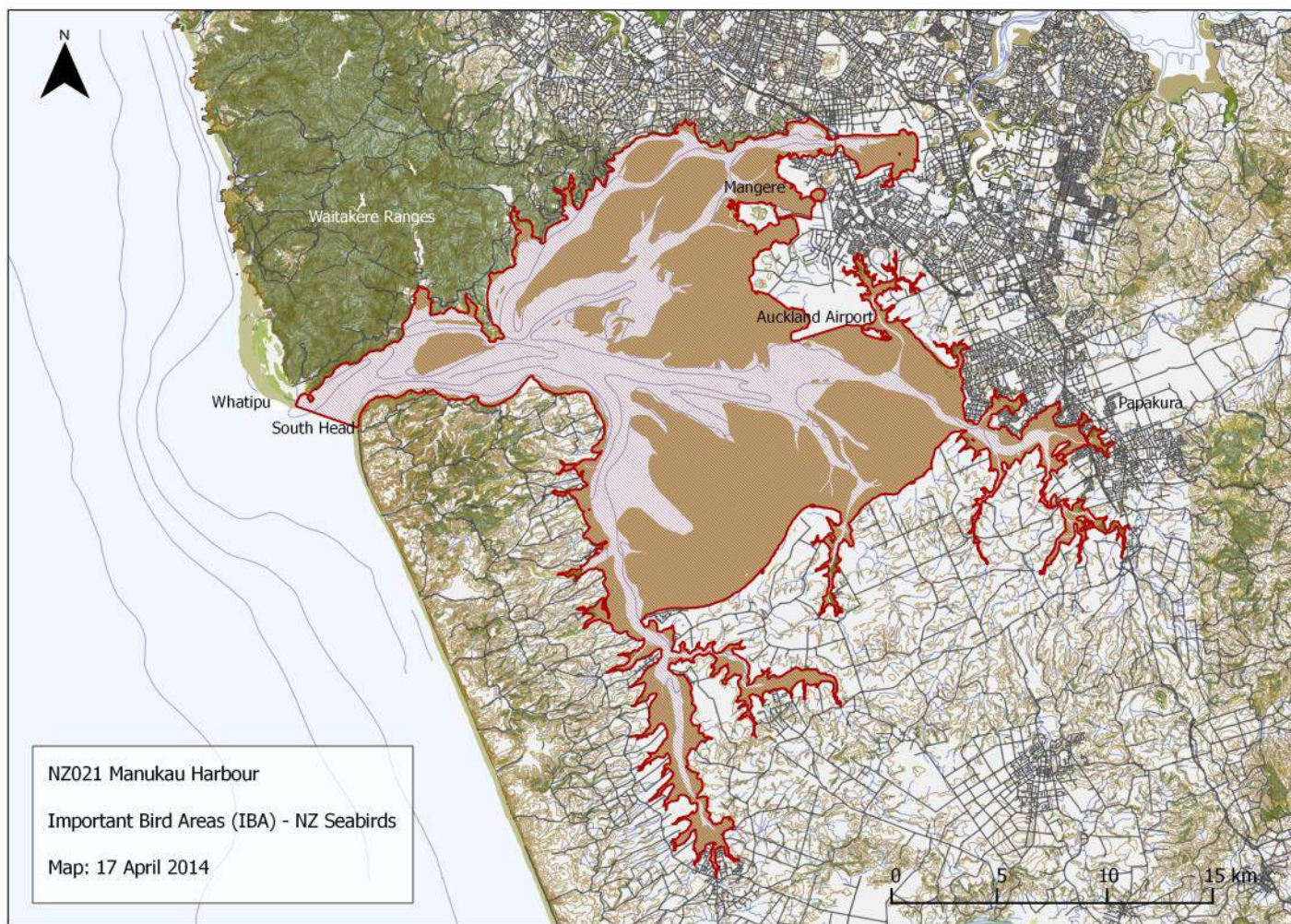
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	2009-2010	244-508	A1	EN	Nationally Critical
NZ Dotterel (Northern Red-breasted Plover)	Resident	2009-2012	16-18	A1, A4i	NT	Nationally Vulnerable
Wrybill	Non-breeding	2009-2012	629-2,478 (individuals)	A1, A4i	VU	Nationally Vulnerable
South Island Pied Oystercatcher	Non-breeding	2009-2012	24,970-27,010 (individuals)	A4i	LC	At Risk - Declining
<i>Species group - shorebirds</i>			More than 20,000 individuals	A4iii		
NZ Grebe (NZ Dabchick)	Breeding		Present	A1	VU	At Risk - Declining

Black Stilt (CR) A1 (non breeding - incl. hybrids) occasional visitor.

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding or resident: Black Shag, Pied Shag, Little Shag, Little Black Shag, White-faced Heron, Reef Heron, Black Swan, Canada Goose, Paradise Shelduck, (Grey Duck), Mallard, Grey Teal, NZ Shoveler, NZ Scaup, Australasian Harrier, Banded Rail, Pukeko, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, NZ Pigeon, Rock Pigeon, Barbary Dove, Spotted Dove, Eastern Rosella, Shining Cuckoo, Morepork, NZ Kingfisher, Welcome Swallow, NZ Pipit, North Island Fernbird, Grey Warbler, NZ Fantail, Silvereye, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, House Sparrow, Starling, Common Myna, Australian Magpie.

Other species recorded: Australasian Gannet, White Heron, Cattle Egret, Royal Spoonbill, Mongolian Dotterel, Pacific Golden Plover, Turnstone, Curlew Sandpiper, Sharp-tailed Sandpiper, Pectoral Sandpiper, Red-necked Stint, Far-eastern Curlew, Asiatic Whimbrel, Great Knot, Grey Plover, Red (Lesser) Knot, Eastern Bar-tailed Godwit, Asiatic Black-tailed Godwit, Grey-tailed (Siberian) Tattler, Semi-palmated Plover, Terek Sandpiper, Arctic Skua, Little Tern.

NB: Movement of wader flocks across the Auckland Isthmus (i.e. between the Manukau Harbour on the Tasman Sea side and the Waitemata Harbour and Tamaki Estuary on the Hauraki Gulf) may warrant extending this IBA, or to be treated separately in future IBA work.



Protected area	Designation	Relationship with IBA
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Clarks Creek	Marginal Strip	Protected area contained within site
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NB: Auckland Council through the Auckland Unitary Plan process have designated areas of tidal flats (ie. wading bird foraging areas) as Significant Ecological Areas Marine (SEA-M) in which activities are regulated to varying degrees depending whether they are SEA-M1 or SEA-M2.

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Seagrass (Submerged); Estuaries	Major
Marine Intertidal	Beach, Sand and shell islands; Saltmarsh, rush	Major
Marine Coastal /Supratidal	Sand Dunes, marram grass,	Major
Shrubland	Riparian areas - <i>Muehlenbeckia</i> , rush, bracken	Major
Forest	Mangrove	Minor
Artificial - Aquatic	Wastewater Treatment Areas; Canals and Drainage Channels, Ditches; Marine Anthropogenic Structures	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by beach and estuary users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Mangrove clearance	Happening now	Small area/few individuals (<10%)	Moderate to rapid deterioration
Pollution	Run-off and sedimentation from adjacent properties and farmland.	Happening now	Majority/most of area/population (50-90%)	Slow but significant deterioration
Residential and commercial development	Commercial and industrial development; Housing and urban areas	Happening now	Some of area/ population (10-49%)	Imperceptible deterioration

References:

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ027	Maketu	Bay of Plenty
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Location	New Zealand, Bay of Plenty
Central coordinates	37.754701°S, 176.452875°E (Maketu Spit)
IBA criteria	A1, A4ii
Area	989 ha
Altitude	0 - 10m
Year of Assessment	2013

Populations of IBA trigger species:

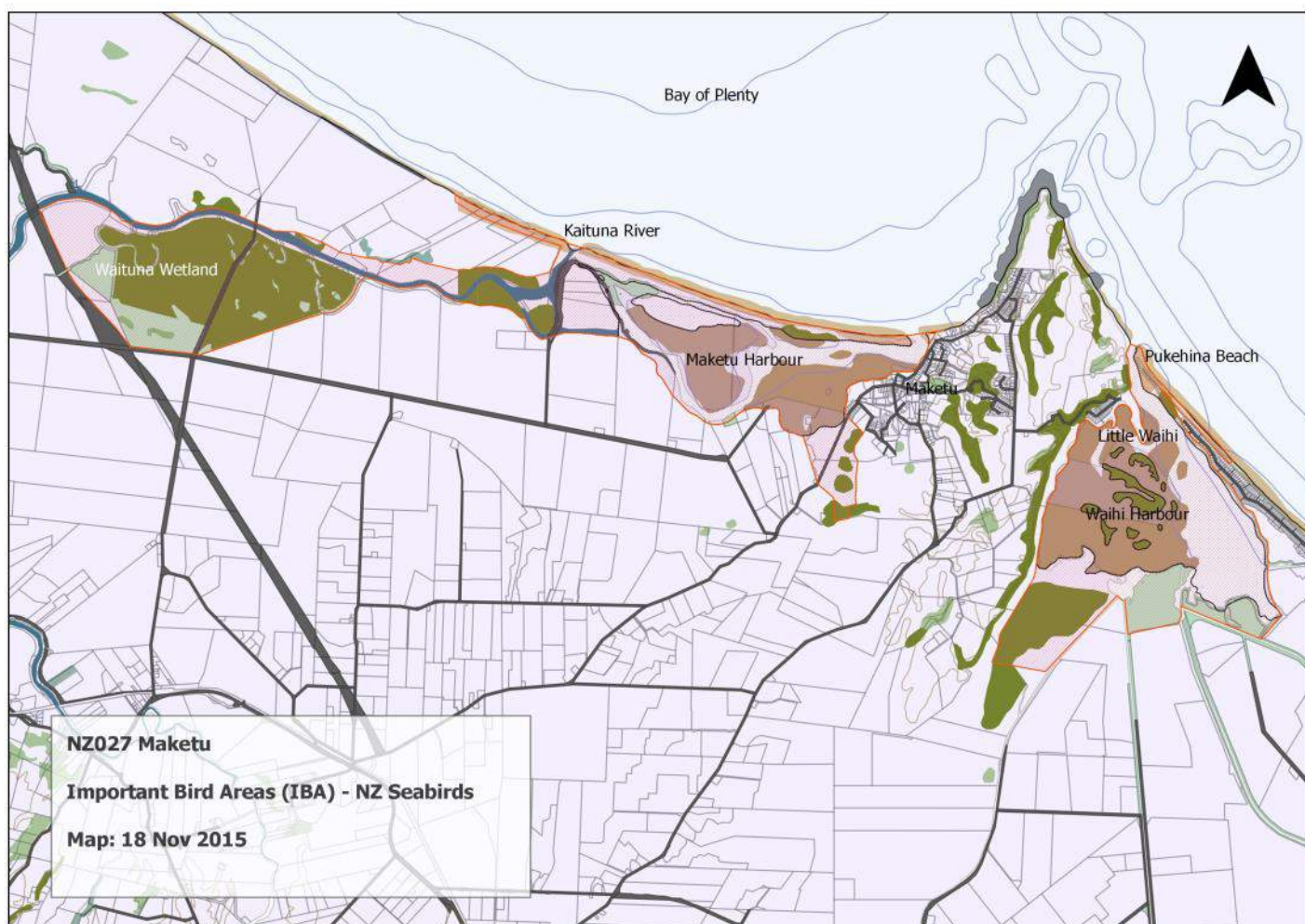
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding/ Non-breeding	2012-2015	13-26	A1	EN	Nationally Critical
NZ Dotterel (Northern Red-breasted Plover)	Resident	2012-2015	6-7	A1	NT	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

Wrybill (VU) are also present in small numbers during non-breeding periods.

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding or resident: Black Shag, Little Black Shag, Pied Shag, Little Shag, White-faced Heron, White Heron, Reef Heron, Royal Spoonbill, Paradise Shelduck, (Grey Duck), Grey Teal, NZ Shoveler, Australasian Harrier, Banded Rail, Spotless Crake, Pukeko, South Island Pied Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Shining Cuckoo, NZ Kingfisher, Welcome Swallow, NZ Pipit, North Island Fernbird, Grey Warbler, North Island Fantail, Silvereye, Black Swan, Canada Goose, Mallard, Californian Quail, Rock Pigeon, Spotted Dove, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, House Sparrow, Starling, Common Myna, Australian Magpie.

Other species recorded: Cattle Egret, Chestnut-breasted Shelduck, Pacific Golden Plover, American Golden Plover, Mongolian Dotterel, Turnstone, Grey Plover, Great Sand Plover, Pectoral Sandpiper, Sharp-tailed Sandpiper, Common Sandpiper, Marsh Sanpiper, Sanderling, Great Knot, Red-necked Stint, Red (Lesser) Knot, Eastern Bar-tailed Godwit, Far-eastern Curlew, Asiatic Whimbrel, Arctic Skua, Little Tern.

Protected area	Designation	Relationship with IBA
Lower Kaituna	Wildlife Management Reserve	Protected area contained within site
Maketu	Wildlife Management Reserve	Protected area contained within site
Waihi	Wildlife Management Reserve	Protected area overlaps with site
Estuary	Wildlife Management Reserve	Protected area contained within site
Pukehina Beach	Marginal Strip	Protected area overlaps with site



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Seagrass (Submerged); Estuaries	Major
Marine Intertidal	Beach, spits; Saltmarsh, rush	Major
Marine Coastal /Supratidal	Sand Dunes; Spinifex and pingao; <i>Austrofestuca litoralis</i>	Major
Wetlands (inland)	Permanent River; Shrub-dominated Wetland	Major
Shrubland	Riparian areas - <i>Muehlenbeckia</i> , rush, bracken	Major
Forest	Mangrove	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, mustelids, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by beach and estuary users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Management of river flow	Happening now	Small area/few individuals (<10%)	Moderate to rapid deterioration ¹
Pollution	Run-off and sedimentation from adjacent properties and farmland.	Happening now	Majority/most of area/population (50-90%)	Slow but significant deterioration
Residential and commercial development	Commercial and industrial development; Housing and urban areas	Happening now	Some of area/population (10-49%)	Imperceptible deterioration

¹ The Kaituna River diversion project is due to start in late 2016. It is anticipated that this will in time, be beneficial to the estuary, though initially may result in more pollution. It will result in significant amounts of wetland being restored and the removal of cattle from Papahikahawai Island in Maketu Harbour (J. Fitter pers. comm.).

References:

Barnard T. - BIRDING-NZ@yahoo.com posts

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ028	Rotorua Sulphur Bay	Bay of Plenty
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Location	New Zealand, Bay of Plenty
Central coordinates	38.139924°S, 176.259112°E (Sulphur Point Lookout)
IBA criteria	A1, A4ii
Area	27 ha
Altitude	284m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding/ Non-breeding	1951-1955	122-220	A1	EN	Nationally Critical
New Zealand Grebe (NZ Dabchick)	Resident		No count ¹	A1, A4i	VU	Nationally Vulnerable

¹ Post-breeding Dabchick numbers increase to >500 individuals as birds congregate from lakes and ponds in the district (G. Taylor pers. comm.)

Ornithological information: NB: Most of the following species occur around the fringes of this IBA (as drawn). Some will nest, roost or forage within the IBA. Black Shag, Little Black Shag (90% of NZ Population nesting here at times (G. Taylor pers. comm.)), Little Shag, Black Swan, Paradise Shelduck, Mallard, Grey Teal, NZ Shoveler, NZ Scaup, Californian Quail, Australasian Harrier, (NZ Falcon), Pukeko, Australian Coot, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, Rock Pigeon, Shining Cuckoo, Morepork, NZ Kingfisher, Welcome Swallow, Grey Warbler, NZ Fantail, Silvereye, Bellbird, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Common Myna, Australian Magpie.

Protected area	Designation	Relationship with IBA
Nil		

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Lake / lakeshore	Major
Wetlands (inland)	Geothermal Wetlands	Major
Shrubland	Manuka, bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake shore users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

References:

Black, M.S. 1955. Some notes on Black-billed Gulls (*Larus bulleri*) at Rotorua with special reference to the breeding cycle. *Notornis* 6: 167-170

Gleeson, N.M., Fogarty, S.M., Player, J.L., McKenzie, H.R. 1972. Black-billed Gulls extend breeding range north. *Notornis* 19: 330-334

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ031	Wairarapa Moana Ruamahanga	Wairarapa
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Location	New Zealand, Wairarapa-Wellington
Central coordinates	41.254839°S, 175.258472°E (Bird hide Boggy Pond)
IBA criteria	A1
Area	13300 ha
Altitude	0 - 240m
Year of Assessment	2013

Populations of IBA trigger species:

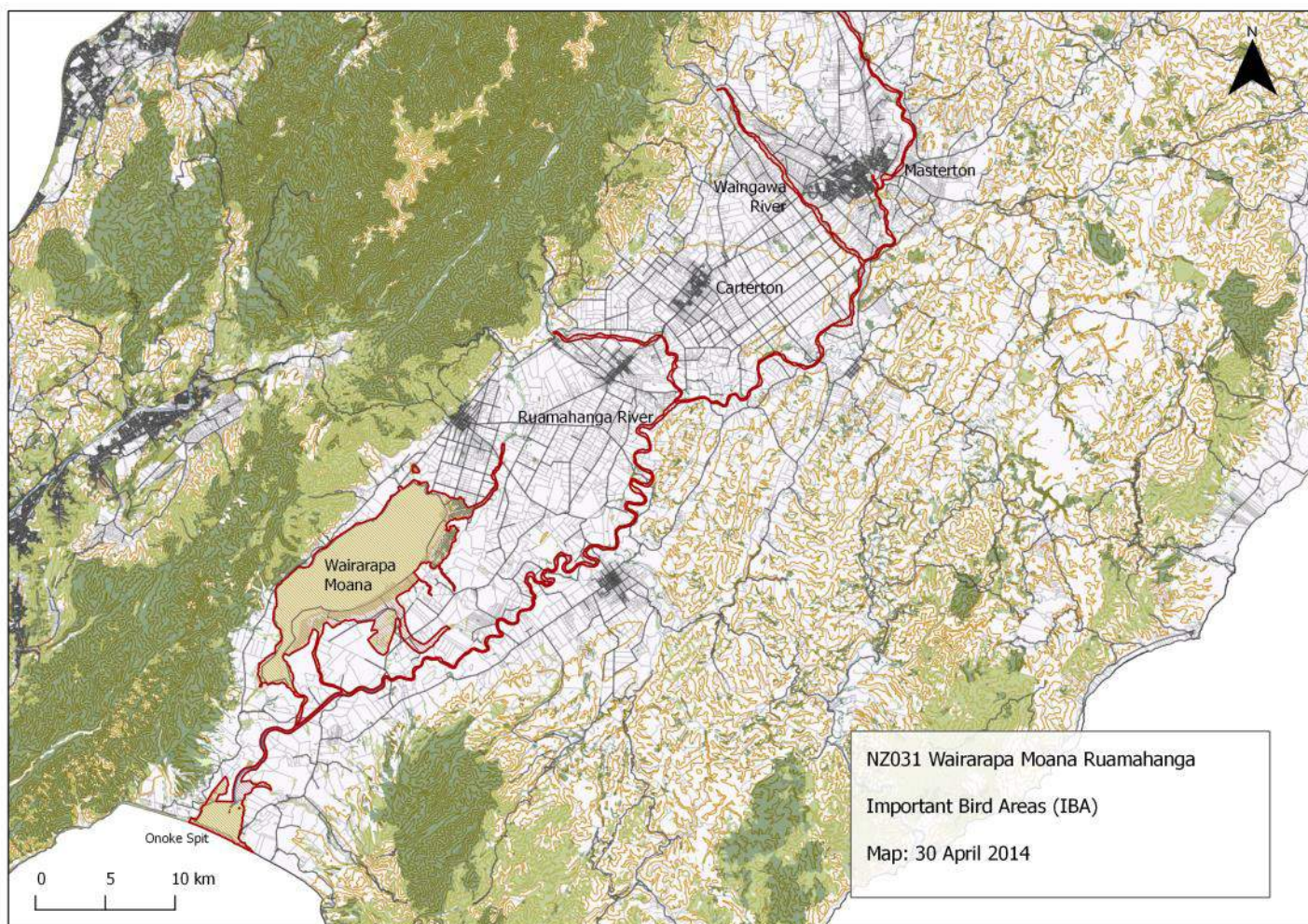
Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding/ Non-breeding	1941-2015	38-1,983 individuals	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Non-breeding	1947-2015	54-400 individuals	A1	EN	Nationally Vulnerable
NZ Dabchick (New Zealand Grebe)	Resident	1926-2015	29-281 individuals	A1, A4i	VU	Nationally Vulnerable
Australasian Bittern	Resident	1975-2015	9-16 individuals	A1	EN	Nationally Endangered

Ornithological information (other species): Black Shag, Little black Shag, Pied Shag, Little Shag, Spotted Shag, White-faced Heron, White Heron, Reef Egret, Royal Spoonbill, Black Swan, Mute Swan, Canada Goose, Feral Goose, Paradise Shelduck, Mallard, Grey Teal, NZ Scaup, Australasian Shoveler, Australasian Harrier, Pukeko, Australian Coot, Marsh (Baillon's) Crane, Spotless Crane, Pied Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Californian Quail, Common Pheasant, NZ Pigeon, Rock Pigeon, Eastern Rosella, NZ Kingfisher, Welcome Swallow, Shining Cuckoo, NZ Pipit, North Island Fantail, Grey Warbler, Silvereye, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Goldfinch, Chaffinch, Greenfinch, Redpoll, House Sparrow, Starling, Australian Magpie, Rook. Other species recorded: Little Egret, Cattle Egret, Nankeen Night Heron, Glossy Ibis, Chestnut-breasted Shelduck, Japanese Snipe, Pacific Golden Plover, Sharp-tailed Sandpiper, Pectoral Sandpiper, Curlew Sandpiper, Red-necked Stint, Red (Lesser) Knot, Great Knot, Eastern Bar-tailed Godwit, Black-tailed Godwit, Hudsonian Godwit, Whimbrel, Little Whimbrel, Common Sandpiper, Common Greenshank, Marsh Sandpiper, Lesser Yellowlegs, Little Tern, Gull-billed Tern, White-winged Black Tern, Fairy Martin.

NB: Wrybill (VU) is an annual visitor, however in small numbers. Black Stilt (CR) and NZ Dotterel (NT) are vagrants to Wairarapa Moana.

Protected area	Designation	Relationship with IBA
Lake Wairarapa	Wetland Conservation Area	Protected area contained within site
Mathews & Boggy Pond	Wildlife Reserve	Protected area contained within site

The IBA includes a number of Marginal Strips (DOC) alongside the Ruamahanga, Waiohine and Waingawa Rivers.



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Beach/Spit	Major
Marine Coastal/Supratidal	Coastal Freshwater Lake (Lake Onoke)	Minor
Wetlands (inland)	Permanent Lakes (incl. Wairarapa Moana); Shrub Dominated Wetlands; Swamps	Major
Wetlands (inland)	Permanent Rivers and Streams; River gravel beds	Major
Introduced Vegetation	Lupin, pasture grasses	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting & collecting terrestrial animals - intentional use (waterfowl - seasonal)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Domestic and urban waste water - run-off	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

References:

- Dennison T.C. Robertson H.A. 1999. Status of the black-fronted dotterel (*Charadrius melanops*) in the Wairarapa. *Notornis* 46: 187-193.
- Greater Wellington Regional Council unpublished data
- Heather B.D. 1973. The black-fronted dotterel (*Charadrius melanops*) in the Wairarapa. *Notornis* 20: 251-261.
- McArthur, N., Playle, S., Govella, S. 2013. Diversity, abundance and distribution of birds on selected rivers in the Wellington Region. Greater Wellington Regional Council, Wellington.
- Pierce, R. 1999. Regional patterns of migration in the banded dotterel (*Charadrius bicinctus bicinctus*). *Notornis* 46: 101-122.
- Rebergen A. 2011. River bird numbers on Ruamahanga, Waingawa, Waiohine and Tauherenikau Rivers, Wairarapa in spring 2010. Forest and Bird, Wellington.
- Rebergen A. 2012. Birds on Wairarapa rivers and coast in 2011-12 breeding season. Forest and Bird, Wellington.
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.
- Robertson, H.A., Heather B.D. 1999. Effects of water levels on the seasonal use of Lake Wairarapa by waders. *Notornis* 46: 79-88.
- Sim, D. 1997. Effect of gravel extraction on the banded dotterel (*Charadrius bicinctus*). Unpublished report, Wellington Regional Council, Masterton.
- Stephenson, G. 1977. Wildlife and wildlife areas in the Wellington Region. Wellington Regional Planning Authority, Wellington.

NZ043	Motueka River	Nelson
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Location	New Zealand, Nelson
Central coordinates	41.100440°S, 173.029261°E (Motueka Spit carpark); 41.387241°S, 172.815542°E (Tapawera bridge)
IBA criteria	A1
Area	898 ha
Altitude	0 - 180m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull ¹	Breeding	1995-2010	38-70	A1	EN	Nationally Critical
Black-fronted Tern ¹	Breeding	2007-2010	6-8	A1	EN	Nationally Vulnerable

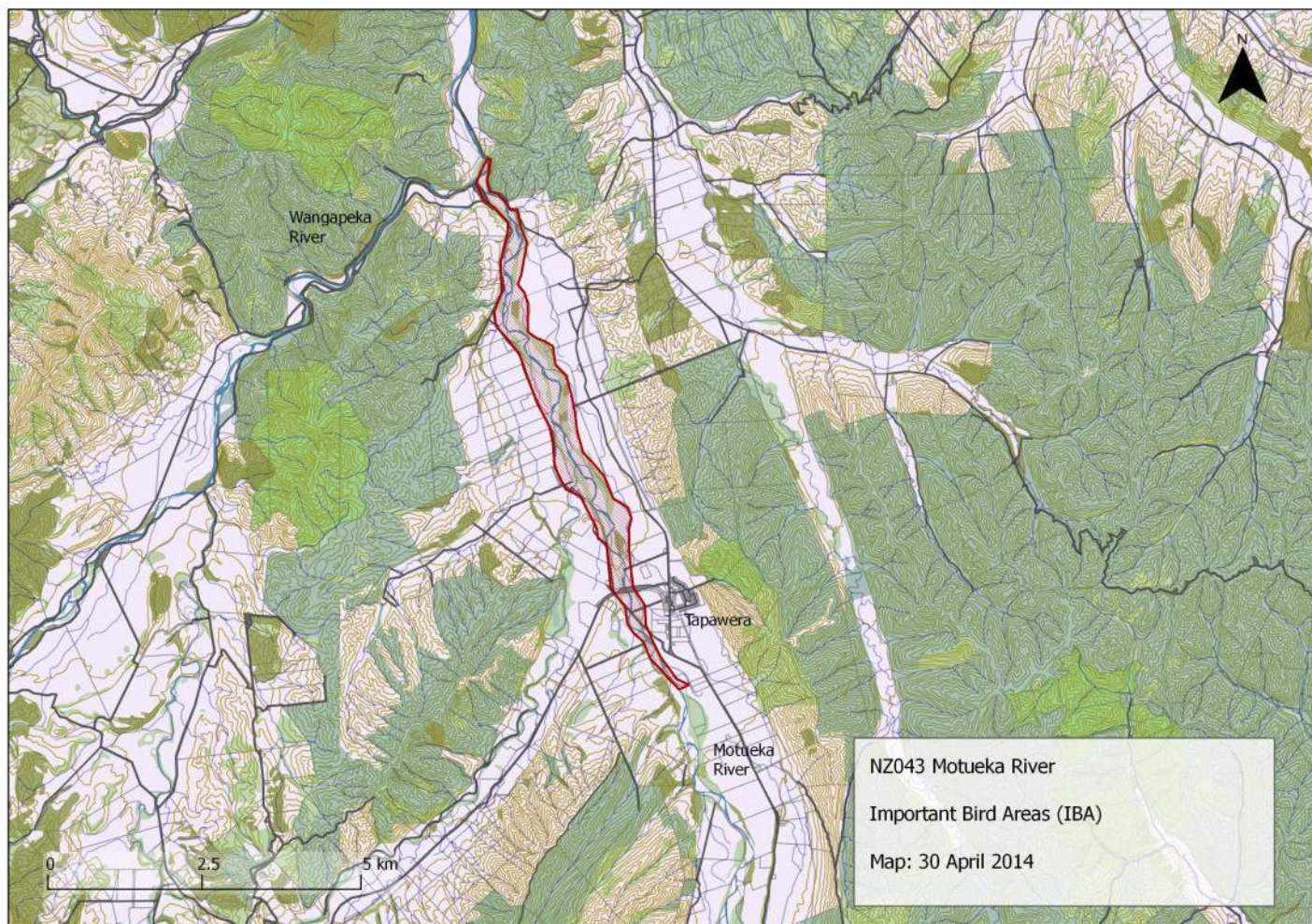
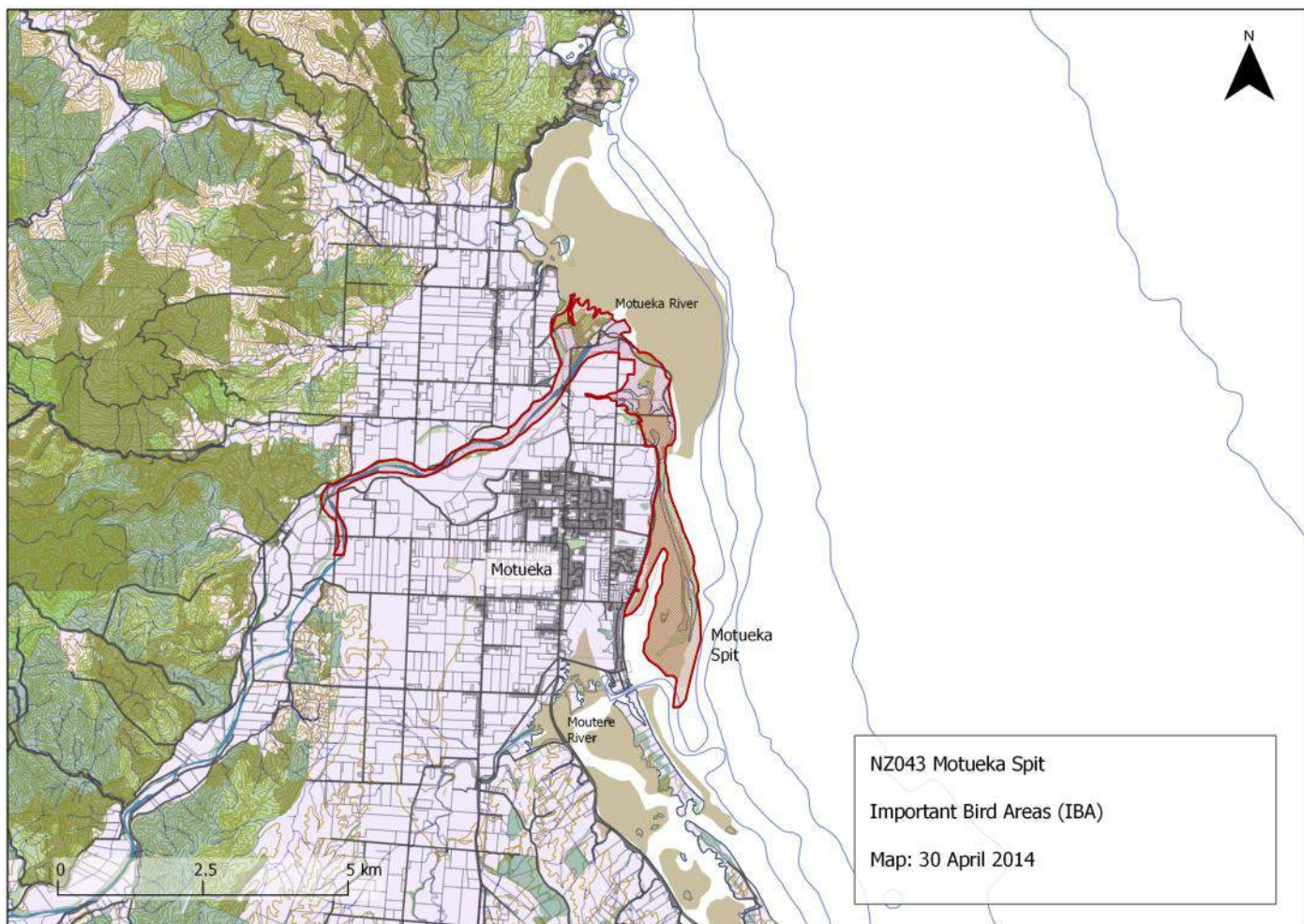
¹ Non-breeding populations at Motueka Spit; both are breeding at Upper Motueka site.

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding or resident: Pied Shag, Black Shag, Little Shag, Spotted Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Grey Teal, NZ Shoveler, Australasian Harrier, Pukeko, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, NZ Pigeon, Shining Cuckoo, Morepork, Little Owl, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling.

Other species recorded: Little Black Shag, White Heron, Royal Spoonbill, Wrybill (VU), South Island Pied Oystercatcher, Eastern Bar-tailed Godwit, Red (Lesser) Knot, Turnstone, Pacific Golden Plover, Curlew Sandpiper, Sharp-tailed Sandpiper, Red-necked Stint, Asiatic Whimbrel, Brown Skua (seen off spit), White-winged Black Tern

Data provided by Ornithological Society of NZ (OSNZ) National Wader Database (2013)

Protected area	Designation	Relationship with IBA
Motueka Sandspit	Scenic Reserve	Protected area contained within site
Raumanuka	Scenic Reserve	Protected area contained within site
Riverbed Motueka River	Conservation Area	Protected area contained within site
Motueka River	Marginal Strip	Protected area overlaps with site



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Beach, Spits; Saltmarsh, rush	Major
Marine Coastal /Supratidal	Sand Dunes, marram grass,	Major
Wetlands (inland)	Permanent River; River gravel beds	Major
Introduced Vegetation	Lupin, pasture grasses & rank weeds; willow margins	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by beach, spit and river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Erosion of spit; storm surges	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Gaze, P. 2010. Motueka River Survey - Kohatu to the Coast. Internal report DOC DM-675156. Department of Conservation, Nelson .
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albastriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ044	Upper Buller	Nelson
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Location	New Zealand, Nelson
Central coordinates	41.790769°S, 172.321587°E (Buller Matakītaki confluence)
IBA criteria	A1
Area	8367 ha
Altitude	150 - 500m
Year of Assessment	2013

Populations of IBA trigger species:

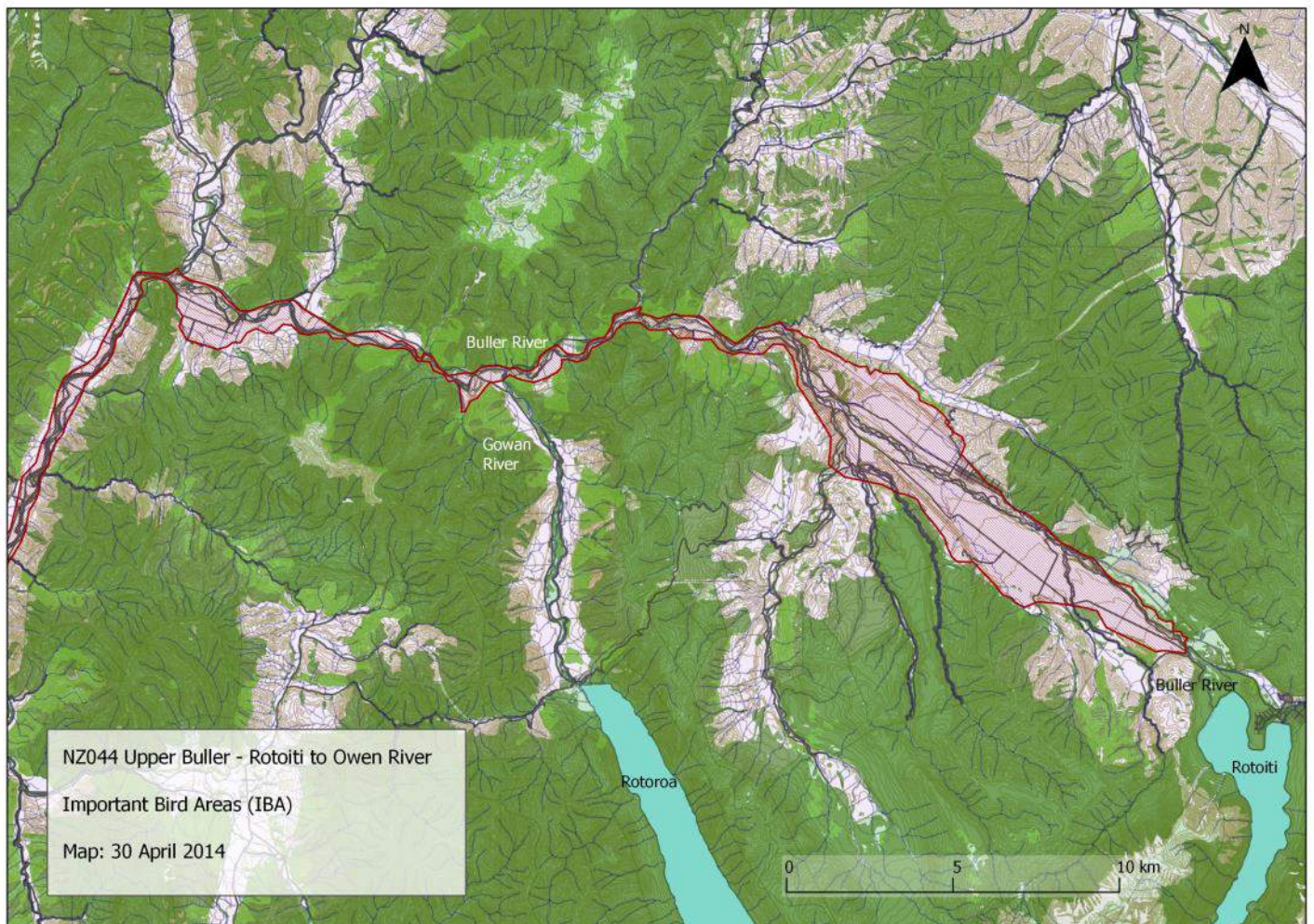
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1995-2014	77-250	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1979-2008	12-37 (individuals)	A1, A4i	EN	Nationally Vulnerable

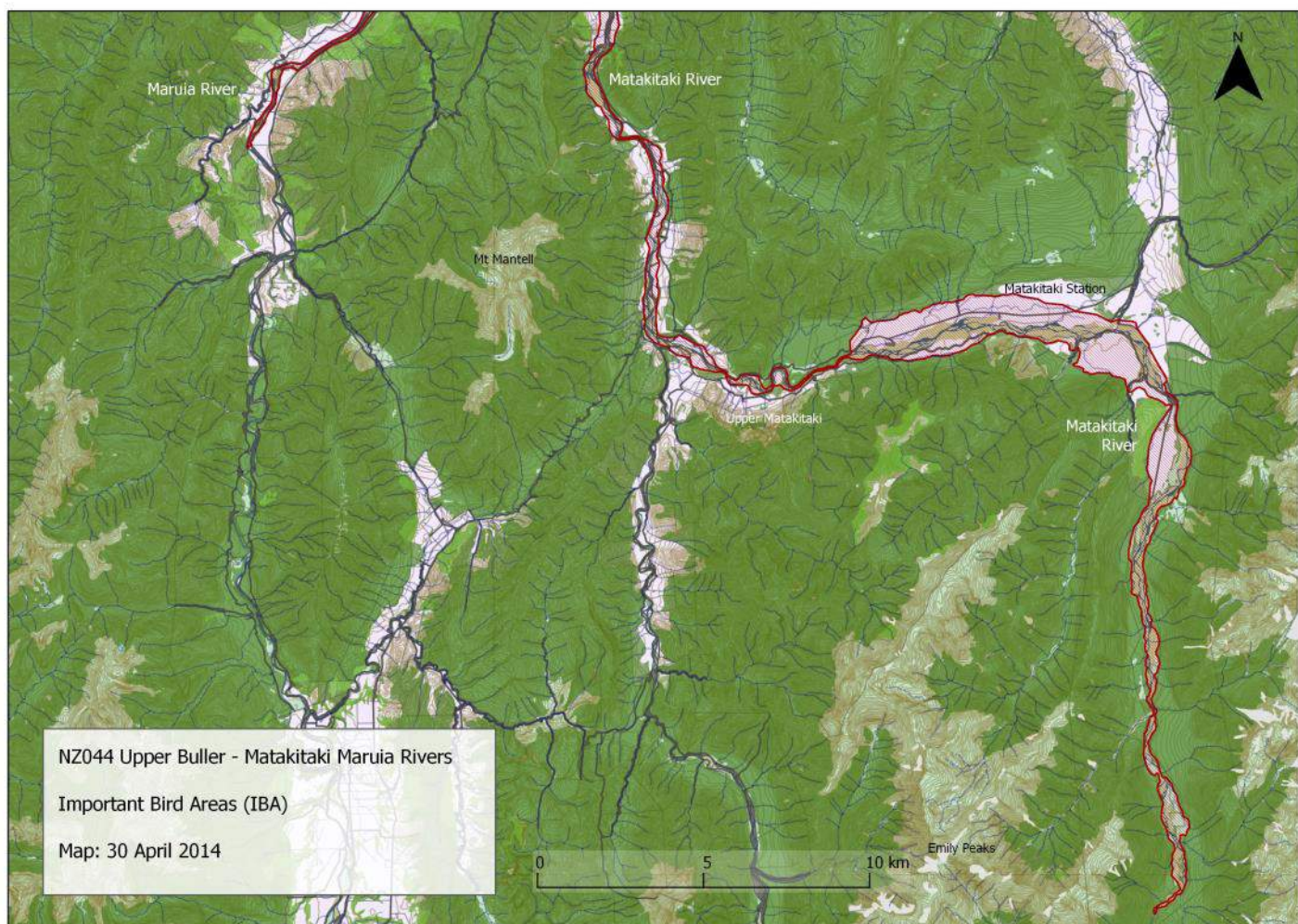
Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Grey Duck/Mallard, Australasian Harrier, NZ Falcon, Pukeko, South Island Pied Oystercatcher, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Pigeon, Shining Cuckoo, Morepork, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, South Island Tomtit, Silvereye, Bellbird, Tui. Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling.

Kaka (EN), Red-crowned Parakeet (VU), Yellow-crowned Parakeet (NT), Rifleman, Brown Creeper and NZ Robin have been recorded in adjacent forest areas (Atlas of Bird Distribution in NZ 2007).

Protected area	Designation	Relationship with IBA
Howard River Valley	Scientific Reserve	Protected area contained within site
Nuggety Road	Conservation Area	Protected area contained within site
Buller River - Thurlow	Conservation Area	Protected area contained within site
Riverbed Buller River	Conservation Area	Protected area contained within site
Matakītaki River	Conservation Area	Protected area contained within site
Maruia River Paenga	Conservation Area	Protected area contained within site

The IBA includes small river sections of the following: Kahurangi National Park, Big Bush Conservation Area, Glenhope Scenic Reserve, Owen River Scenic Reserve, Maruia Falls Scenic Reserve, Matakītaki West Conservation Area, Shenandoah Scenic Reserve, Matakītaki South Conservation Area, Matakītaki River Headwaters conservation Area. There are also some Marginal Strips and one Local Purpose Reserve (Ferry).





IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; River gravel beds	Major
Introduced Vegetation	Pastureland; Lupin, pasture grasses & rank weeds; Willow margins, shelter belts	Major
Grasslands	Tussock on river flats (upper valleys)	Minor
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albostratus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.
- Steffens, K. 2007. A comparison of Braided River Bird Surveys from Matakita and Buller Rivers 1995-2007. Internal report DOCDM-224892. Department of Conservation, Nelson Lakes.
- Steffens, K. 2012. Helicopter surveys of black-fronted terns in Marlborough, New Zealand. Internal report DOCDM-892932. Department of Conservation, Nelson Lakes.

NZ045	Wairau River	Marlborough
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Location	New Zealand, Marlborough
Central coordinates	41.717518°S, 173.095264°E (Wash Bridge, SH63)
IBA criteria	A1, (A4ii)
Area	131 sq km
Altitude	5 - 1200m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1996-2014	178-466	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1980-2009	241-533	A1, A4i	EN	Nationally Vulnerable

Kea (VU) will venture into IBA from neighbouring areas where it is resident.

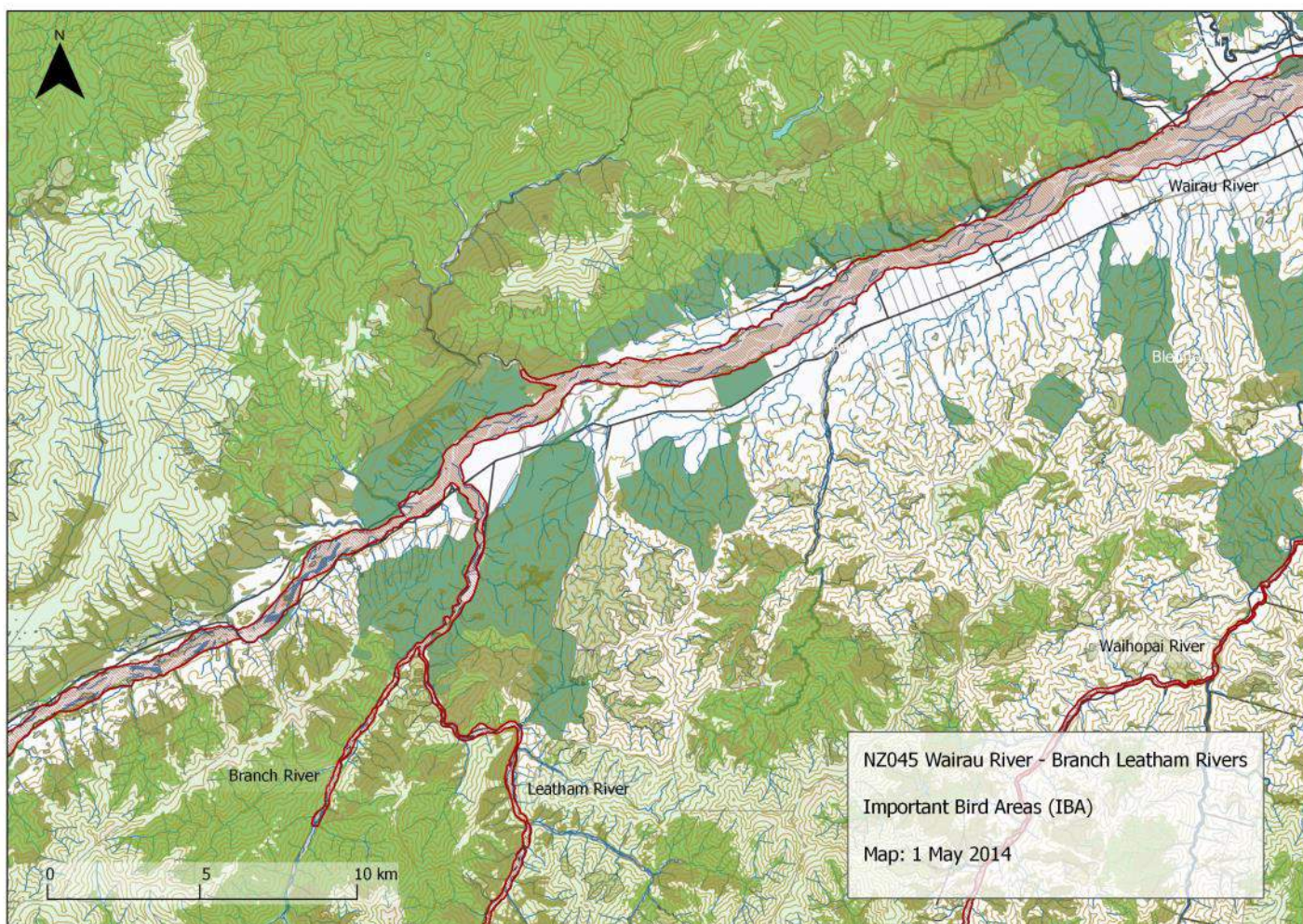
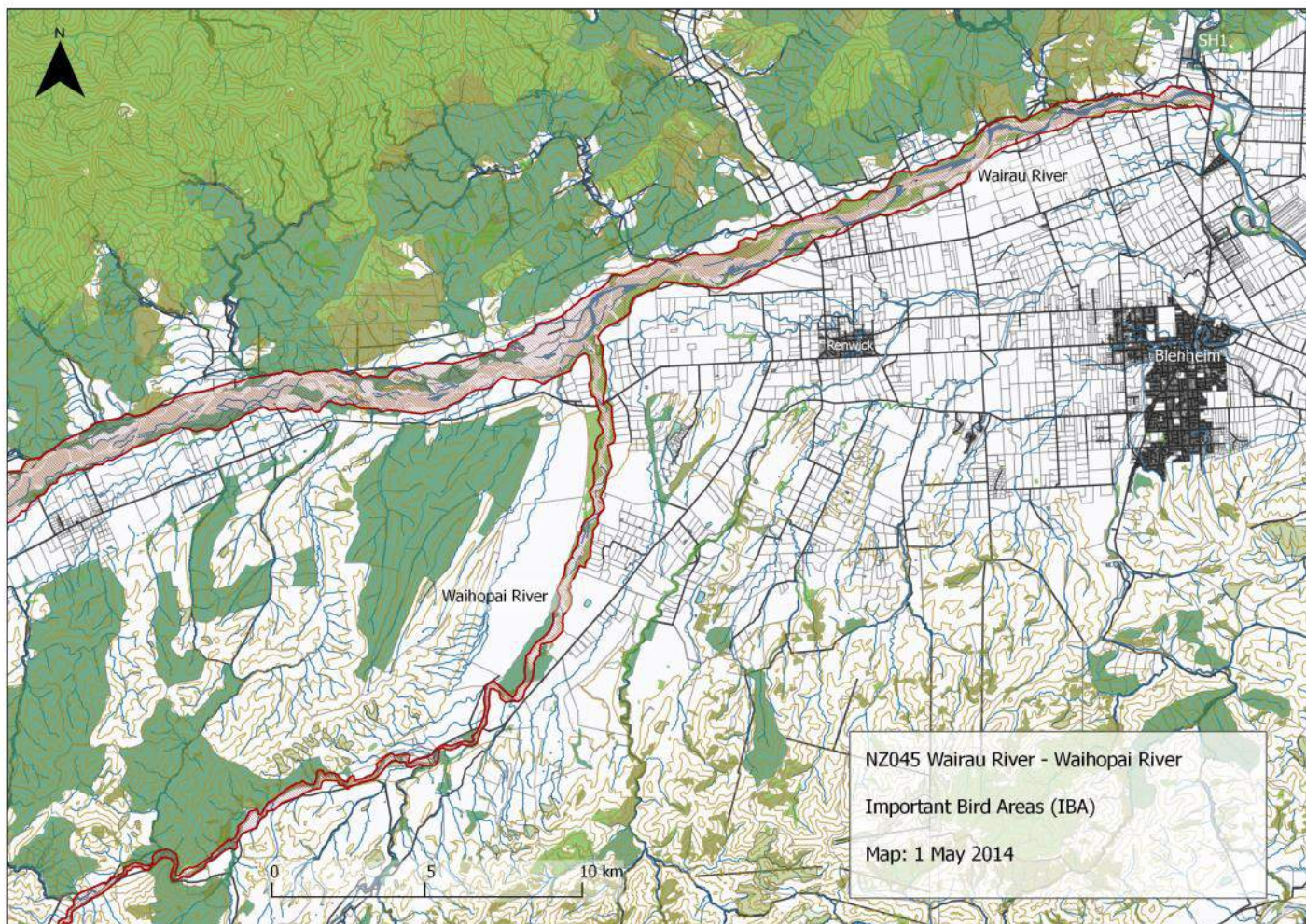
Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard/Grey Duck, Australasian Harrier, Pukeko, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Shining Cuckoo, NZ Kingfisher, Rifleman, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

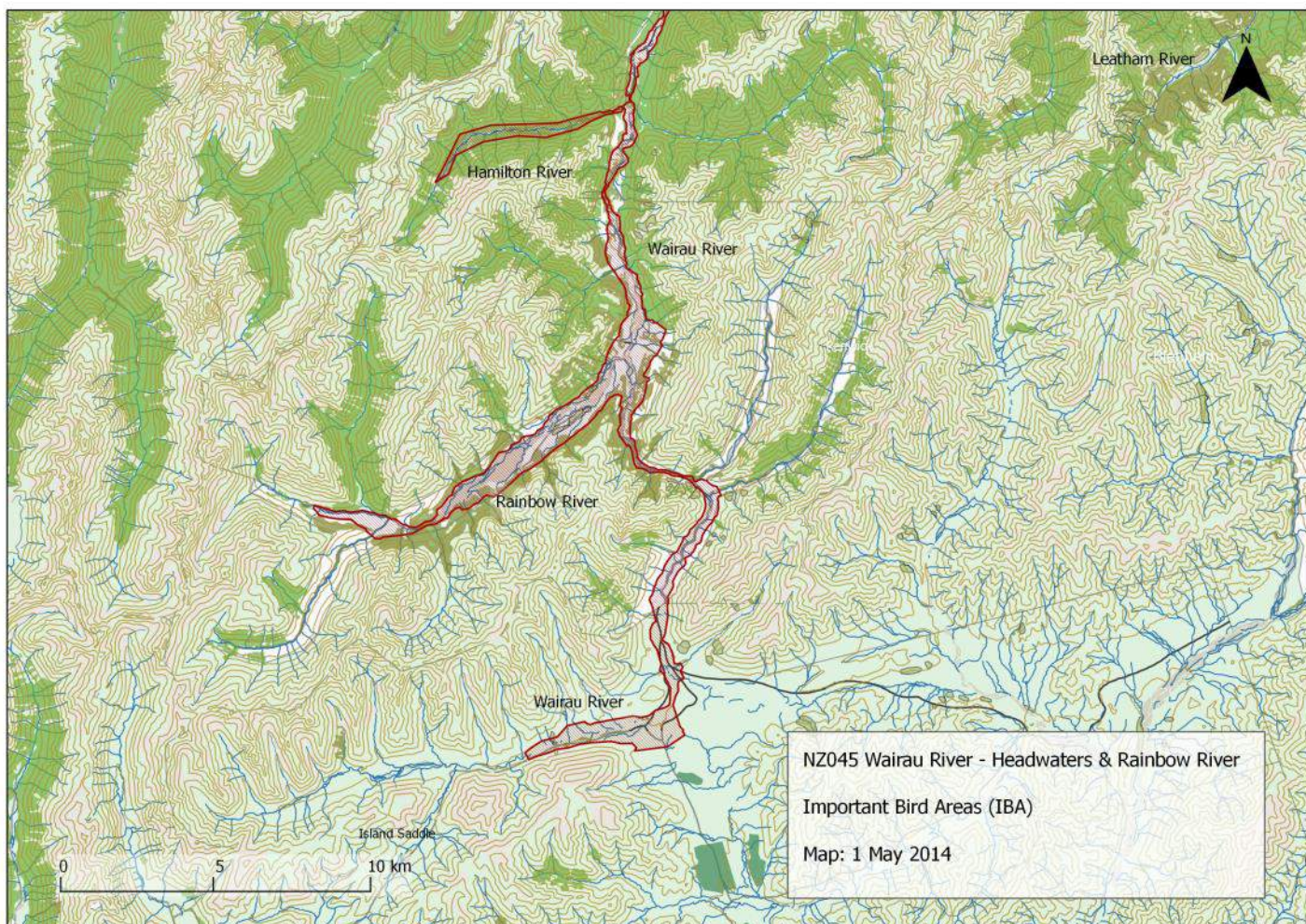
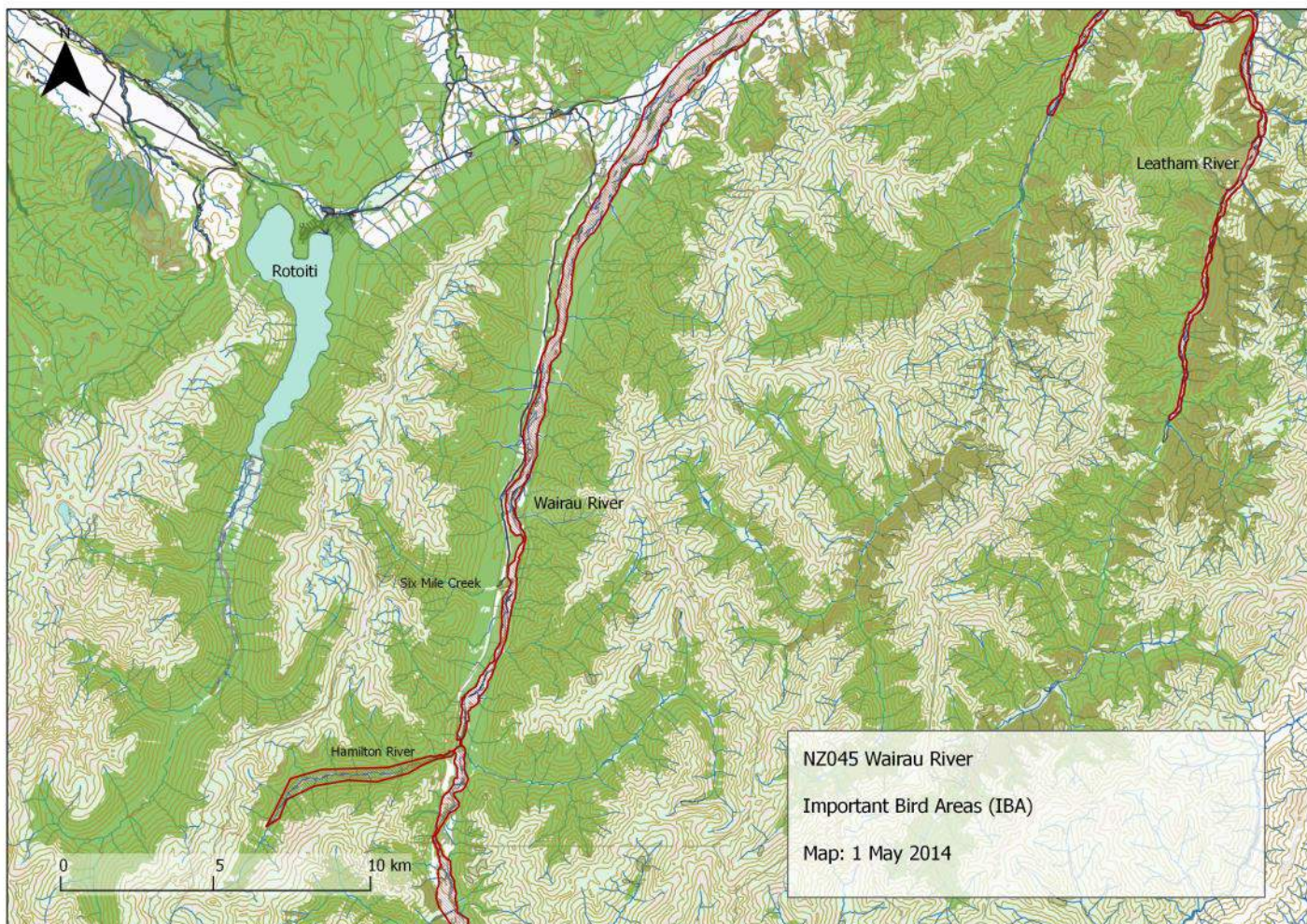
Other species recorded: NZ Falcon, Caspian Tern, NZ Pigeon, Brown Creeper, Tui.

Protected area	Designation	Relationship with IBA
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The IBA includes small river sections of the following: Molesworth Recreation Reserve, Rainbow Run Conservation Reserve, Rainbow Conservation Area, Latham Conservation Area and Mount Richmond Forest Park.

Also Marginal Strip (including Riverbed and Local Purpose Reserves) in the Wairau Valley and its tributaries (Latham, Branch and Waihopai Rivers).





IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Bogs, small swamps	Major
Introduced Vegetation	Lupin, broom, gorse, pasture grasses & rank weeds; Willow margins	Major
Grasslands	Tussock on river flats (upper valleys)	Minor
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech forest on river flats (margins)	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Bell, M. 2005. Breeding success of black-fronted tern on the Wairau River. Unpublished report. Department of Conservation, Renwick.
- O'Donnell, C.F.J., Sedgeley, J.A., Westbrooke, I. 2006. Habitat use by black-fronted terns (*Sterna albostrigata*) on the Wairau River, New Zealand; preliminary results
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albostrigatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.
- Steffens, K. 2012. Helicopter surveys of black-fronted terns in Marlborough, New Zealand. Internal report DOCDM-892932. Department of Conservation, Nelson Lakes.

NZ046	Wairau Lagoons	Marlborough
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Location	New Zealand, Marlborough
Central coordinates	41.505492°S, 174.058113°E (Wairau river-mouth)
IBA criteria	A1
Area	3588 ha
Altitude	0 - 5m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Non-breeding		No counts ¹	A1	EN	Nationally Critical
Black-fronted Tern	Non-breeding	2008-2014	15-650 (individuals)	A1, A4i	EN	Nationally Vulnerable

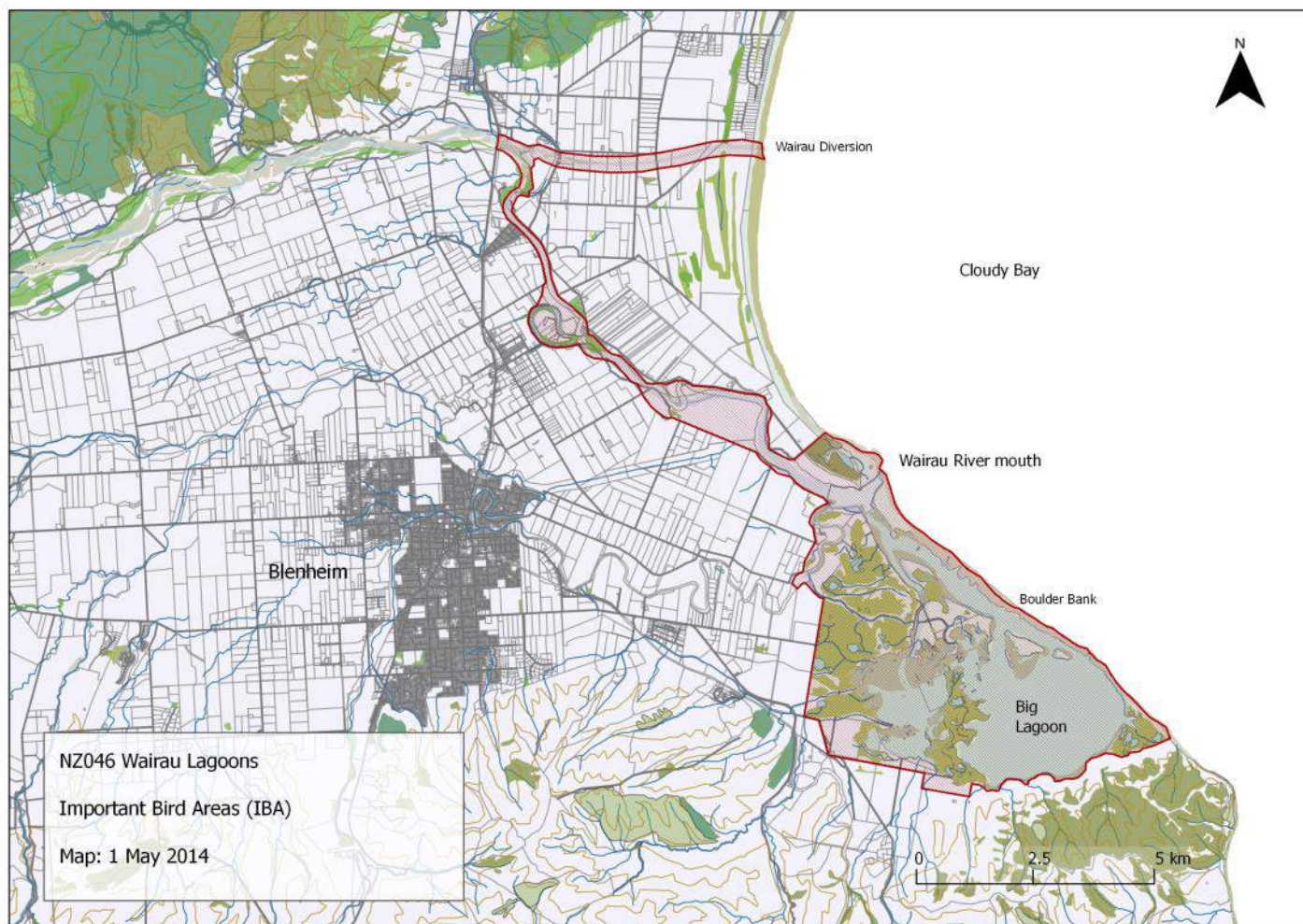
¹Wairau Lagoons and the adjacent areas (including Wairau Bar and areas offshore) are very important congregation and feeding areas for this species post-breeding.

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Grey Teal, New Zealand Shoveler, NZ Scaup, Australasian Harrier, Pukeko, Coot, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, NZ Kingfisher, Welcome Swallow, South Island Fernbird, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Tui, Skylark, Blackbird, Song Thrush, Yellowhammer, Cirl Bunting, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Other species recorded: Spotted Shag, Pied Shag, Little Black Shag, White Heron, Cattle Egret, Royal Spoonbill, Glossy Ibis, South Island Pied Oystercatcher, Pacific Golden Plover, Eastern Bar-tailed Godwit, Far-eastern Curlew, White-winged Black Tern.

Protected area	Designation	Relationship with IBA
Wairau Lagoons	Wetland Management Reserve	Protected area contained within site
Wairau Diversion Mouth	Conservation Area	Protected area overlaps with site

The IBA also includes some land designated Marginal Strip , and Riverbed and Public Purpose Reserves.



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle beach and boulder bank	Major
Marine Coastal /Supratidal	Coastal Brackish Lakes	Major
Wetlands (inland)	Swamps (Big Lagoon area)	Major
Wetlands (inland)	Permanent Rivers; River gravel beds; Bogs, small swamps	Major
Introduced Vegetation	Lupin, gorse, pasture grasses & rank weeds; Willow margins	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake, river and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting & collecting terrestrial animals - intentional use (waterfowl - seasonal)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration

References:

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ047	Awatere River	Marlborough
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Location	New Zealand, Marlborough
Central coordinates	41.658678°S, 174.076996°E (Seddon Bridge SH1)
IBA criteria	A1, (A4ii)
Area	3267 ha
Altitude	0 - 900m
Year of Assessment	2013

Populations of IBA trigger species:

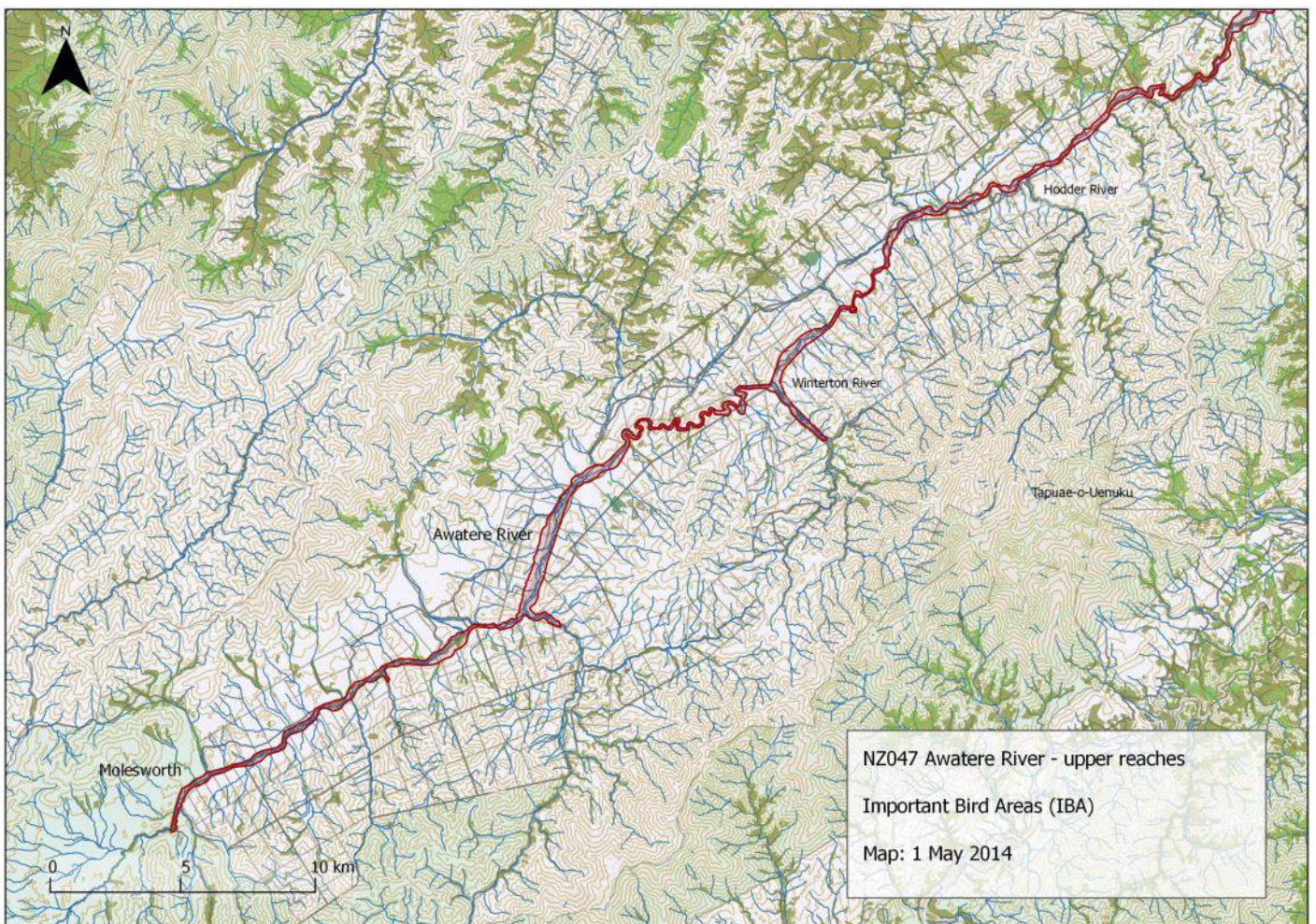
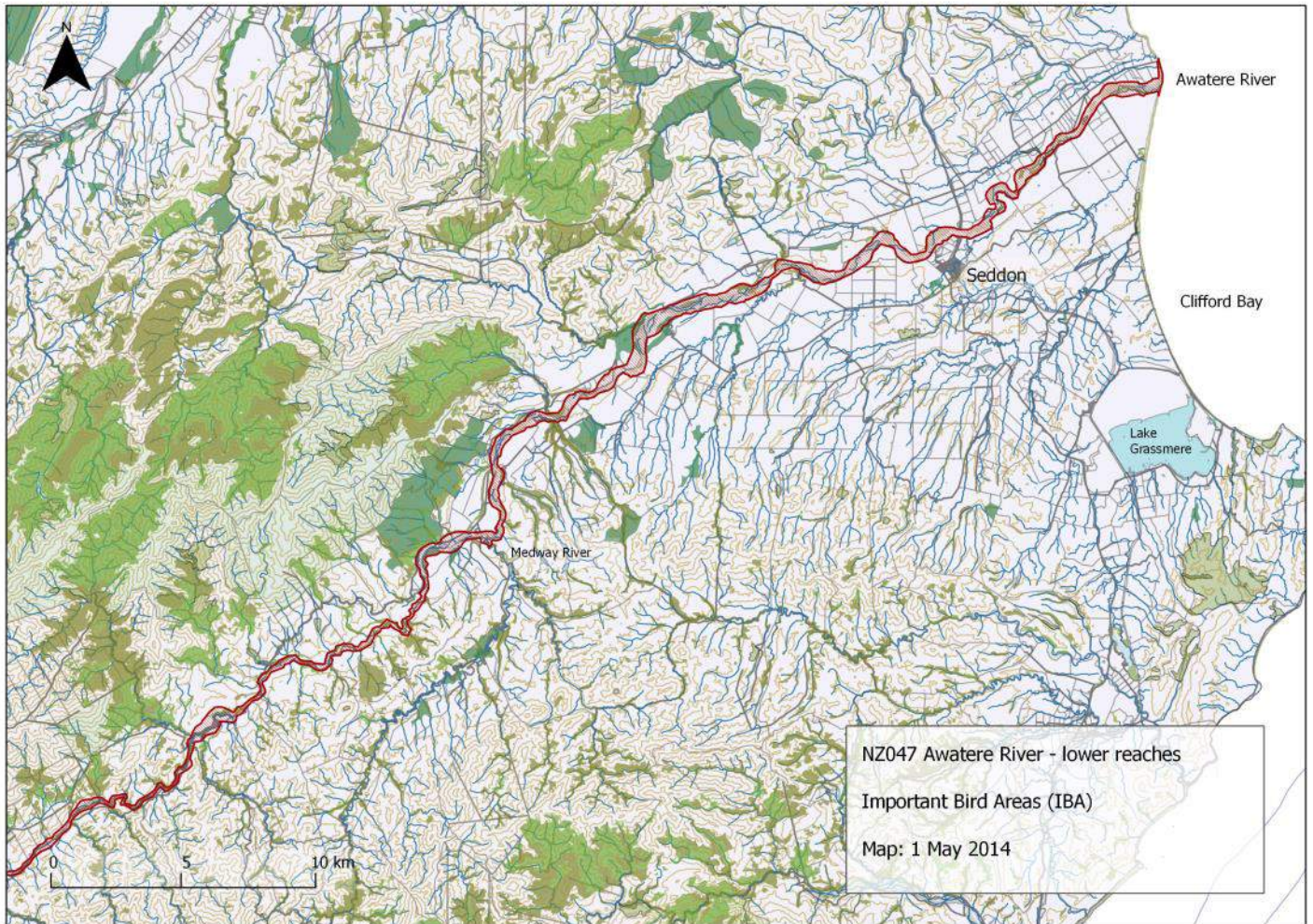
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1975-1997	39-100	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1975-1997	38-54	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Grey Teal, NZ Shoveler, Australasian Harrier, NZ Falcon, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Californian Quail, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereeye, Bellbird, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Protected area	Designation	Relationship with IBA
Awatere River	Marginal Strip	Protected area contained within site
Riverbed Awatere River	Conservation Area	Protected area contained within site

The IBA includes a small area towards the headwaters which overlaps with Molesworth Recreation Reserve.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; River gravel beds; small Swamps	Major
Introduced Vegetation	Lupin, broom, gorse, pasture grasses & rank weeds	Major
Grasslands	Tussock on river flats (upper valleys)	Minor
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.
- Steffens, K. 2012. Helicopter surveys of black-fronted terns in Marlborough, New Zealand. Internal report DOCDM-892932. Department of Conservation, Nelson Lakes.

NZ048	Lake Grassmere	Marlborough
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Location	New Zealand, Marlborough
Central coordinates	41.722002°S, 174.160767°E
IBA criteria	A1, (A4ii)
Area	1491 ha
Altitude	0 - 5m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Non-breeding	2003-2015	35-3,600 (individuals)	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Non-breeding	2003-2008	280-1,100 (individuals)	A1, A4i	EN	Nationally Vulnerable
Wrybill	Non-breeding	2003-2011	7-16 (individuals)	A1	VU	Nationally Vulnerable

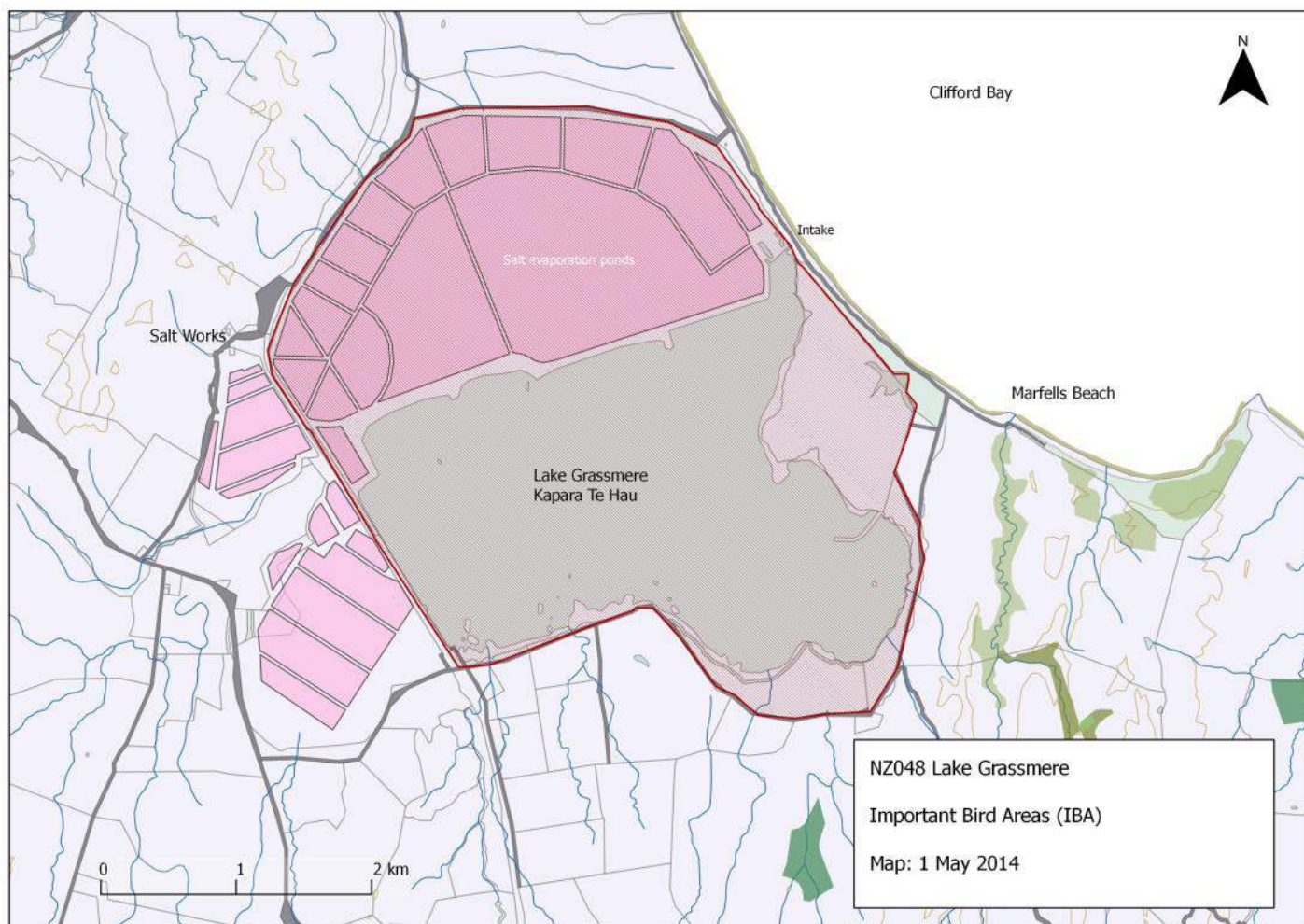
Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Black Swan, Canada Goose, Paradise Shelduck, Grey Teal, Mallard, NZ Shoveler, NZ Scaup, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Caspian Tern, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Silvereye, Skylark, Blackbird, Song Thrush, Yellowhammer, Cirl Bunting, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Other species recorded: White-faced Heron, Australasian Harrier, South Island Pied Oystercatcher, Pacific Golden Plover, Turnstone, Red (Lesser) Knot, Sharp-tailed Sandpiper, Curlew Sandpiper, Pectoral Sandpiper, Marsh Sandpiper, Red-necked Stint, Eastern Bar-tailed Godwit, Sanderling, Red-necked Phalarope, Red-billed Gull, White-fronted Tern, .

Protected area	Designation	Relationship with IBA
Grassmere Beach	Conservation Area	Protected area overlaps with site

The IBA includes one area (1 sq km) between the lake and the beach that is subject to Part IVA Section 24 Conservation Act 1987. Access salt pans is restricted by owners, Dominion Salt , who also own the lake.

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Extensive salt marsh	Major
Marine Coastal/Supratidal	Coastal Lake; Sand-dunes with marram grass	Major
Introduced vegetation	Pasturelands	Major
Artificial - aquatic	Salt Exploitation Sites	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake, river and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting & collecting terrestrial animals - intentional use (waterfowl - seasonal)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration

References:

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ049	Clarence River mouth	Kaikoura
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Location	New Zealand, Marlborough
Central coordinates	42.160031°S, 173.909798°E
IBA criteria	A1
Area	1386 ha
Altitude	0 - 125m
Year of Assessment	2013

Populations of IBA trigger species:

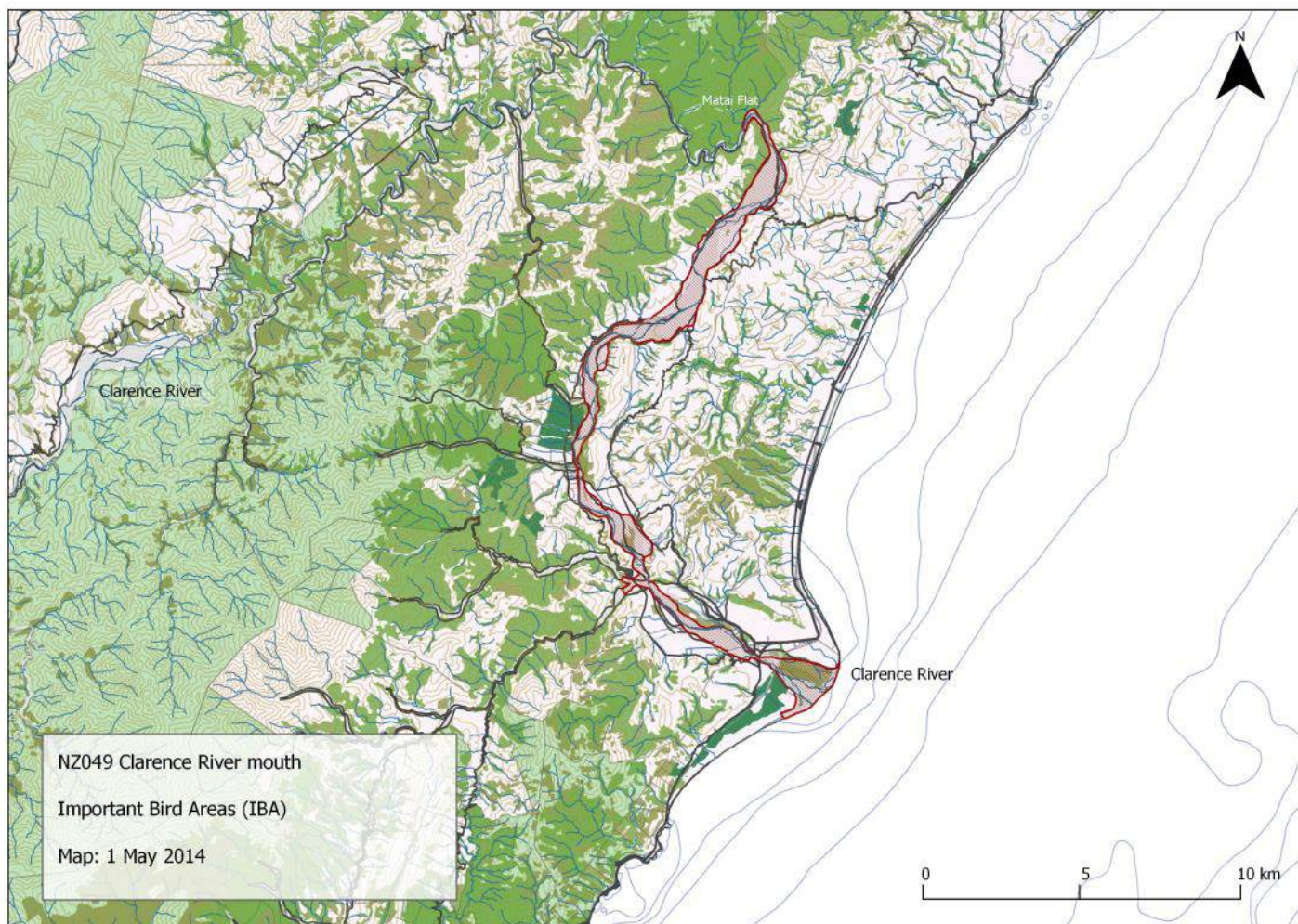
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	2010-2014	210-260	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1992-2011	20-42	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, Californian Quail, NZ Kingfisher, Welcome Swallow, NZ Pipit, Silvereye, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling. Other species recorded: Pied Shag, NZ Falcon, South Island Pied Oystercatcher.

Protected area	Designation	Relationship with IBA
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The IBA includes an area of Stewardship Land (DOC) designated 'Grazing Licence - Murray' for the Clarence River near the river mouth.

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Outwash Delta (Rivermouth)	Major
Wetlands (inland)	Permanent Rivers; River Gravel Beds; Small Swamps	Major
Introduced Vegetation	Lupin, broom, gorse, pasture grasses & rank weeds	Major
Grasslands	Tussock on river flats (upper valleys)	Minor
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albostratus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Steffens, K. 2012. Helicopter surveys of black-fronted terns in Marlborough, New Zealand. Internal report DOCDM-892932. Department of Conservation, Nelson Lakes.

NZ050	Clarence Acheron Saxton Rivers	Marlborough
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Location	New Zealand, Marlborough
Central coordinates	42.393291°S, 172.968235°E (Clarence Acheron confluence)
IBA criteria	A1
Area	7683 ha
Altitude	400 - 1200m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding		No counts	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1992-2011	111-269	A1, A4i	EN	Nationally Vulnerable

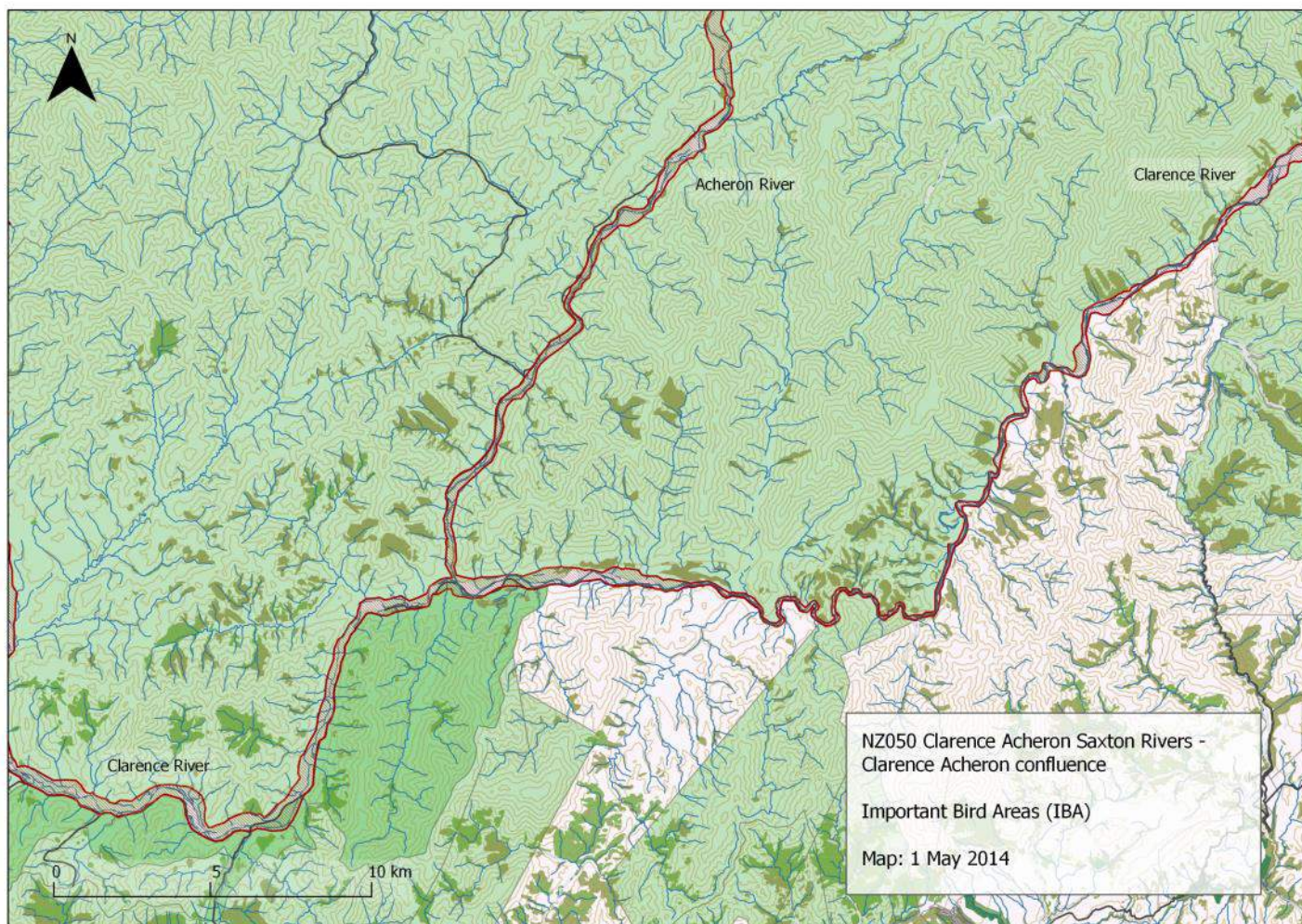
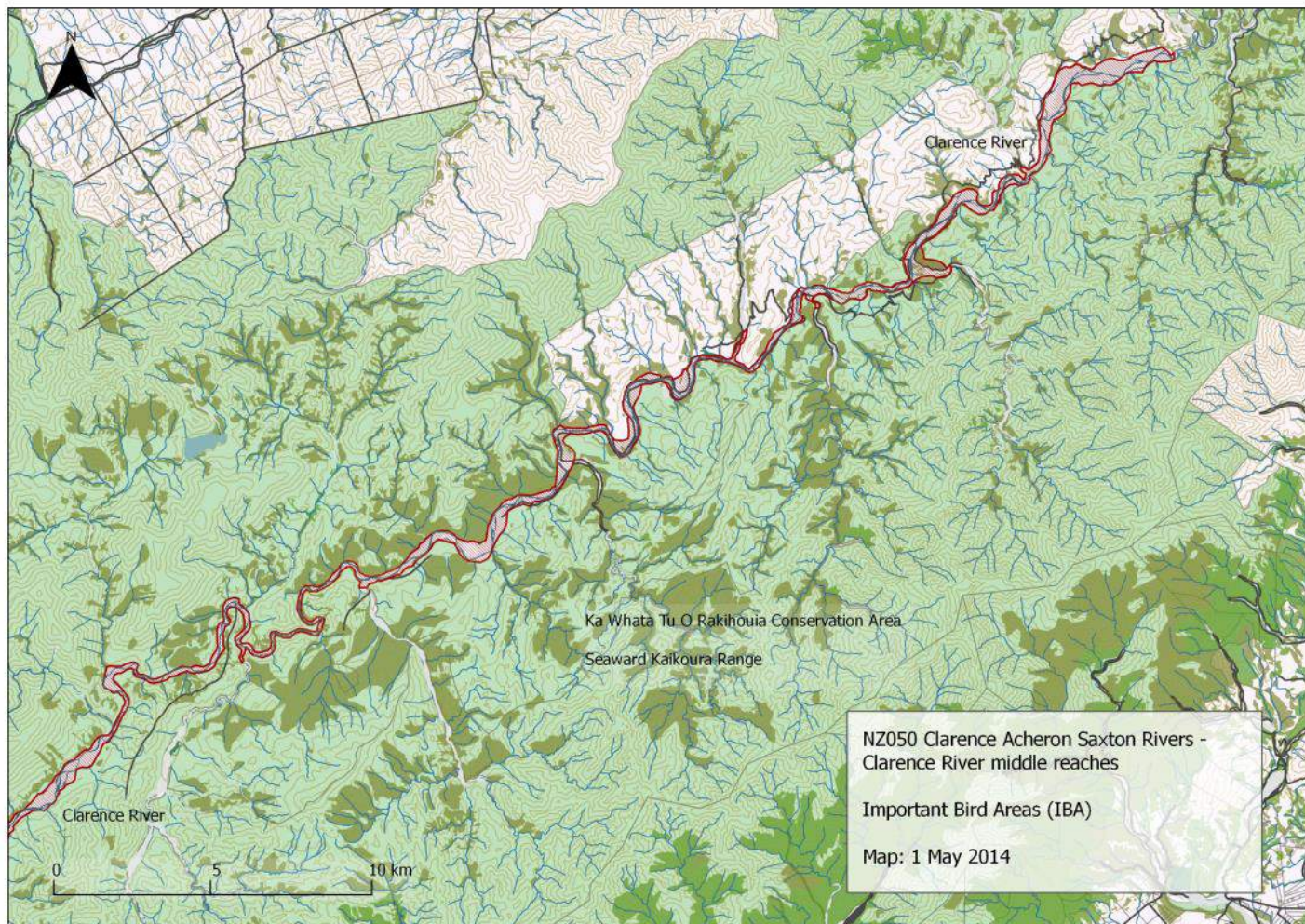
Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Canada Goose, Mallard, Grey Duck, Australasian Harrier, NZ Falcon, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, Silvereye, Sky-lark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

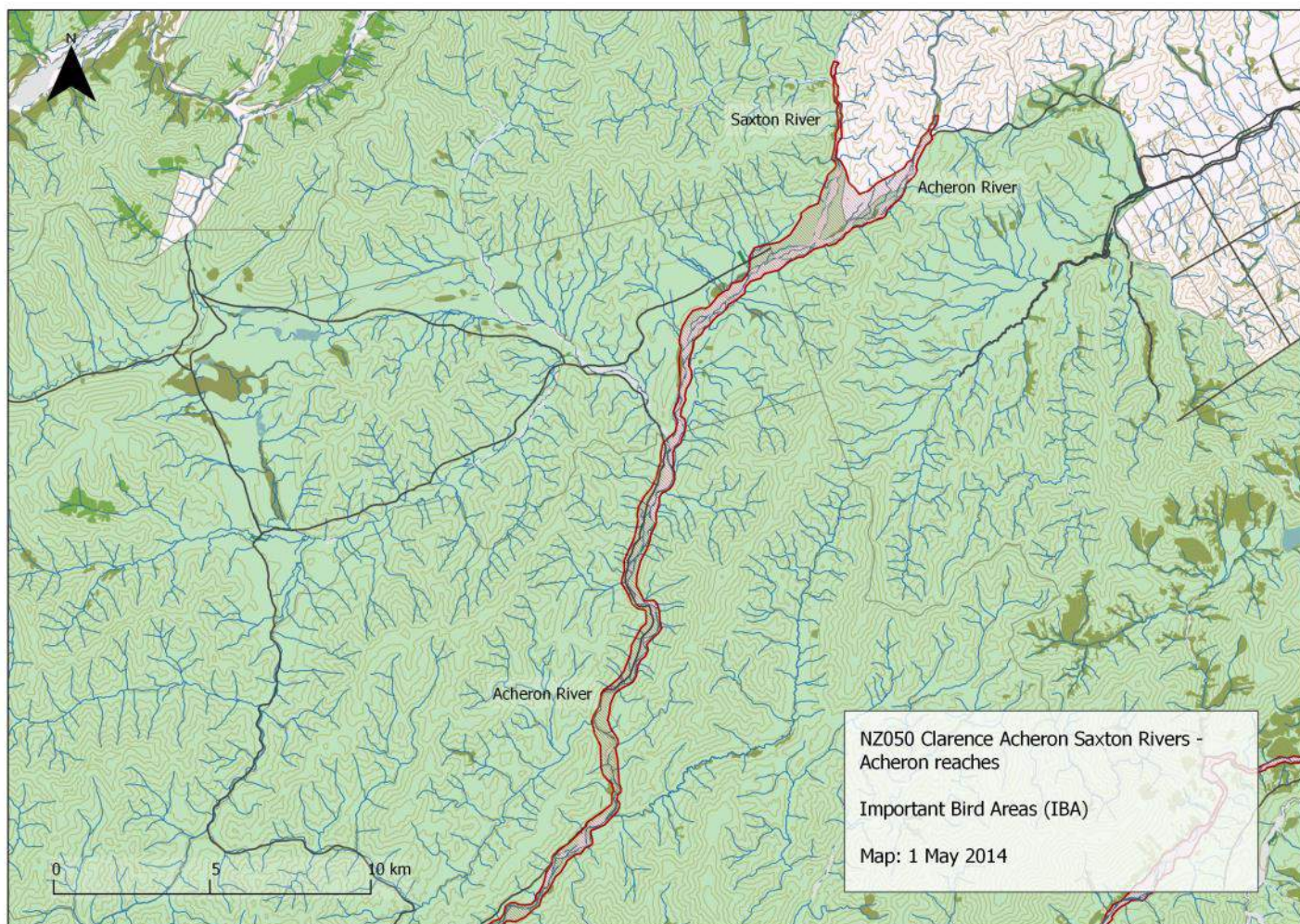
Protected area	Designation	Relationship with IBA
Ka Whata Tu o Rakihouia ¹	Conservation Park	Protected area overlaps with site
Molesworth ¹	Recreation Reserve	Protected area overlaps with site

¹ These conservation areas, together with The Hassock Conservation Area and St James Conservation Area, border large sections of the Clarence, Acheron and Saxton Rivers.

There are also extensive Marginal Strip on each of the rivers and tributaries.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; River Gravel Beds; Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, shelter and ornamental tress (homesteads)	Major
Grasslands	Tussock on river flats (upper valleys)	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major





Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Steffens, K. 2012. Helicopter surveys of black-fronted terns in Marlborough, New Zealand. Internal report DOCDM-892932. Department of Conservation, Nelson Lakes.

NZ052	Kahutara River	Kaikoura
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Location	New Zealand, Kaikoura
Central coordinates	42.434036°S, 173.588405°E (SH1 bridge)
IBA criteria	A1
Area	702 ha
Altitude	0 - 320m
Year of Assessment	2013

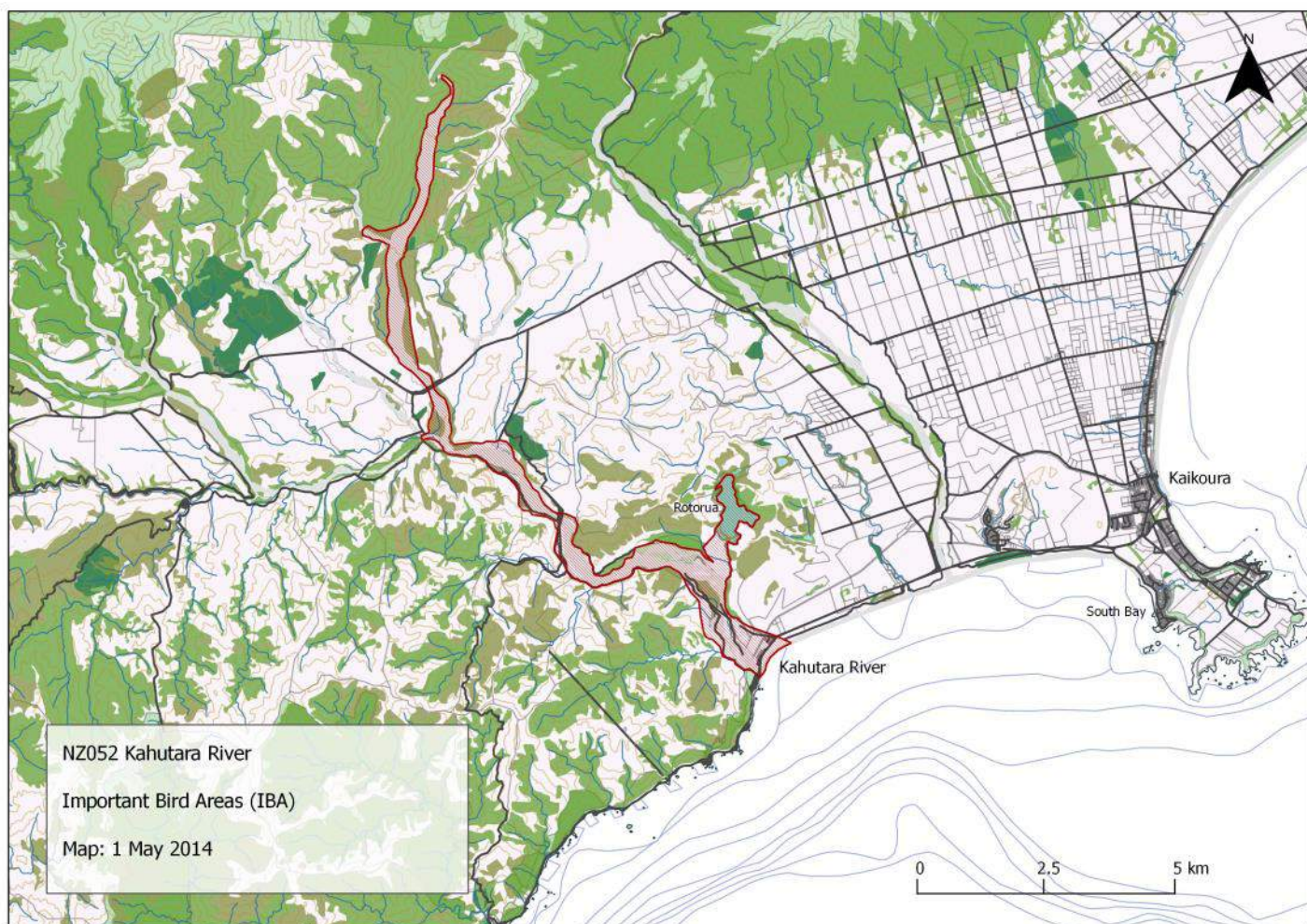
Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	2000-2008	55-67	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	2000-2009	5-6	A1	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Pied Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Grey Duck, Mallard, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, NZ Pigeon, Shining Cuckoo, Morepork, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird. Californian Quail, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Protected area	Designation	Relationship with IBA
Kahutara River	Conservation Area	Protected area contained within site
Lake Rotorua	Wildlife Reserve	Protected area contained within site
Kahutara River	Marginal Strip	Protected area overlaps with site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (small estuary and spit)	Major
Wetlands (inland)	Permanent Rivers; River Gravel Beds; Lake (Rotorua) Small	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper valleys)	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ054	Waiau River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	42.584117°S, 172.782755°E (Waiau Ferry Bridge SH7A)
IBA criteria	A1, A4ii
Area	8774 ha
Altitude	0 - 620m
Year of Assessment	2013

Populations of IBA trigger species:

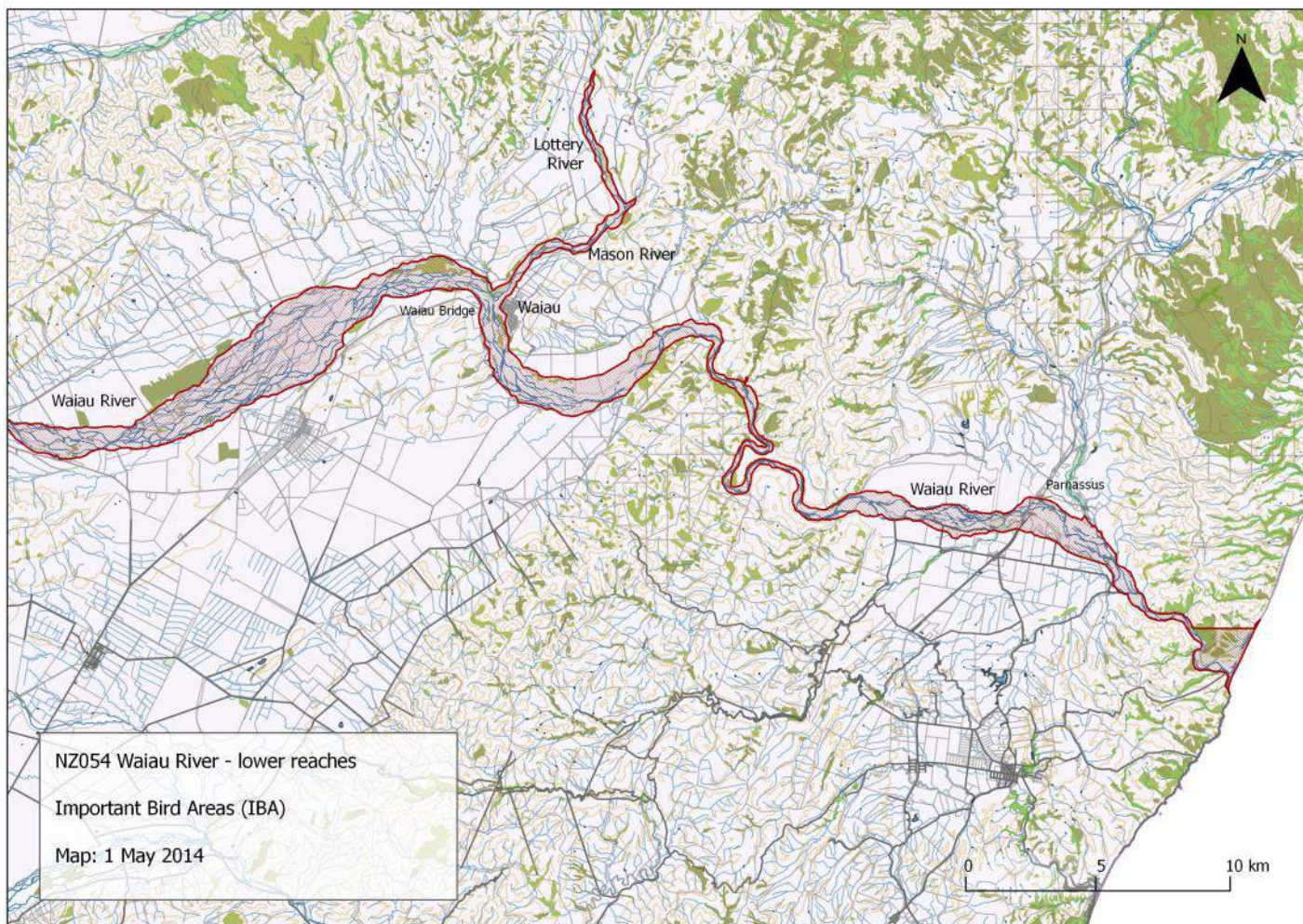
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1995-2010	961-1,624	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1975-2010	202-470	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding	1996-1997	14-17 (nests)	A1	VU	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Teal, Californian Quail, Australasian Harrier, Pukeko, South Island Pied Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, NZ Pigeon, Rock Pigeon, White-fronted Tern, NZ Kingfisher, Welcome Swallow, Shining Cuckoo, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Kaka (EN), Yellow-crowned Parakeet (NT), NZ Falcon (NT), Rifleman and other forest birds have been recorded in adjacent forest areas in the Hope and Boyle Valleys (N. Allen pers. comm.).

Protected area	Designation	Relationship with IBA
Waiau Rivermouth	Scenic Reserve	Protected area contained within site
Waiau River	Marginal Strip	Protected area contained within site
Waiareka Downs	Conservation Area	Protected area contained within site
Mason Waiau Riverbeds	Conservation Area	Protected area contained within site
Lottery Riverbed Mason River Confluence	Conservation Area	Protected area contained within site
Mason River	Marginal Strip	Protected area contained within site
Cabbage Tree Island	Conservation Area	Protected area contained within site

The IBA borders extensive areas of the Lake Sumner Forest Park, and also The Poplars and Woodbank Conservation Areas.



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit)	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on some river flats (upper reaches) and along margins of IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

DOC River Survey Database 2013.

O'Donnell C.F.J. 2000. The significance of river and open water habitats for indigenous birds in Canterbury, New Zealand. Environment Canterbury Unpublished Report U00/37. Christchurch, Environment Canterbury.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Palmer, P. 2013. Compilation of "Summary of intrinsic values" chapters from Canterbury Conservancy's intrinsic values catchment reports: Hurunui-Waiarau Zone. Department of Conservation, Christchurch.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Sagar, P.M. (1994). Aquatic birds of the Waiarau River November 1993 and March 1994. NIWA Miscellaneous Report 168 (unpublished). Christchurch, National Institute of Water and Atmospheric Research.

NZ055	Hurunui River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	42.872442°S, 172.768593°E (Hurunui bridge SH7)
IBA criteria	A1, A4ii
Area	9123 ha
Altitude	0 - 715m
Year of Assessment	2013

Populations of IBA trigger species:

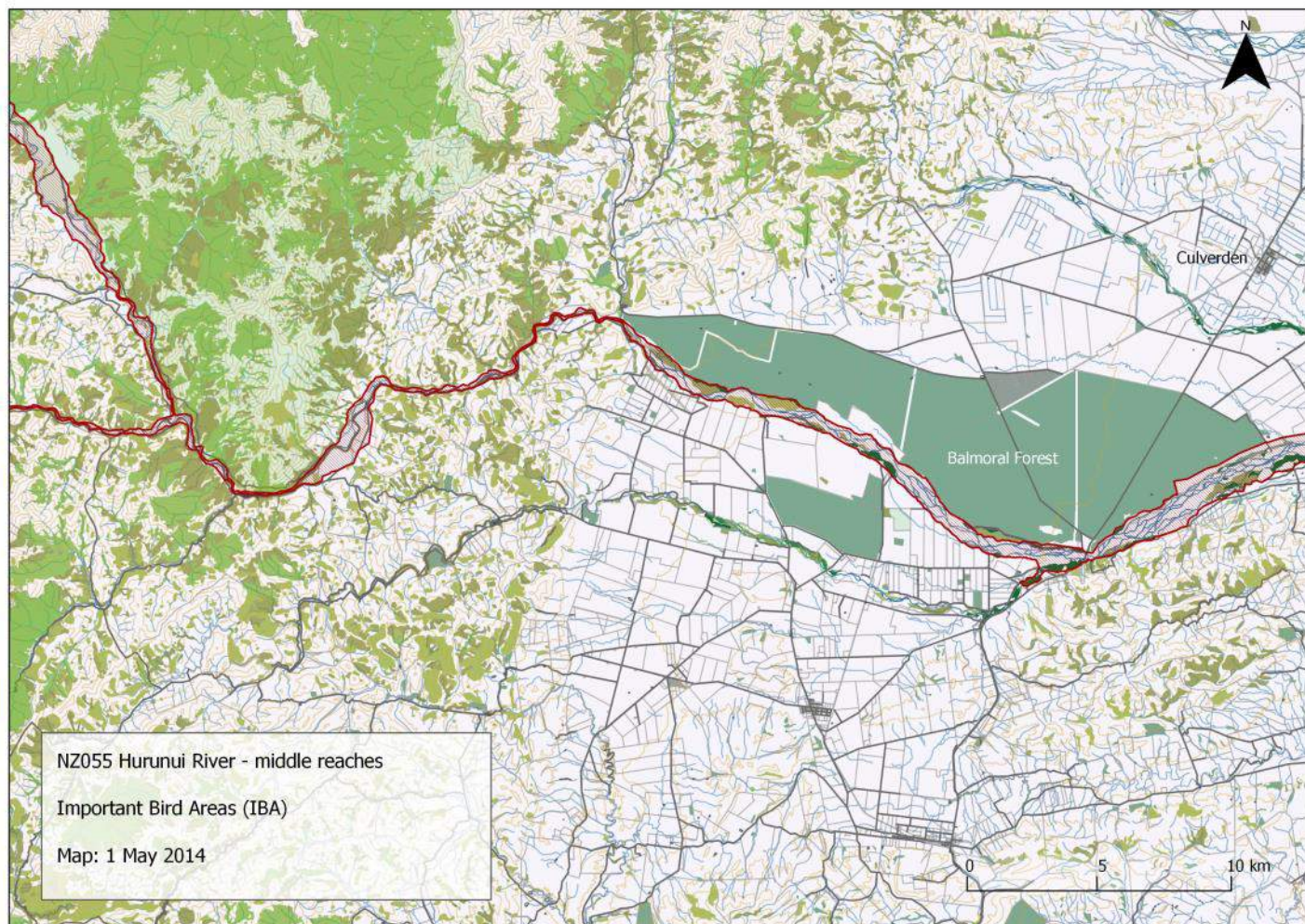
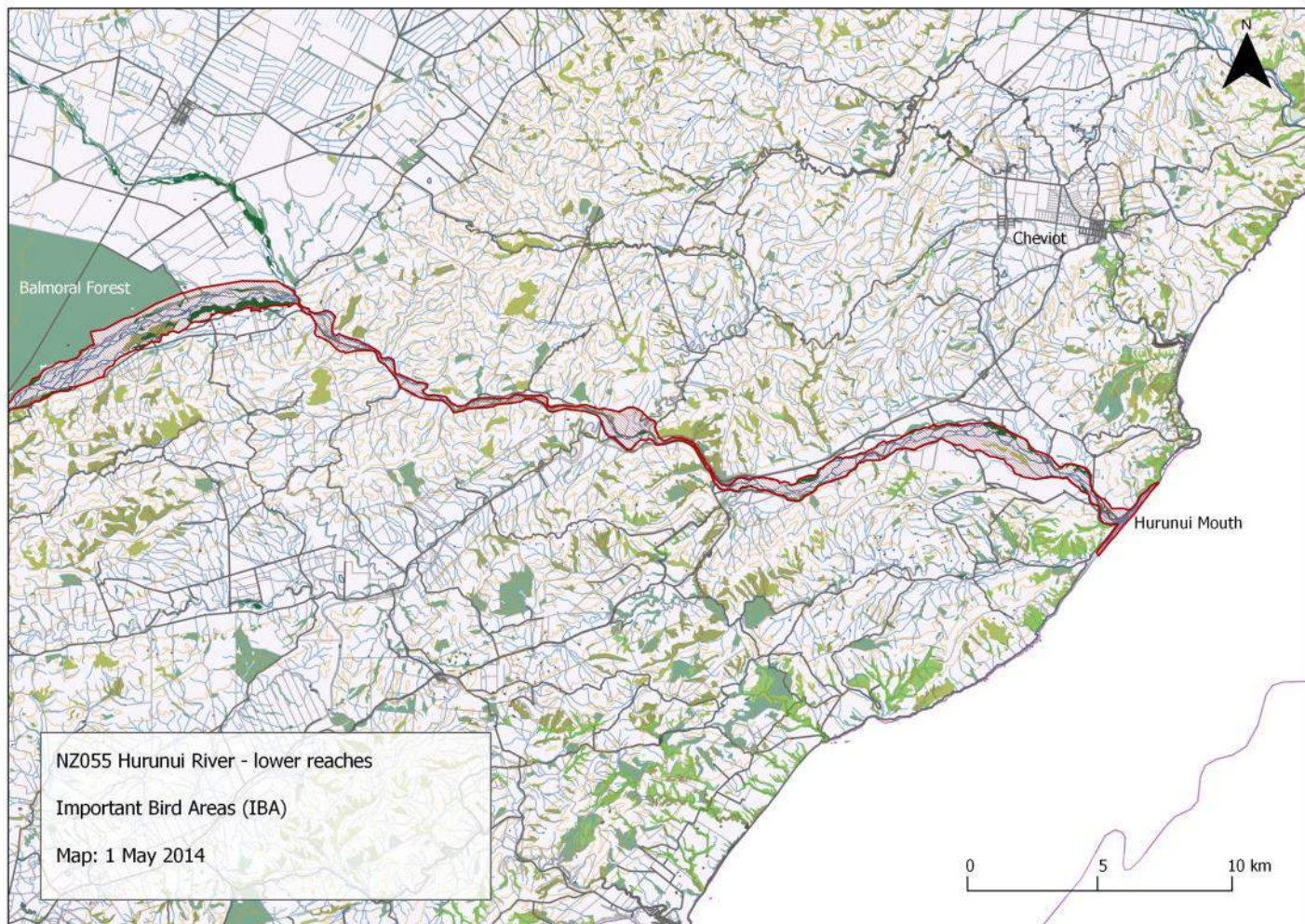
Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	2008-2014	528-1,083	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	2006-2010	211-442 (nests)	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding	2009-2010	2-10 (nests)	A1	VU	Nationally Vulnerable

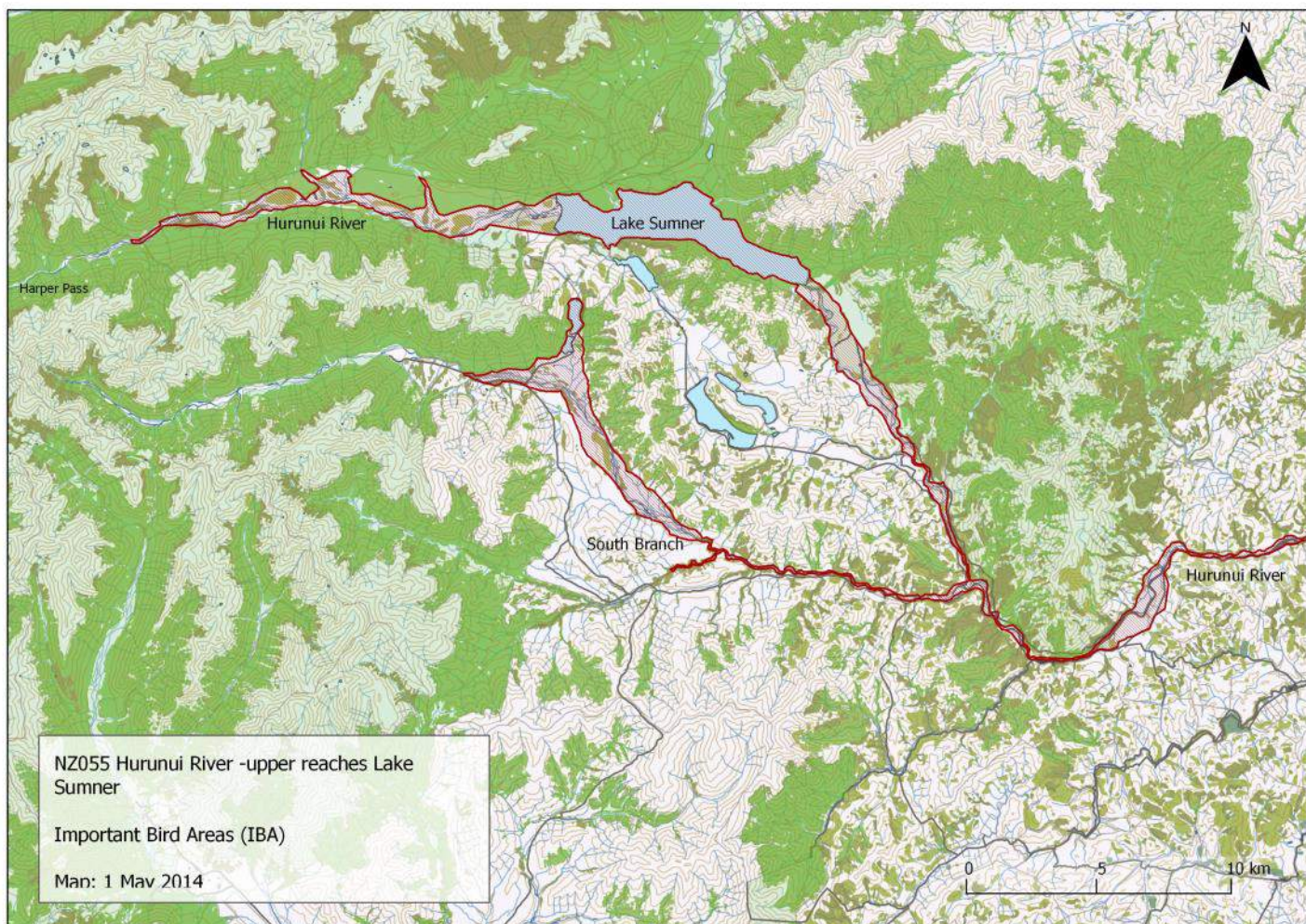
Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: White-faced Heron, Australasian Harrier, Canada Goose, Paradise Shelduck, Mallard, Grey Teal, Californian Quail, Pukeko, South Island Pied Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, NZ Pigeon, Rock Pigeon, Shining Cuckoo, White-fronted Tern, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Black Shag, Little Shag.

Great Spotted Kiwi, Kaka, Kea, Yellow-crowned Parakeet, Orange-fronted Parakeet and Yellowhead occur in forest in the upper reaches - especially in the South Branch. NZ Scaup and likely other marsh species are at Lake Sumner, with Australasian Crested Grebes at nearby Lakes Sheppard and Taylor.

Protected area	Designation	Relationship with IBA
Pacific Ocean Foreshore Napenape	Conservation Area	Protected area overlaps with site
Hurunui	Marginal Strip	Protected area contained within site
Hurunui River Kairn Brock	Conservation Area	Protected area contained within site
South Branch Hurunui	Marginal Strip	Protected area contained within site

The IBA includes areas (mainly open river flats) of the Lake Sumner Forest Park and Head of Lake Sumner Conservation Area which it borders.





IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit)	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on some river flats (upper reaches) and along margins of IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

DOC River Survey Database 2013.

O'Donnell, C.F.J. 2000. The significance of river and open water habitats for indigenous birds in Canterbury, New Zealand. Environment Canterbury Unpublished Report U00/37. Christchurch, Environment Canterbury.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobstriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Palmer, P. 2013. Compilation of "Summary of intrinsic values" chapters from Canterbury Conservancy's intrinsic values catchment reports: Hurunui-Waiau Zone. Department of Conservation, Christchurch.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ057	Pegasus Bay Coast (3 sites)	Canterbury
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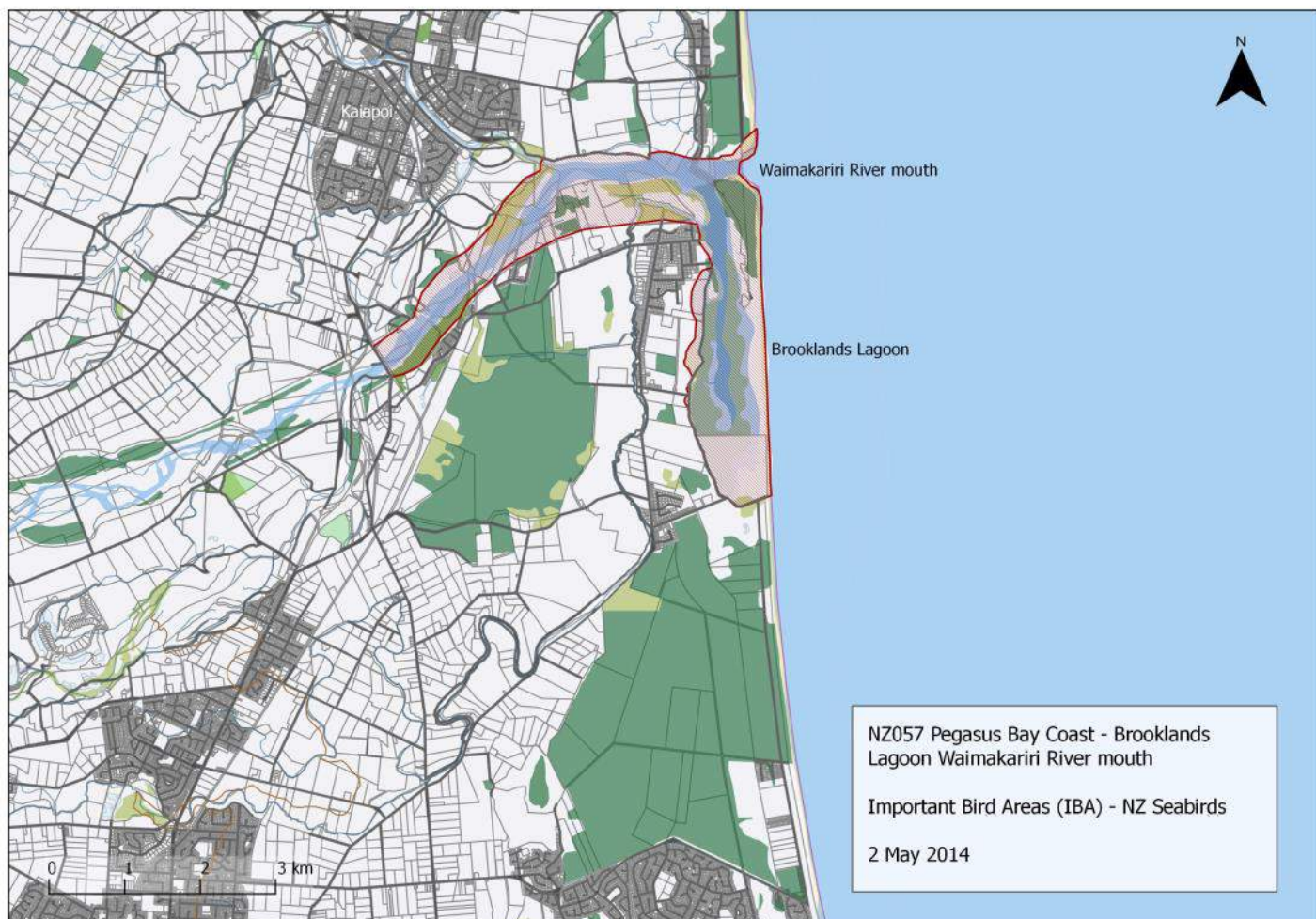
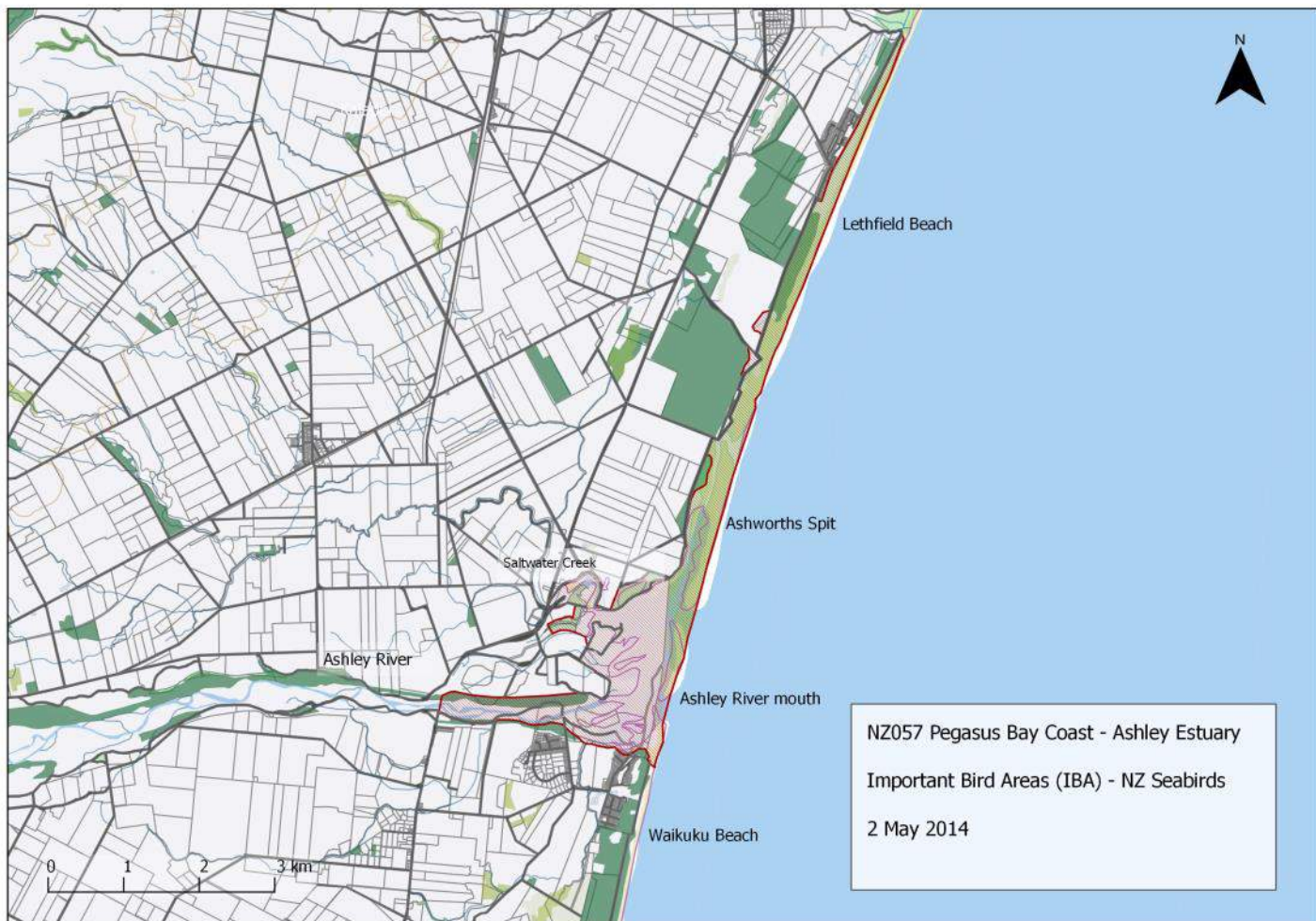
Location	New Zealand, Canterbury
Central coordinates	43.275581°S, 172.721987°E (Ashley Estuary), 43.391577°S, 172.702589°E (Brooklands Lagoon), 43.541642°S, 172.727652°E (Avon-Heathcote)
IBA criteria	A1, A4ii, (A4iii)
Area	476 ha (Ashley Estuary), 749 ha (Brooklands Lagoon), 1,275 ha (Avon/Heathcote)
Altitude	0 - 5m
Year of Assessment	2013

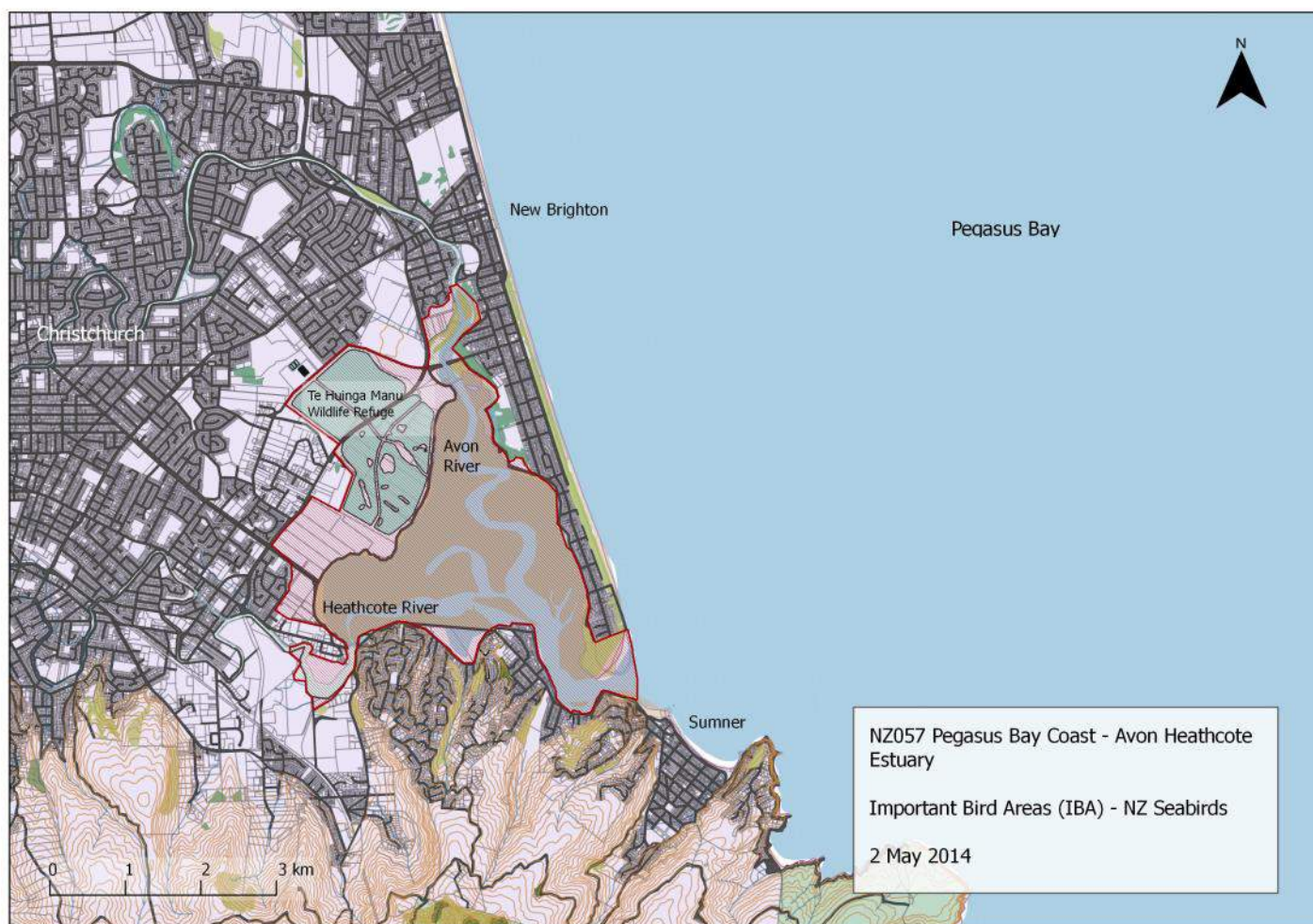
Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding & non-breeding	1999-2010	732-1,000 (individuals)	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Non-breeding	2000-2014	120-260 (individuals)	A1, A4i	EN	Nationally Vulnerable
Black Stilt	Non-breeding	2009-2013	1-2 (individuals)	A1	CR	Nationally Critical
Wrybill	Non-breeding	1999-2013	14-50 (individuals)	A1	VU	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered
South Island Pied Oystercatcher	Non-breeding		3,208-4,562 (individuals)	A4i	LC	At Risk - Declining
<i>Species group - waterbirds</i>			More than 20,000 individuals			

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Little Black Shag, Little Shag, White-faced Heron, Mute Swan, Black Swan, Canada Goose, Paradise Shelduck, NZ Shoveler, Mallard, Grey Duck, Grey Teal, Black Scaup, Australasian Harrier, Californian Quail, Pheasant, Little Owl, Pukeko, Marsh Crake, Spotless Crake, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, NZ Pigeon, NZ Kingfisher, Shining Cuckoo, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Cirl Bunting, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow Starling, Australian Magpie.

Other species recorded: Australian Little Grebe, Spotted Shag, White Heron, Reef Heron, Little Egret, Cattle Egret, Royal Spoonbill, Glossy Ibis, Australian Coot, Pacific Golden Plover, Large Sand Plover, NZ Dotterel (SI) (EN), Mongolian Dotterel, Red-capped Dotterel, Grey Plover, Turnstone, Red (Lesser) Knot, Curlew Sandpiper, Sharp-tailed Sandpiper, Pectoral Sandpiper, Red-necked Stint, Asiatic Dowitcher, Eastern Bar-tailed Godwit, Asiatic Black-tailed Godwit, Hudsonian Godwit, Wandering Tattler, Siberian Tattler, Sanderling, Far-eastern Curlew, Whimbrel, Greenshank, Terek Sandpiper, White-winged Black Tern, Gull-billed Tern, Little Tern, Bellbird.





Protected area	Designation	Relationship with IBA
Pacific Ocean Foreshore	Conservation Area	Protected area overlaps with site
Ashley River Mouth	Conservation Area	Protected area contained within site
Ashley River	Conservation Area	Protected area contained within site
Reference Christchurch City Council Parks		

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Estuaries	Major
Marine Intertidal	Sandy and Shingle Shoreline/Beaches and Spits; Intertidal Mud Flats	Major
Marine Coastal/Supratidal	Coastal Brackish Lagoons	Major
Wetlands (inland)	Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds	Major
Shrubland	Saltmarsh ribbowood	Minor
Artificial - Aquatic	Wastewater Treatment Areas	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by estuary, beach and river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting - intentional use (waterfowl - seasonal); Persecution	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Domestic & urban waste water - run-off	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Christchurch City Council 2015. Brooklands Lagoon. <http://resources.ccc.govt.nz/files/FactsheetBrooklands-popularparks.pdf>
- Christchurch City Council 2015. Avon Heathcote Estuary <http://resources.ccc.govt.nz/files/FactsheetAvonEstuary-walks.pdf>
- Langlands, P. 2012. Current status of the Australasian bittern (*Botaurus poiciloptilus*) in Canterbury. Report No. R13/25. Environment Canterbury.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Ornithological Society of NZ (OSNZ) National Wader Database 2013.
- Owen, S.J. (Ed.) 1992. The Estuary: Where Our Rivers Meet The Sea. Parks Unit, Christchurch City Council: Christchurch
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ058	Ashley River Rakahuri	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	43.229195°S, 172.229576°E (Ashley Gorge bridge)
IBA criteria	A1
Area	5130 ha
Altitude	0 - 500m
Year of Assessment	2013

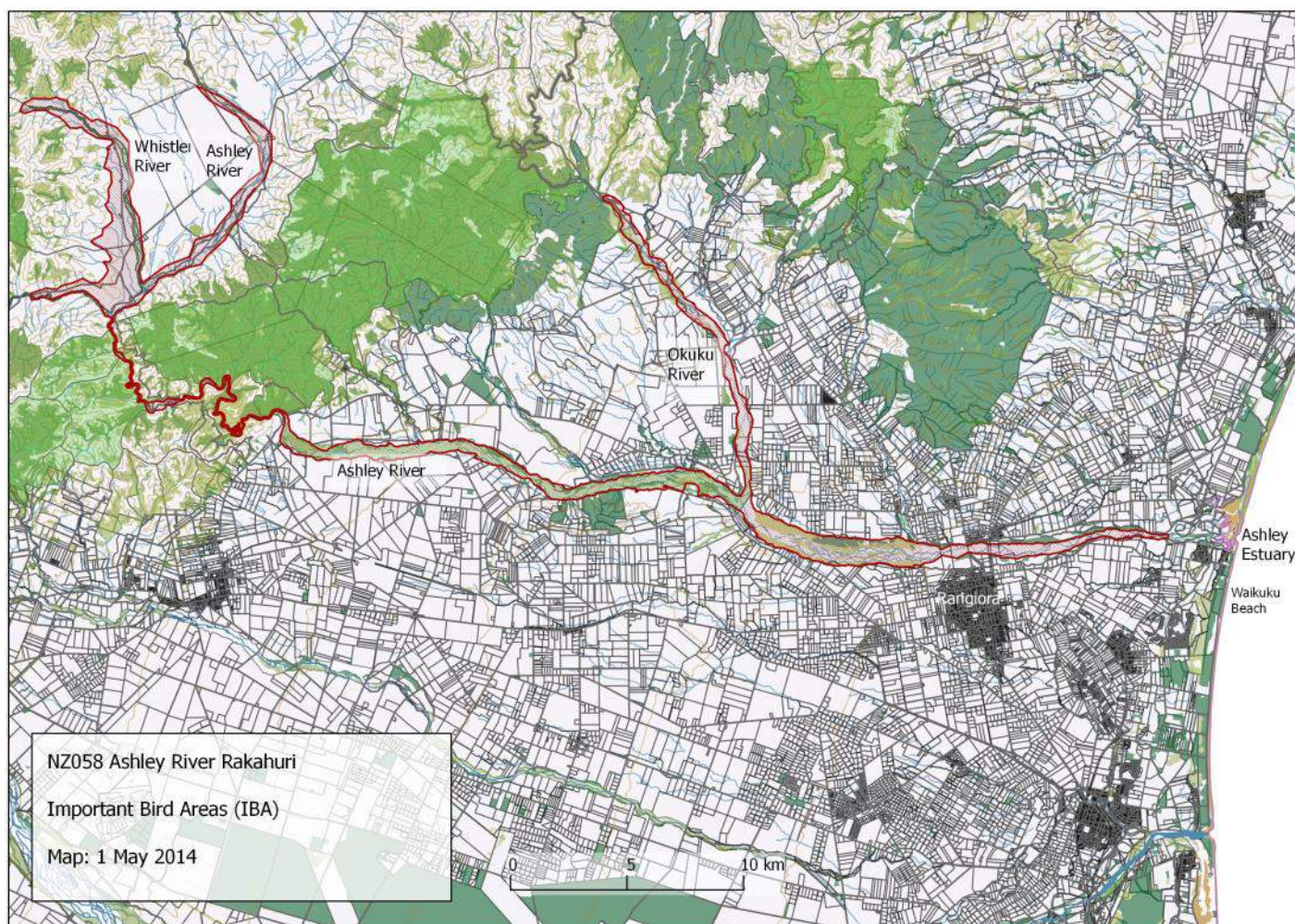
Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1981-2014	123-383	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1981-2014	43-88	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding	2000-2013	5-7	A1	VU	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, Pukeko, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, White-fronted Tern, Rock Pigeon, NZ Kingfisher, Shining Cuckoo, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Protected area	Designation	Relationship with IBA
Ashley Riverbed Rakahuri	Conservation Area	Protected area contained within site
Okuku Riverbed Serenada	Conservation Area	Protected area contained within site
Ashley Gorge	Marginal Strip	Protected area overlaps with site
Whistler Riverbed	Conservation Area	Protected area contained within site
Whistler River	Marginal Strip	Protected area contained within site
Ashley Townshend River	Marginal Strip	Protected area overlaps with site

The IBA is bordered by the Oxford Forest Conservation Area in the Ashley Gorge area.



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on some river flats (upper reaches) and along margins of IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Ashley Rakahuri River Care Group Database 2013.

Brown, J.A., Robinson, T.J. 2009. Addressing uncertainty in braided river bird counts. Department of Conservation Research & Development Series 311, Department of Conservation, Wellington.

Bowden, M.J., Ayrey, R.B., Duffield, D.M., Glennie, J.M., Harrison, N., Hurd, S.B., Mason, C.R., Talbot, J.D., Weeber, J.H., 1982. The water resources of the Ashley catchment, North Canterbury Catchment Board and Regional Water Board, Christchurch
DOC River Survey Database 2013.

Hughey, K., Booth, K., Deans, N., Baker, M., 2009. A significance assessment method for river values. Draft report. Lincoln University, Canterbury.

Keedwell, R.J. 2005. Breeding biology of black-fronted terns (*Sterna albobriata*) and the effects of predation. *Emu* 105: 39-47.

O'Donnell, C.F.J., Moore, S.G.M. 1983. The wildlife and conservation of braided river systems in Canterbury. Fauna Survey Unit Report 33. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 73 p.

O'Donnell, C.F.J. 2000. The significance of river and open water habitats for indigenous birds in Canterbury, New Zealand. Environment Canterbury Unpublished Report U00/37. Christchurch, Environment Canterbury.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Palmer, P. 2013. Compilation of "Summary of intrinsic values" chapters from Canterbury Conservancy's intrinsic values catchment reports: Waimakariri Zone. Department of Conservation, Christchurch.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Wilson, G. 2001. National distribution of braided rivers and the extent of vegetation colonisation. Landcare Research Contract Report: LC0001/068.

NZ059	Waimakariri River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	43.415024°S, 172.646713°E (Kaiapoi bridge SH1); 43.005651°S, 171.746693°E (Mount White Bridge)
IBA criteria	A1, A4ii
Area	7,267 ha (lower reaches), 2,418 ha (gorge); 10,272 ha (upper reaches)
Altitude	0 - 800m
Year of Assessment	2013

Populations of IBA trigger species:

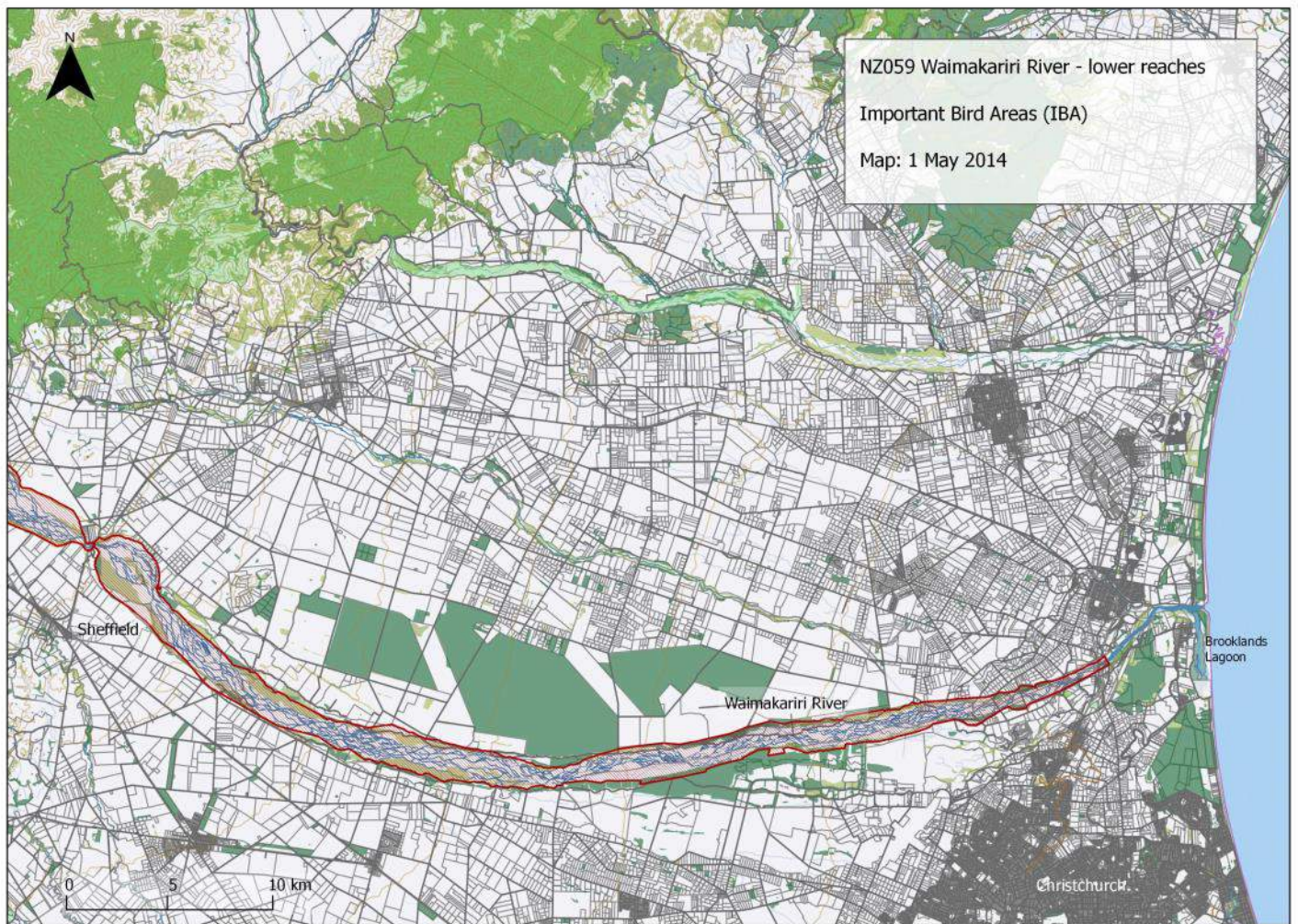
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1981-2014	376-2,292	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1980-2009	309-540	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding	2007-2009	36-84	A1	VU	Nationally Vulnerable

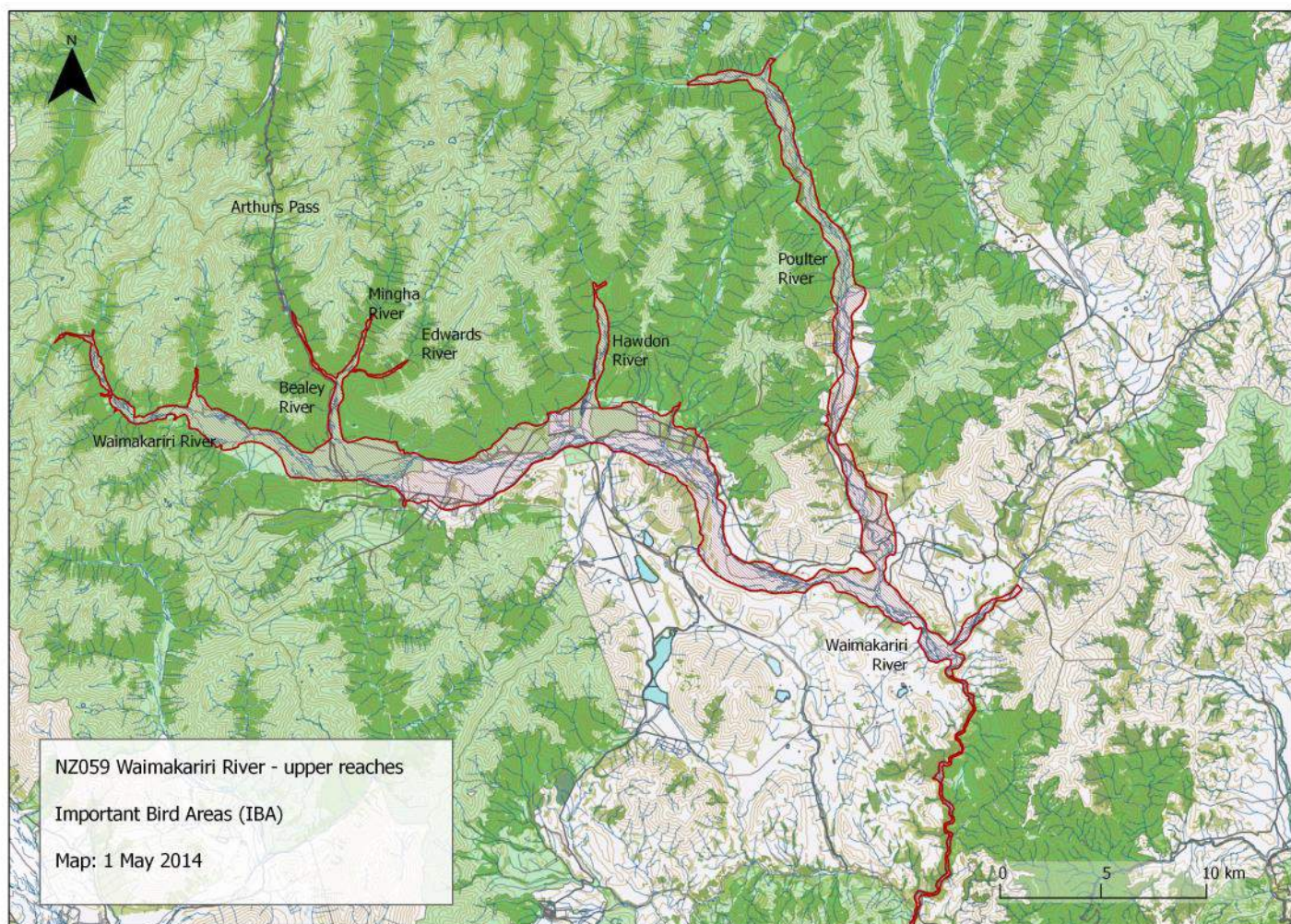
Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Paradise Shelduck, Canada Goose, Mallard, Australasian Harrier, Pukeko, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Rock Pigeon, Shining Cuckoo, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

NB: Adjacent forest and alpine areas will be identified as IBAs with land-birds (e.g. Great Spotted Kiwi, Kea, Kaka, Weka, Yellowhead/Mohua) and water-birds (e.g. Blue Duck) as trigger species (e.g. Upper Waimakariri, Hawdon, Edwards, Mingha, Poulter, Valleys).

Protected area	Designation	Relationship with IBA
Waimakariri River	Marginal Strip	Protected area contained within site
Hawdon Flats	Government Purpose Reserve (National Park)	Protected area contained within site
Waimakariri Riverbed Paddys Bend	Conservation Area	Protected area contained within site

The IBA is bordered by the Korowai Torlesse Tussocksland Park and Oxford Forest Conservation Area in the Waimakariri Gorge area. With the latter, there is some overlap along the riverbed. In the upper reaches the IBA includes areas, mainly riverbed and river flats, of the Arthur's Pass National Park. These include sections of the Upper Waimakariri, Bealey, Mingha, Edwards, Hawdon, and Poulter Rivers.





IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, lupin, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on some river flats (upper reaches) and along margins of IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

DOC River Survey Database 2013.

Keedwell, R.J. 2005. Breeding biology of black-fronted terns (*Sterna albobriata*) and the effects of predation. *Emu* 105: 39-47.

O'Donnell, C.F.J., Moore, S.G.M. 1983. The wildlife and conservation of braided river systems in Canterbury. Fauna Survey Unit Report 33. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 73 p.

O'Donnell, C.F.J. 2000. The significance of river and open water habitats for indigenous birds in Canterbury, New Zealand. Environment Canterbury Unpublished Report U00/37. Christchurch, Environment Canterbury.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Ornithological Society of NZ (OSNZ) National Wader Database 2013.

Palmer, P. 2013. Compilation of "Summary of intrinsic values" chapters from Canterbury Conservancy's intrinsic values catchment reports: Waimakariri Zone. Department of Conservation, Christchurch.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Wilson, G. 2001. National distribution of braided rivers and the extent of vegetation colonisation. Landcare Research Contract Report: LC0001/068.

NZ058	Te Waihora	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	43.787553°S, 172.487823°E
IBA criteria	A1, A4ii, A4iii
Area	29,687 ha
Altitude	0 - 12m
Year of Assessment	2013

Populations of IBA trigger species:

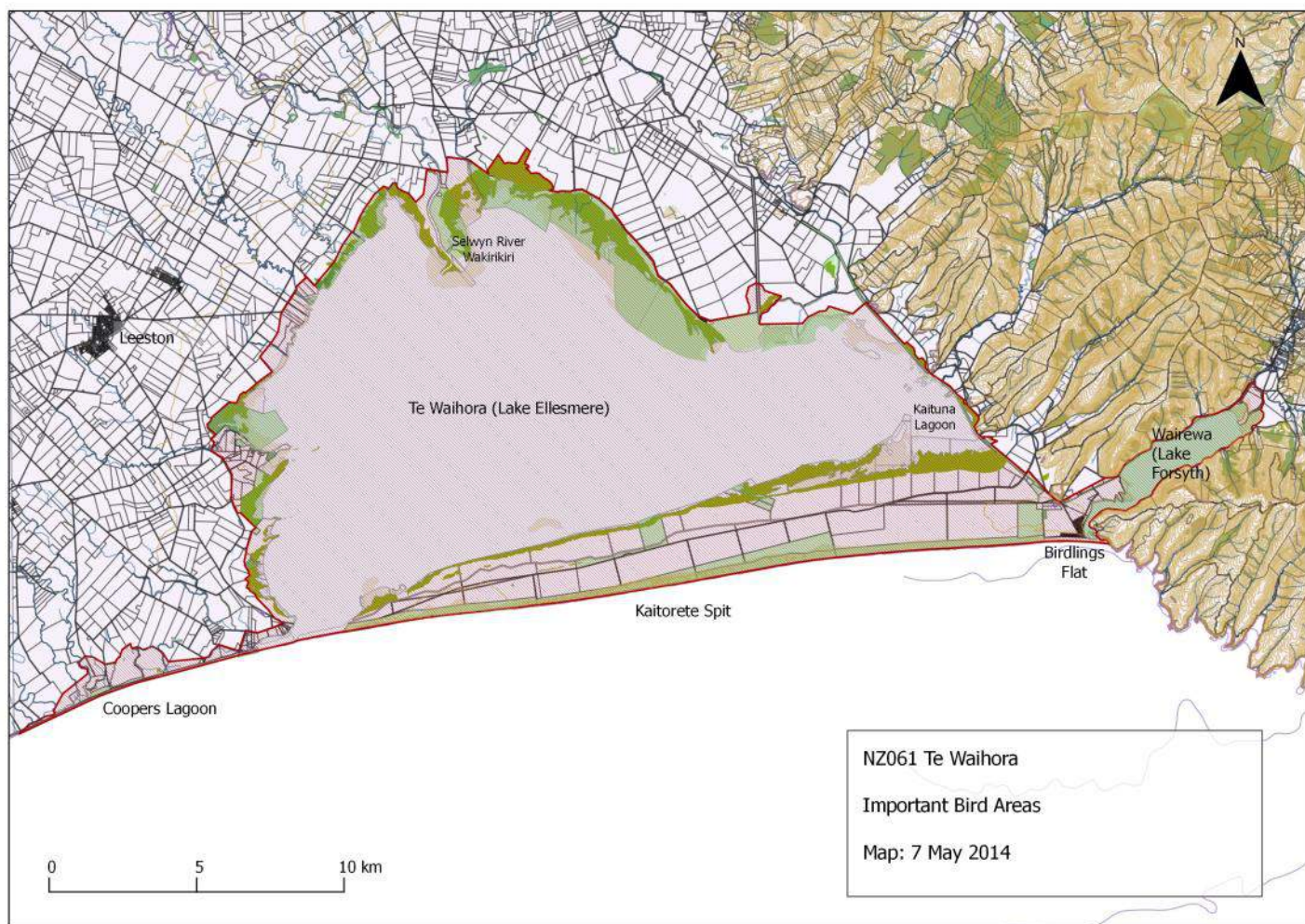
Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding & non-breeding		311-530 (individuals)	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Non-breeding	2006-2015	28-54 (individuals)	A1, A4i	EN	Nationally Vulnerable
Wrybill	Non-breeding	2009-2013	349-701 (individuals)	A1	VU	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered
Great (Australasian) Crested Grebe ¹	Non-breeding	2006-2015	45-200 (individuals)	A4i	LC	At Risk - Declining
Species group - waterbirds			More than 20,000 individuals	A4iii		

¹ NZ Threat Classification system recognises subspecies.

Black Stilt (CR) have been recorded at Te Waihora

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Pied Shag, Black Shag, Little Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, NZ Shoveler, Mallard, Grey Duck, Grey Teal, Australasian Harrier, Californian Quail, Pheasant, Little Owl, Pukeko, Marsh Crake, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, NZ Pigeon, Shining Cuckoo, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Other species recorded include: Australian Pelican, Spotted Shag, White Heron, Intermediate Egret, Little Egret, Cattle Egret, Royal Spoonbill, Glossy Ibis, Mute Swan, Chestnut-breasted Shelduck, Nankeen Kestrel, Australian Coot, South Island Pied Oystercatcher, Turnstone, Pacific Golden Plover, Large Sand Plover, Mongolian Dotterel, Grey Plover, Turnstone, Red (Lesser) Knot, Curlew Sandpiper, Sharp-tailed Sandpiper, Pectoral Sandpiper, Red-necked Stint, Asiatic Dowitcher, Eastern Bar-tailed Godwit, Asiatic Black-tailed Godwit, Hudsonian Godwit, Siberian Tattler, Sanderling, Far-eastern Curlew, Whimbrel, Greenshank, Terek Sandpiper, Painted Snipe, Little Tern, White-winged Black Tern, Gull-billed Tern, Bellbird.



Protected area	Designation	Relationship with IBA
Lakelands Wildlife Reserve	Conservation Area	Protected area contained within site
Greenpark Sands	Conservation Area	Protected area contained within site
Yarrs Flat	Wildlife Reserve	Protected area contained within site
Selwyn	Wildlife Management Reserve	Protected area contained within site
Williams	Wildlife Management Reserve	Protected area contained within site
Te Waihora	Proposed Picnic Area	Protected area contained within site
Harts Creek	Wildlife Management Reserve	Protected area contained within site
Lakeside	Wildlife Management Reserve	Protected area contained within site
Coopers Lagoon	Wildlife Management Reserve	Protected area contained within site
Kaitorete Spit	Conservation Area (incl. marginal strip)	Protected area contained within site
Waihora	Scientific Reserve	Protected area contained within site

Protected area (contd.)	Designation	Relationship with IBA
Kaitorete Spit	Scientific Reserve	Protected area contained within site
Wairewa	Conservation Area	Protected area contained within site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Sandy and Shingle Shoreline/Beaches and Spit	Major
Marine Coastal/Supratidal	Coastal Saline Lagoon (Te Waihora Lake Ellesmere); Coastal Freshwater Lake (Kaituna Lake Forsyth)	Major
Wetlands (inland)	Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds; willows at river and stream mouths	Major
Shrubland	Saltmarsh ribbonwood, bracken. Kaitorete Spit flora includes special plants	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting - intentional use (waterfowl - seasonal); Persecution	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods; Closure of lake outlet	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Hughey K.F.D., Taylor K.J.W. (ed.) 2009. Te Waihora/Lake Ellesmere: State of the Lake and Future Management. EOS Ecology, Christchurch.
- Kaitorete Spit Biodiversity Action Plan for Coastal Conservation Land 2003. Department of Conservation, Christchurch.
- Kitto, S.G. 2010. The environmental history of Te Waihora - Lake Ellesmere. Thesis for Degree of Master of Science, University of Canterbury
- Langlands, P. 2012. Current status of the Australasian bittern (*Botaurus poiciloptilus*) in Canterbury. Report No. R13/25. Environment Canterbury.
- Ornithological Society of NZ (OSNZ) National Wader Database 2013.
- O'Donnell, C.F.J. 1985. Lake Ellesmere, a wildlife habitat of international importance. *Fauna Survey Unit Report No. 40*. New Zealand Wildlife Service, Department of Internal Affairs, Christchurch
- O'Donnell, C.F.J. 2000. The significance of river and open water habitats for indigenous birds in Canterbury, New Zealand. Environment Canterbury Unpublished Report U00/37. Environment Canterbury, Christchurch.
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.
- Te Rūnanga o Ngāi Tahu 2005. Te Waihora Joint Management Plan. Te Rūnanga o Ngāi Tahu and Department of Conservation, Christchurch.

NZ062	Rakaia River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	43.744313°S, 172.040268°E (SH1 bridge); 43.281854°S, 171.294434°E (Rakaia Mathias confluence)
IBA criteria	A1
Area	46,318 ha
Altitude	0 - 300m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1970-2014	409 - 1,827	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1975-2011	36-291	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding	2009-2011	109-455 (nests)	A1	VU	Nationally Vulnerable

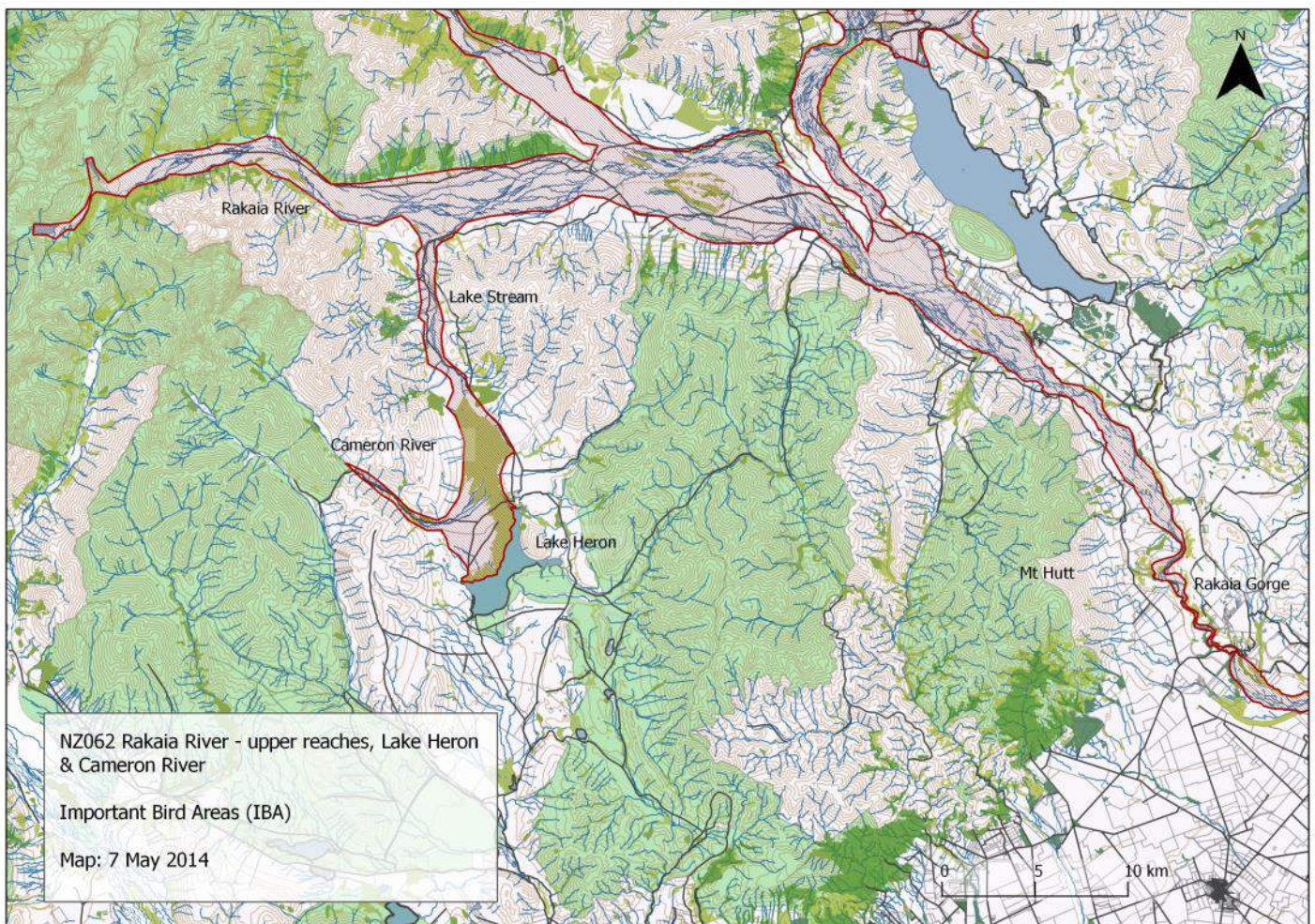
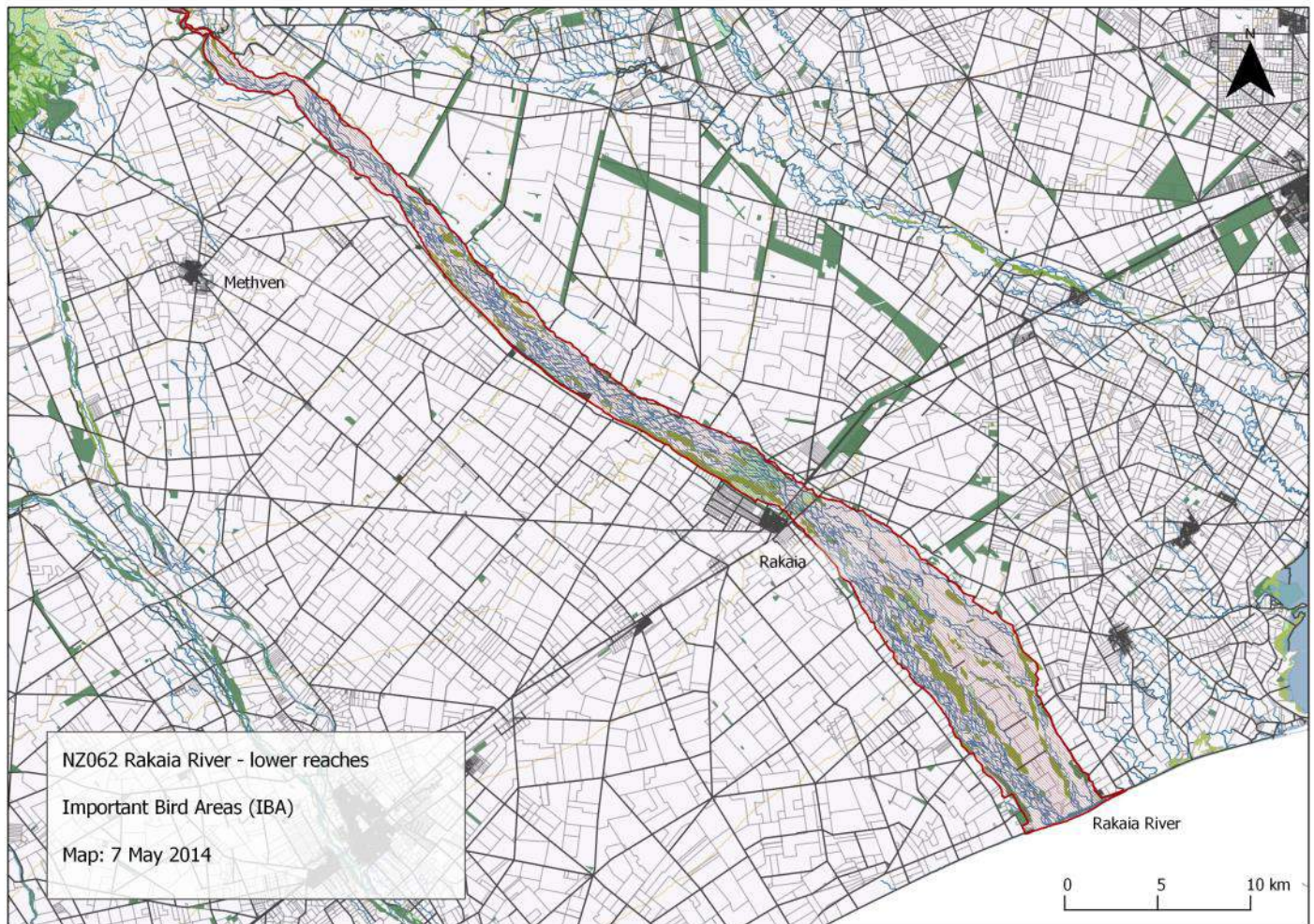
Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, NZ Falcon, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, Silvereye, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Spotted Shag, Grey Teal.

Protected area ¹	Designation	Relationship with IBA
Rakaia Riverbed ²	Conservation Area	Protected areas contained within site
Rakaia River Margin	Conservation Area	Protected areas contained within site
Mount Hutt	Conservation Area Marginal Strips	Protected areas contained within site
Wilberforce Riverbed	Conservation Area	Protected areas contained within site

¹ Protected areas for the entire IBA

² The Riverbed Conservation Areas are at multiple sites.

The IBA borders and/or includes small sections of the Adams Wilderness Area, Hakatere Conservation Park, Rangitata/Rakaia Head Waters Conservation Area, Rakaia Forest Conservation Area, Cragieburn Forest Park, Wanganui / Otira Catchments Conservation Area and Central Southern Alps Wilberforce Conservation Area.





IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit)	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, lupin, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on some river flats (upper reaches) and along margins of IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (lakes and rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

DOC River Survey Database 2013.

DOC 2013. CWMS: Ashburton Zone: Compilation of "Summary of intrinsic values" chapters from Canterbury Conservancy's intrinsic values catchment reports. Rakaia River (DOCDM-20906)

Hay, J.H. 1984. The behavioural ecology of the Wrybill Plover *Anarhynchus frontalis*. PhD Thesis, University of Auckland

Hughey, K.F.D. 1985. Hydrological factors influencing the ecology of riverbed breeding birds on the plains' reaches of Canterbury's braided rivers. PhD thesis, University of Canterbury.

Hughey, K.F.D. 1985. The relationship between riverbed flooding and non-breeding wrybills on northern feeding grounds in summer. *Notornis* 32: 42-50

Hughey, K.F.D. 1997. The diet of the Wrybill (*Anarhynchus frontalis*) and the Banded Dotterel (*Cbaradrius bicinctus*) on two braided rivers in Canterbury, New Zealand. *Notornis* 44: 185-193

O'Donnell, C.F.J., Moore, S.G.M. 1983. The wildlife and conservation of braided river systems in Canterbury. Fauna Survey Unit Report 33. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 73 p.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Sagar P.M. 1986. The effects of floods on the invertebrate fauna of a large, unstable braided river, *New Zealand Journal of Marine and Freshwater Research*, 20: 37-46

NZ063	Ashburton River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	43.910953°S, 171.739311°E (Ashburton Bridge SH1)
IBA criteria	A1, A4ii
Area	5,450 ha
Altitude	0 - 1200m
Year of Assessment	2013

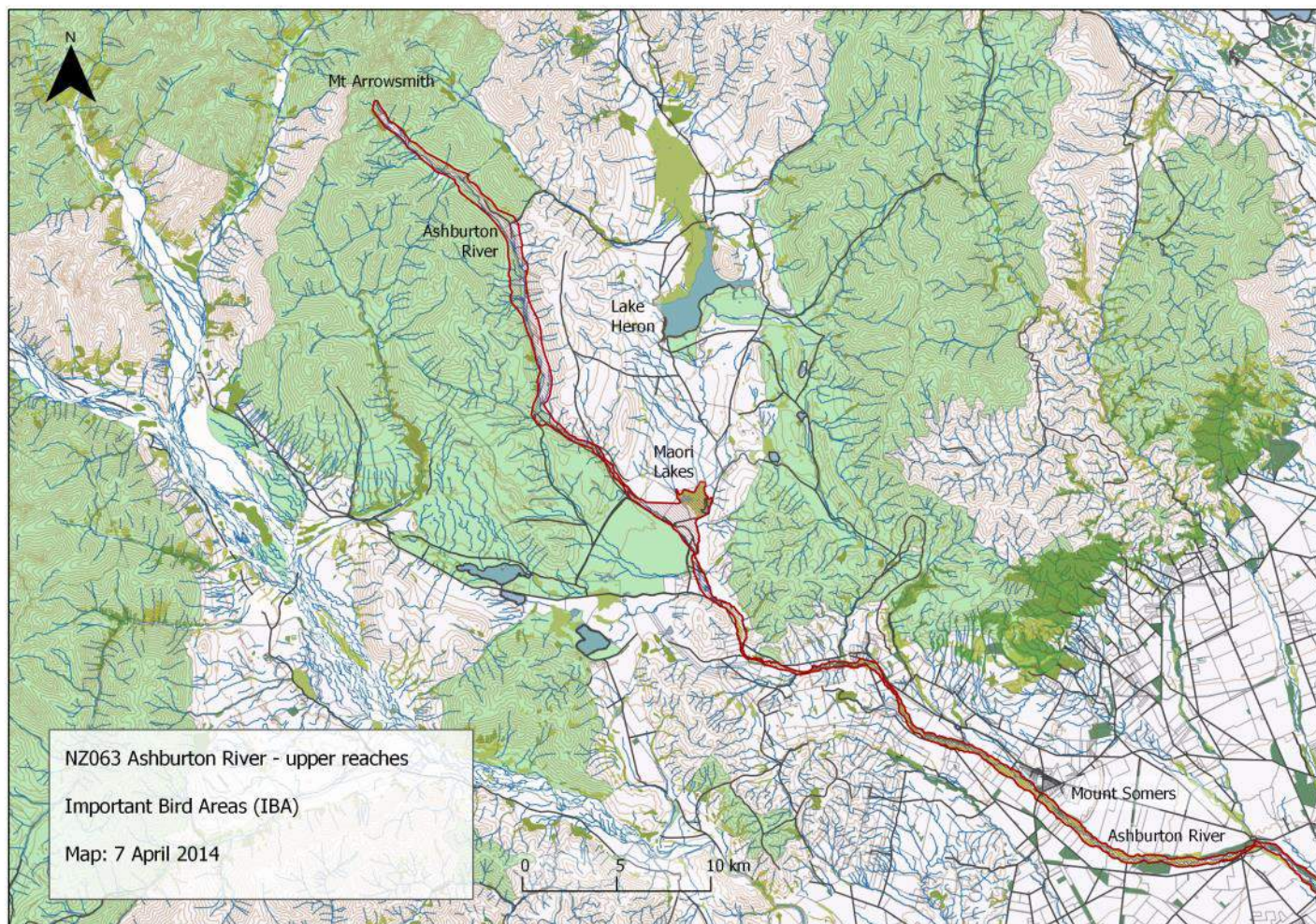
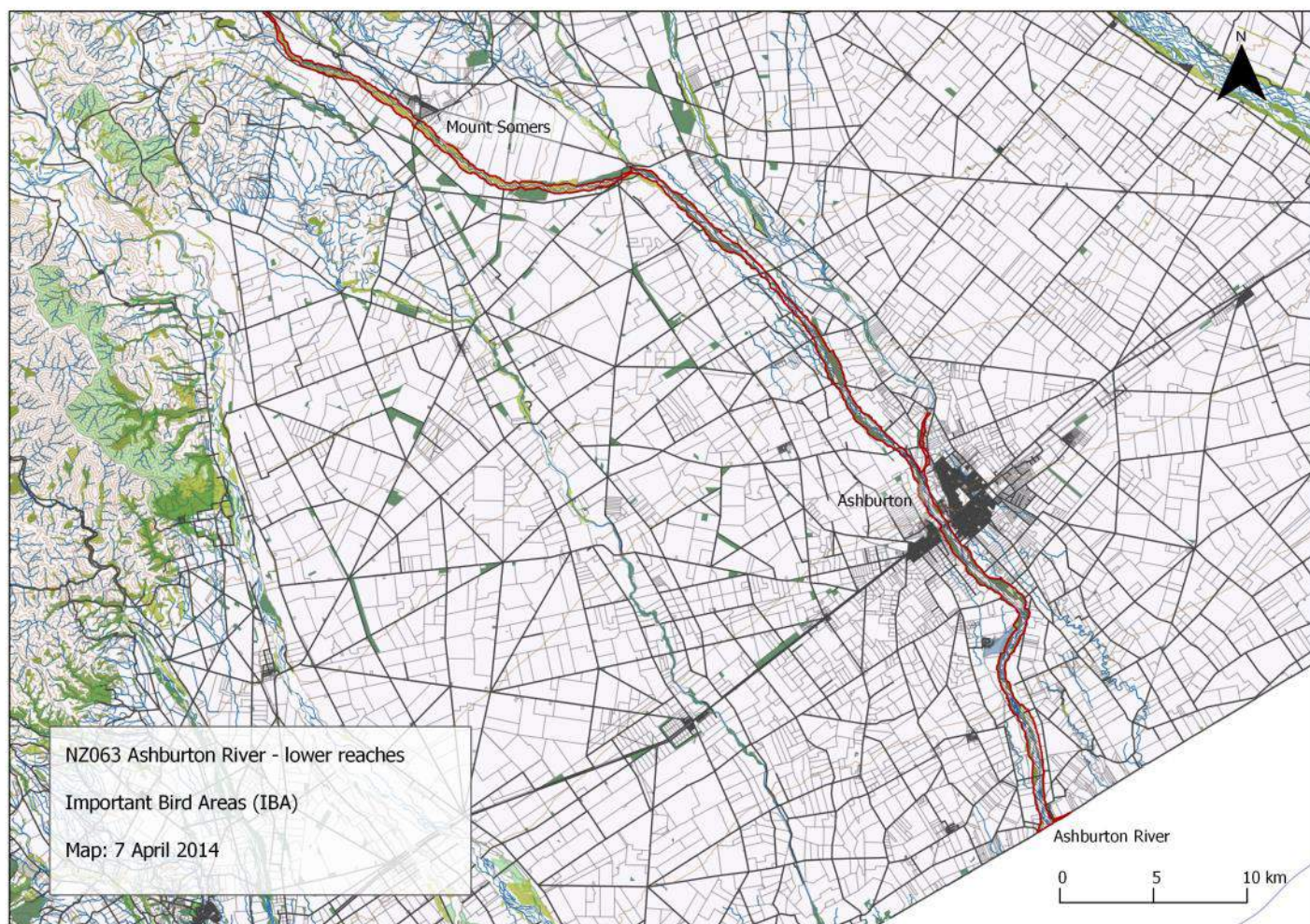
Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1970-2014	5,095-7,686	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1981-2010	149-279	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding		Present	A1	VU	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Vulnerable
Spotted Shag	Non-breeding		No counts (thousands)	A4ii	LC	Not Threatened

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, Silvereye, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Also recorded: NZ Falcon, Royal Spoonbill, Eastern Bar-tailed Godwit, Turnstone.

Protected area	Designation	Relationship with IBA
Kongutu	Recreation Reserve	Protected area contained within site
Ashburton River	Marginal Strip	Protected area contained within site
Ashburton Riverbed	Conservation Area	Protected area contained within site
Barrosa	Conservation Area	Protected area contained within site
Maori Lakes	Conservation Area	Protected area contained within site

The IBA borders and includes sections of the Hakatere Conservation Area, Hakatere Conservation Park and Rangitata/Rakaia Head Waters Conservation Area .



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit)	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting - intentional use (waterfowl - seasonal); Persecution	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration



References:

DOC River Survey Database 2013.

DOC 2013. CWMS: Ashburton Zone: Compilation of "Summary of intrinsic values" chapters from Canterbury Conservancy's intrinsic values catchment reports. Ashburton River (DOCDM-58969, 09/2006)

O'Donnell, C.F.J. 1992. Birdlife of the Ashburton River, Canterbury, New Zealand. Canterbury Conservancy Technical Report 1. Christchurch, Department of Conservation

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Spotted Shag post-breeding congregation at the Ashburton River Mouth. Photo: Andrew Crossland.

NZ064	Rangitata River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	43.973941°S, 171.301712°E (Arundel bridge)
IBA criteria	A1, A4ii
Area	18,975 ha
Altitude	0 - 900m
Year of Assessment	2013

Populations of IBA trigger species:

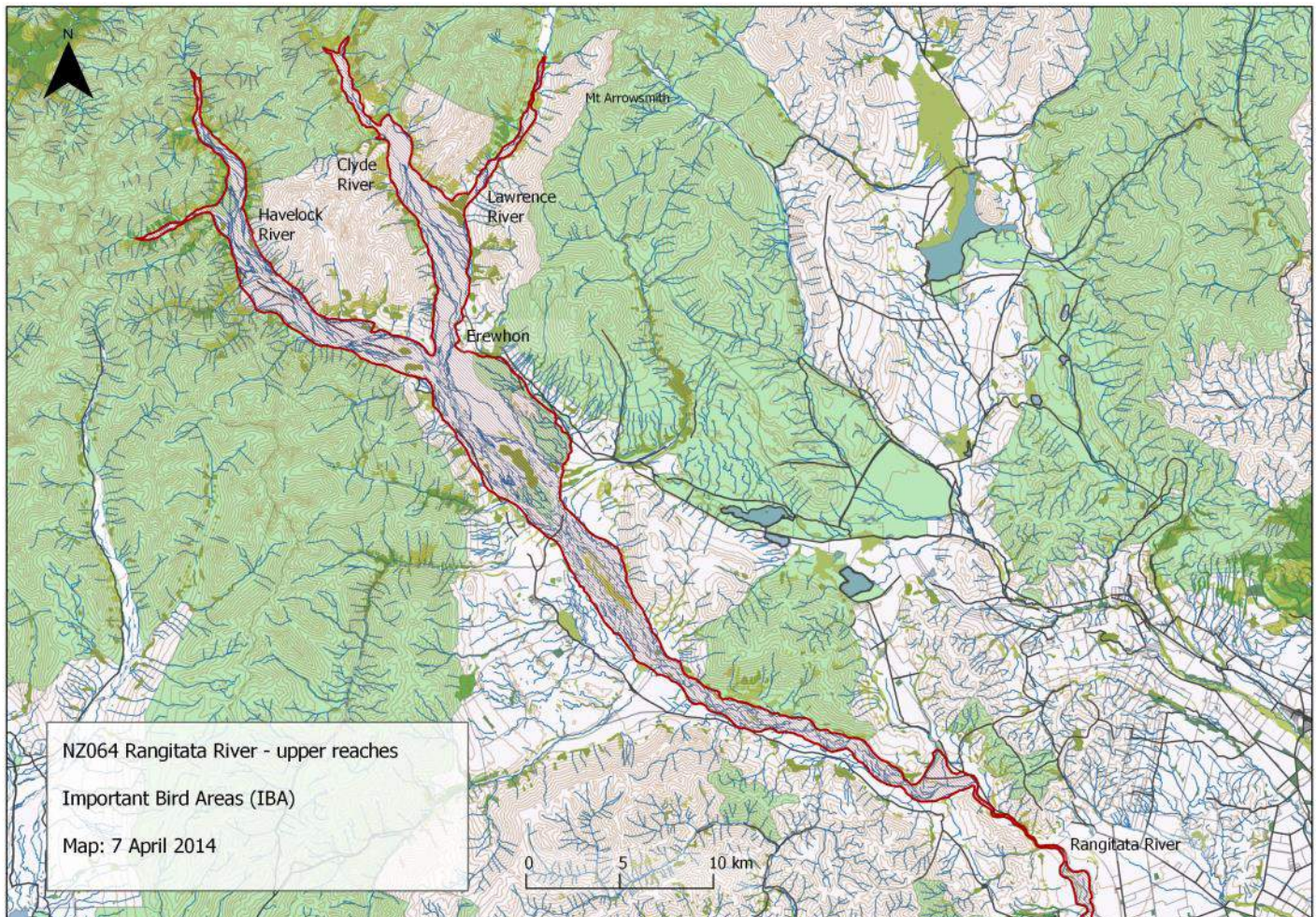
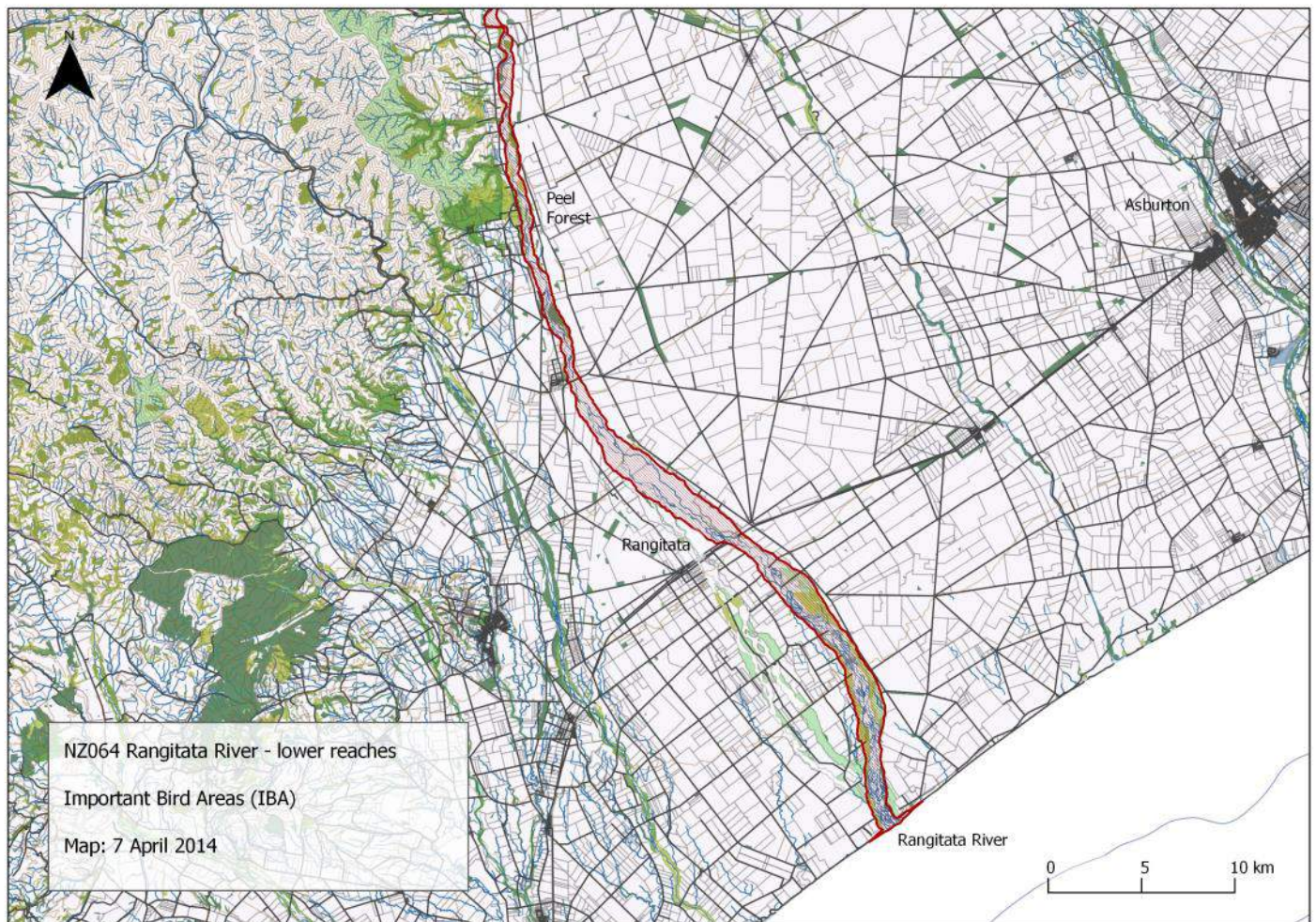
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1970-2014	985-3,012	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1982-2010	218-524	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding	2006-2010	67-254	A1, A4i	VU	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, Silvereye, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Spotted Shag.

Protected area	Designation	Relationship with IBA
Rangitata River	Conservation Reserve	Protected area overlaps with site
Rangitata River	Marginal Strip	Protected area contained within site
Rangitata Riverbed	Conservation Area	Protected area contained within site
Tenehaun	Scenic Reserve	Protected area contained within site
Upper Rangitata Riverbed	Conservation Area	Protected area contained within site

The IBA borders and includes sections of Mt Peel/Waikari Hills Conservation Area, Hakatere Conservation Park, Te Kahui Kaupeka Conservation Park and Rangitata/Rakaia Head Waters Conservation Area.

The Upper Rangitata River is included in DOC's O Te Wharakai Wetland Management Project. The Rangitata River is also protected by a Water Conservation Order (2006).



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit)	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting - intentional use (waterfowl - seasonal); Persecution	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

DOC River Survey Database 2013.

Moore, S.G. 1986a. Upper Rangitata survey. Unpublished File Report. Christchurch, New Zealand Wildlife Service, Department of Internal Affairs.

O'Donnell, C.F.J., Moore, S.G.M. 1983. The wildlife and conservation of braided river systems in Canterbury. Fauna Survey Unit Report 33. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 73 p.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ065	Orari River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	44.129616°S, 171.306862°E (Victoria Bridge, Orari)
IBA criteria	A1
Area	1,900 ha (includes Spider Lagoon Conservation Area)
Altitude	0 - 280m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1995-2009	341-1,200 (nests)	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	2008-2009	37-44 (nests)	A1, A4i	EN	Nationally Vulnerable
Australasian Bittern ¹	Resident		Present	A1	EN	Nationally Vulnerable

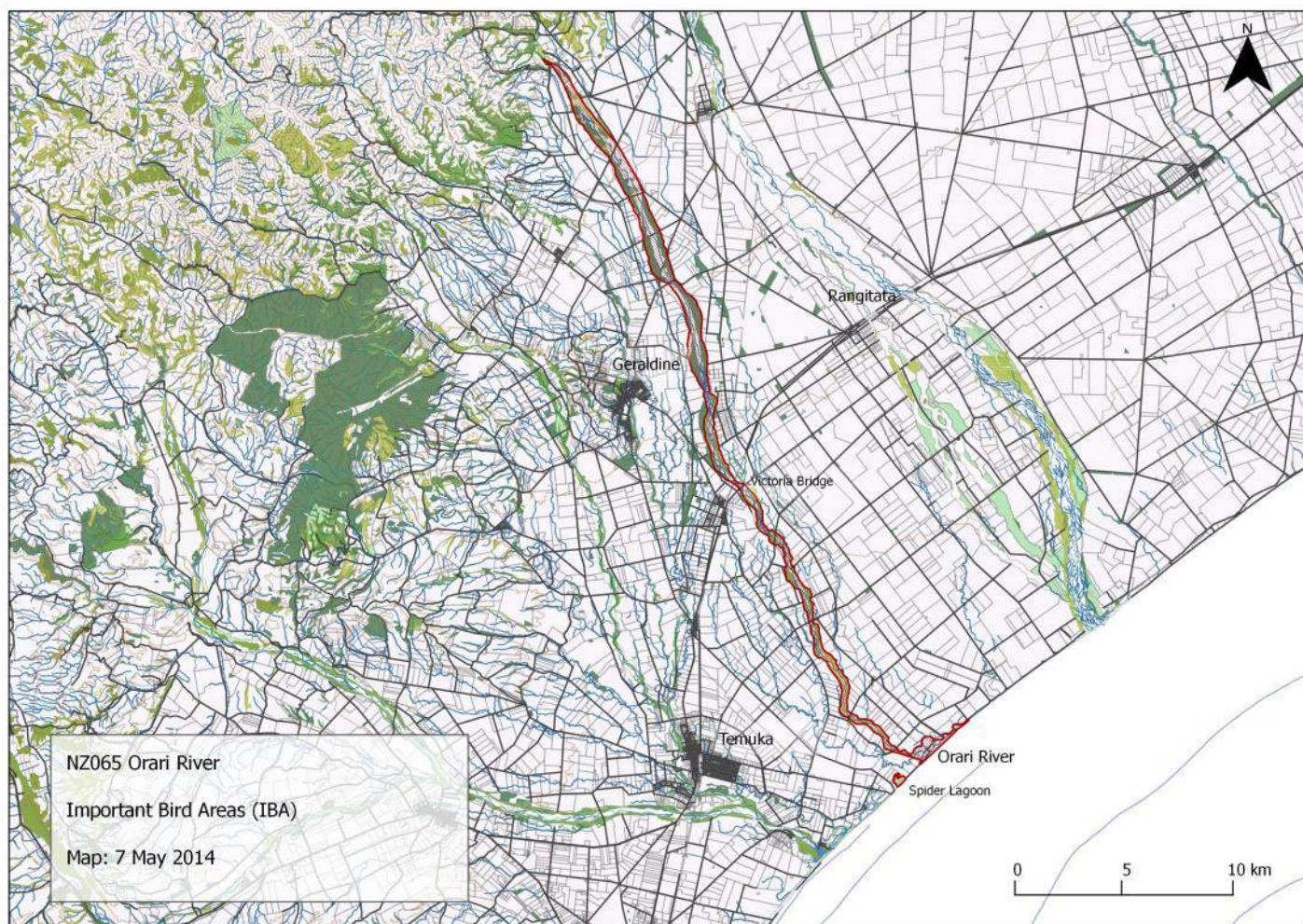
¹ Occur at Spider lagoon (DOC K38068) near river-mouth.

Blue Duck (EN) have been reported in the upper reaches of the Orari River (N. Allen pers. comm.)

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, Marsh (Baillon's) Crake, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, Silvereye, Skylark, House Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Spotted Shag, Black-fronted Dotterel.

Protected area	Designation	Relationship with IBA
Spider Lagoon	Conservation Area	Protected area contained within site
Orari Riverbed	Conservation Area	Protected area contained within site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit); Coastal Brackish Lagoon	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Shrubland	Kanuka/manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting - intentional use (waterfowl - seasonal); Persecution	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

DOC River Survey Database 2013.

DOC 2013. CWMS: Orari-Opihi-Pareora Zone: Compilation of “Summary of intrinsic values” chapters from Canterbury Conservancy’s intrinsic values catchment reports. Orari River (DOCDM-128175)

Hughey, K.F.D. 1985b. The Orari, Opihi and their main tributary rivers – a wildlife survey in relation to channelisation, tree planting and gravel extraction. Unpublished File Report 38/8/3. New Zealand Wildlife Service, Christchurch.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Overmars, F.B. 1983. Part surveys of the Opihi and Orari Rivers. Unpublished File Report 15/2/11. Christchurch, New Zealand Wildlife Service, Department of Internal Affairs.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Schweigman, P. 1994. Opihi and Orari River wetland bird survey 1994. Unpublished Report. Dunedin, Ornithological Society of New Zealand.

NZo66	Opihi River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	44.191996°S, 171.043233°E (Hanging Rock bridge)
IBA criteria	A1
Area	2,758 ha
Altitude	0 - 500m
Year of Assessment	2013

Populations of IBA trigger species:

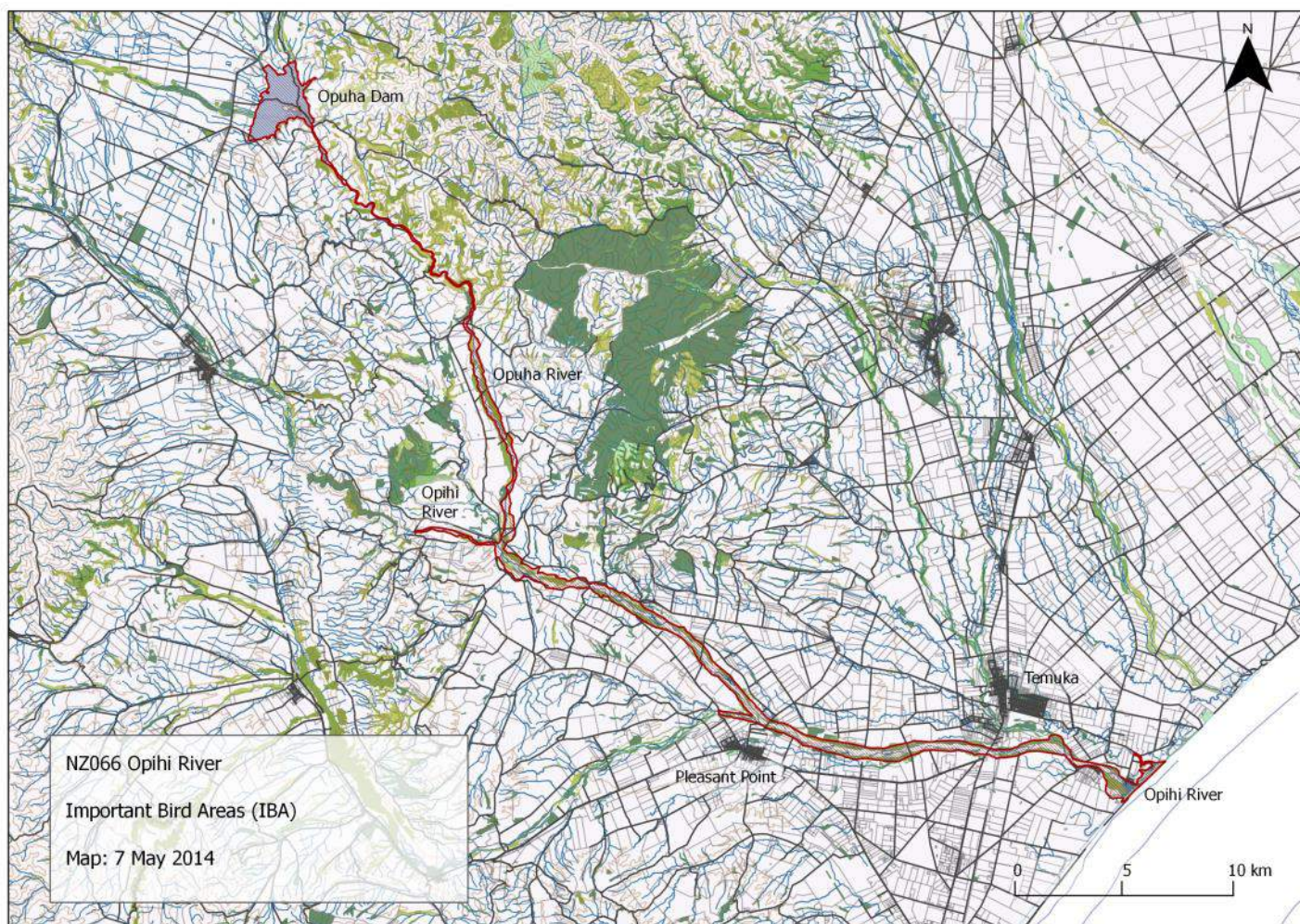
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1995-2014	1,741-3,824	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1983-2011	37-62	A1, A4i	EN	Nationally Vulnerable

Black Stilt (CR) have been observed at Opuha Dam (N. Allen pers. comm.)

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Australasian Shoveler, Mallard, Grey Duck, Grey Teal, NZ Scaup, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, White-fronted Tern, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, Silvereye. Rock Pigeon, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Australasian Crested Grebe, Australian Little Grebe, Royal Spoonbill, Spotted Shag, Variable Oystercatcher.

Protected area	Designation	Relationship with IBA
Milford Lagoon	Conservation Area	Protected area contained within site
Opihi River	Marginal Strip	Protected area contained within site
Opihi River	River Conservation Reserve	Protected area contained within site

IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit); Coastal Brackish Lagoon	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Artificial - Aquatic	Water Storage Area (Opuha Dam)	Minor



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting - intentional use (waterfowl - seasonal); Persecution	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

DOC River Survey Database 2013.

DOC 2013. CWMS: Orari-Opihi-Pareora Zone: Compilation of “Summary of intrinsic values” chapters from Canterbury Conservancy’s intrinsic values catchment reports. Opihi River (DOCDM-461980)

Hughey, K.F.D. 1985b. The Orari, Opihi and their main tributary rivers – a wildlife survey in relation to channelisation, tree planting and gravel extraction. Unpublished File Report 38/8/3. New Zealand Wildlife Service, Christchurch.

O’Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albostratus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Overmars, F.B. 1983. Part surveys of the Opihi and Orari Rivers. Unpublished File Report 15/2/11. Christchurch, New Zealand Wildlife Service, Department of Internal Affairs.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Schweigman, P. 1994. Opihi and Orari River wetland bird survey 1994. Unpublished Report. Dunedin, Ornithological Society of New Zealand.

NZo67	Waitaki River	Canterbury Otago
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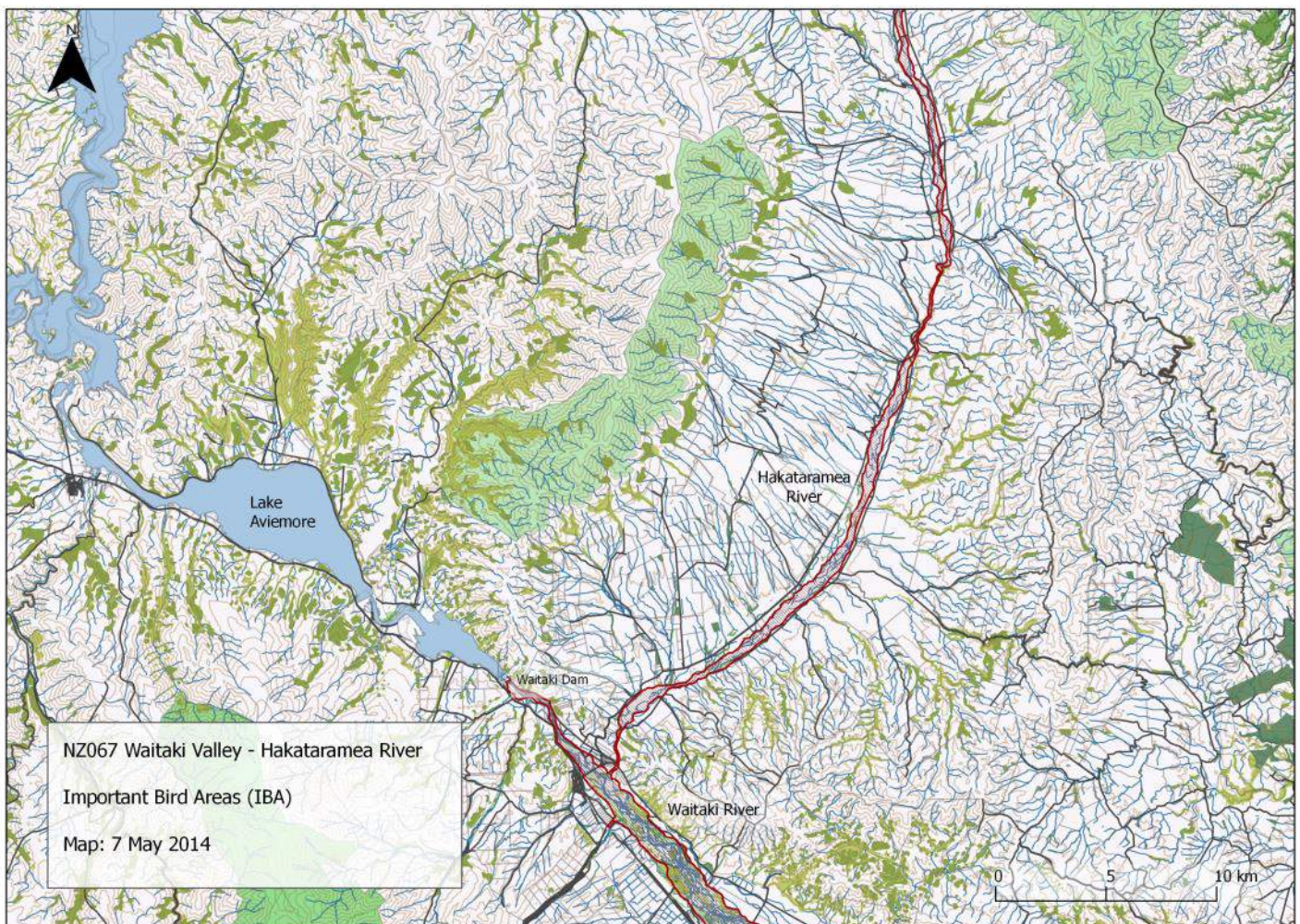
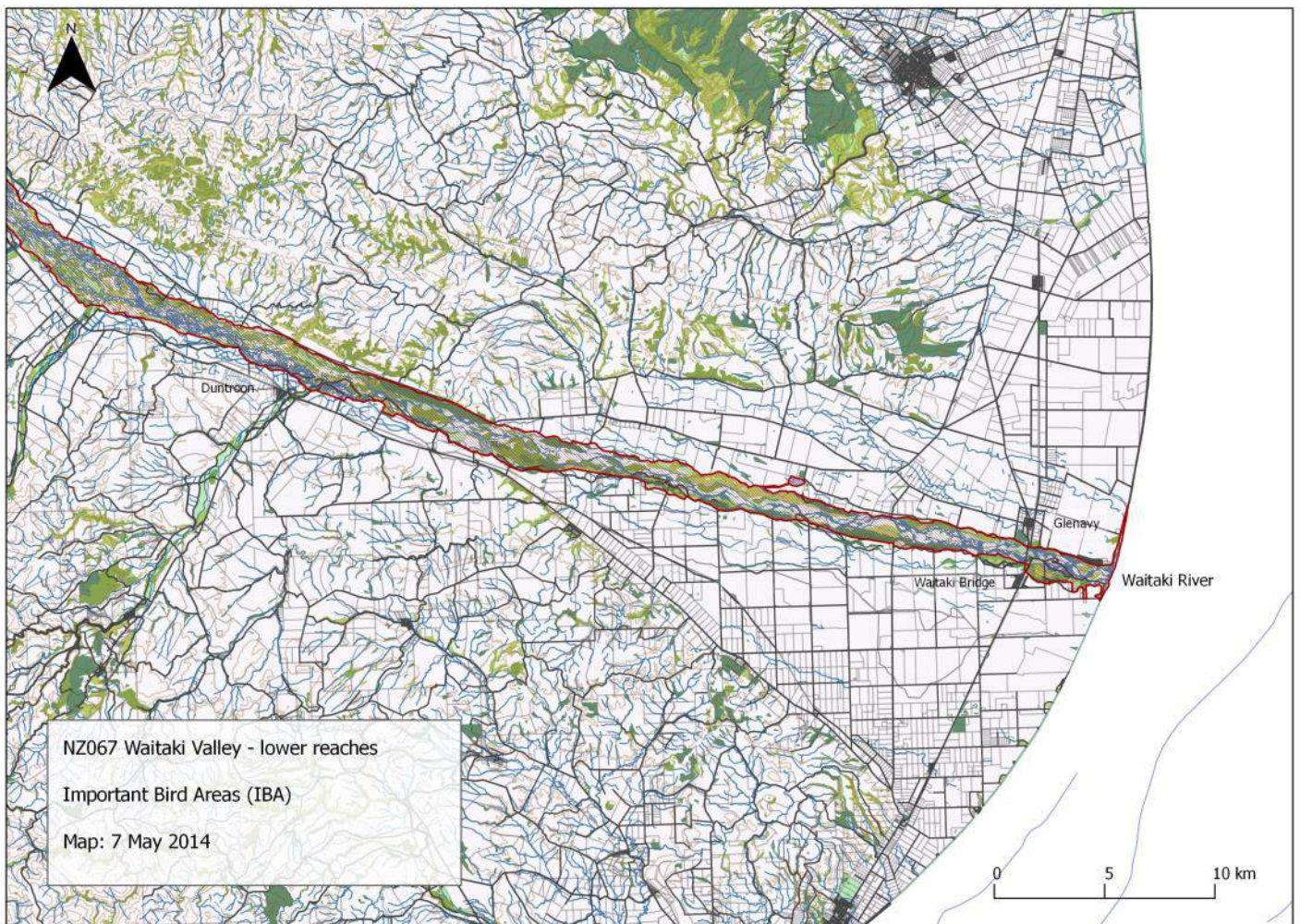
Location	New Zealand, Canterbury - Otago
Central coordinates	44.928155°S, 171.100456°E
IBA criteria	A1
Area	9,509 ha
Altitude	0 - 500m (Hakataramea)
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1970-2014	508-952	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1962-2011	111-231	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, South Island Pied Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, White-fronted Tern, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, Silvereye, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Spotted Shag, Stewart Island Shag, Great Egret (White Heron), Australasian Shoveler, Eastern Bar-tailed Godwit, Red-billed Gull,, Sulphur-crested Cockatoo, Cirl Bunting.

Protected area	Designation	Relationship with IBA
Waitaki River	Conservation Area	Protected area contained within site
Kaik	Fishing Reserve	Protected area contained within site
Waitaki Bridge	Marginal Strip	Protected area contained within site
Waitaki Bridge	Conservation Area	Protected area contained within site
Waitaki Riverbed	Conservation Area	Protected area contained within site
Waitaki River	Marginal Strip	Protected area contained within site
Black Point	Government Purpose (Wildlife Management)	Protected area contained within site
Hakataramea River	Conservation Area	Protected area contained within site



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouth (Estuary and Spit)	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches Hakataramea)	Major
Shrubland	Kanuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and beach users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Biological resource use	Hunting - intentional use (waterfowl - seasonal); Persecution	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Boffa Miskell 2006. North Bank Tunnel Concept water consents. Terrestrial ecology assessment. Report prepared for Meridian Energy. Christchurch, Boffa Miskell.

DOC River Survey Database 2013.

DOC 2013. CWMS: Lower Waitaki – South Coastal Canterbury Zone: Compilation of “Summary of intrinsic values” chapters from Canterbury Conservancy’s intrinsic values catchment reports. Waitaki (DOCDM-611864)

McKinlay, B. 1990. Manuhierikia River survey. Unpublished file report BIR 7. Dunedin, Department of Conservation.

O'Donnell, C.F.J., Moore, S.G.M. 1983. The wildlife and conservation of braided river systems in Canterbury. Fauna Survey Unit Report 33. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 73 p.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Law, E., de Hamel, R.J.B., Wakelin, D.J., Courtney, S.P. 1984. Habitat requirements of wetland birds in the lower Waitaki River catchment, New Zealand. Occasional Publication 6. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 769 p.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZo68	Godley Cass Rivers	Canterbury
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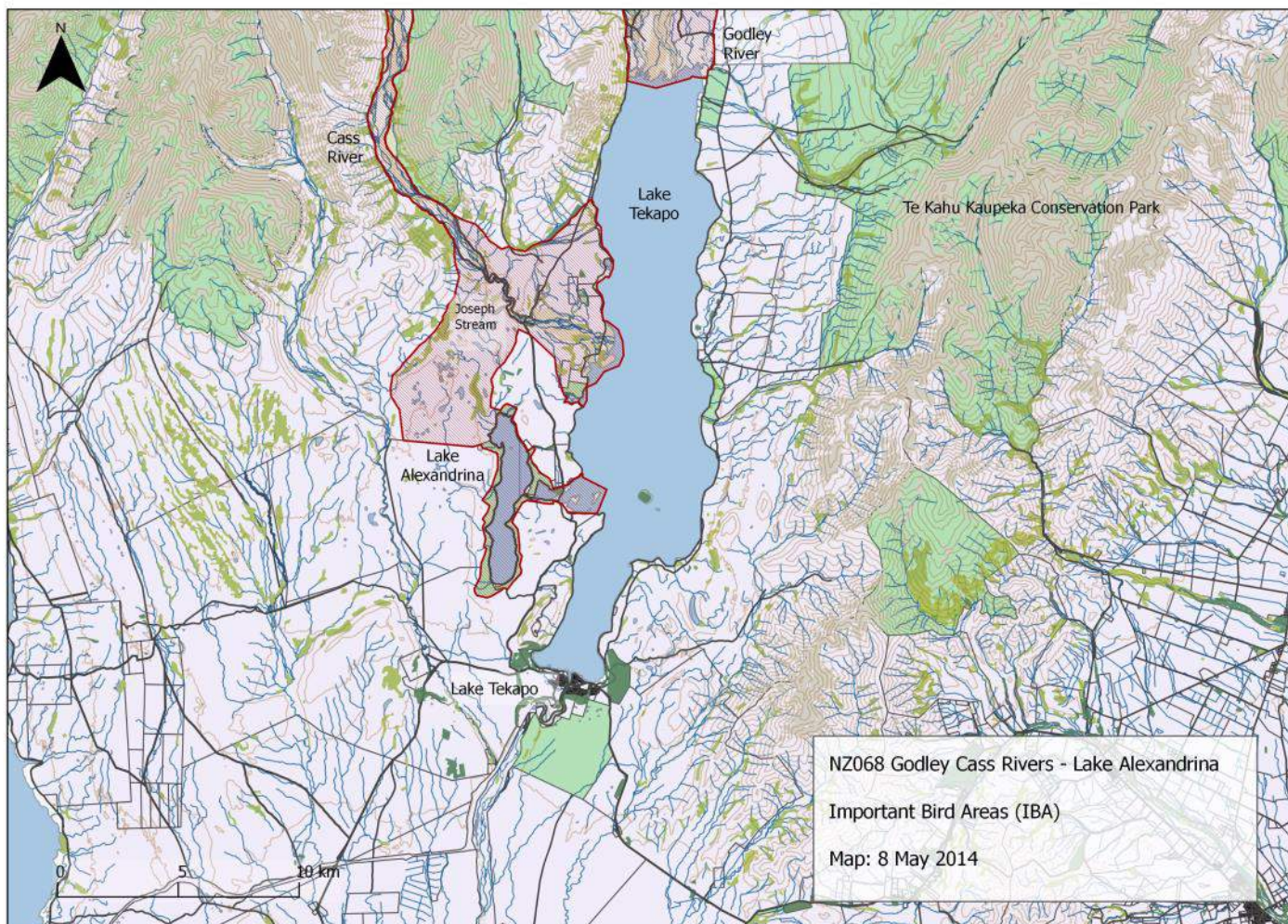
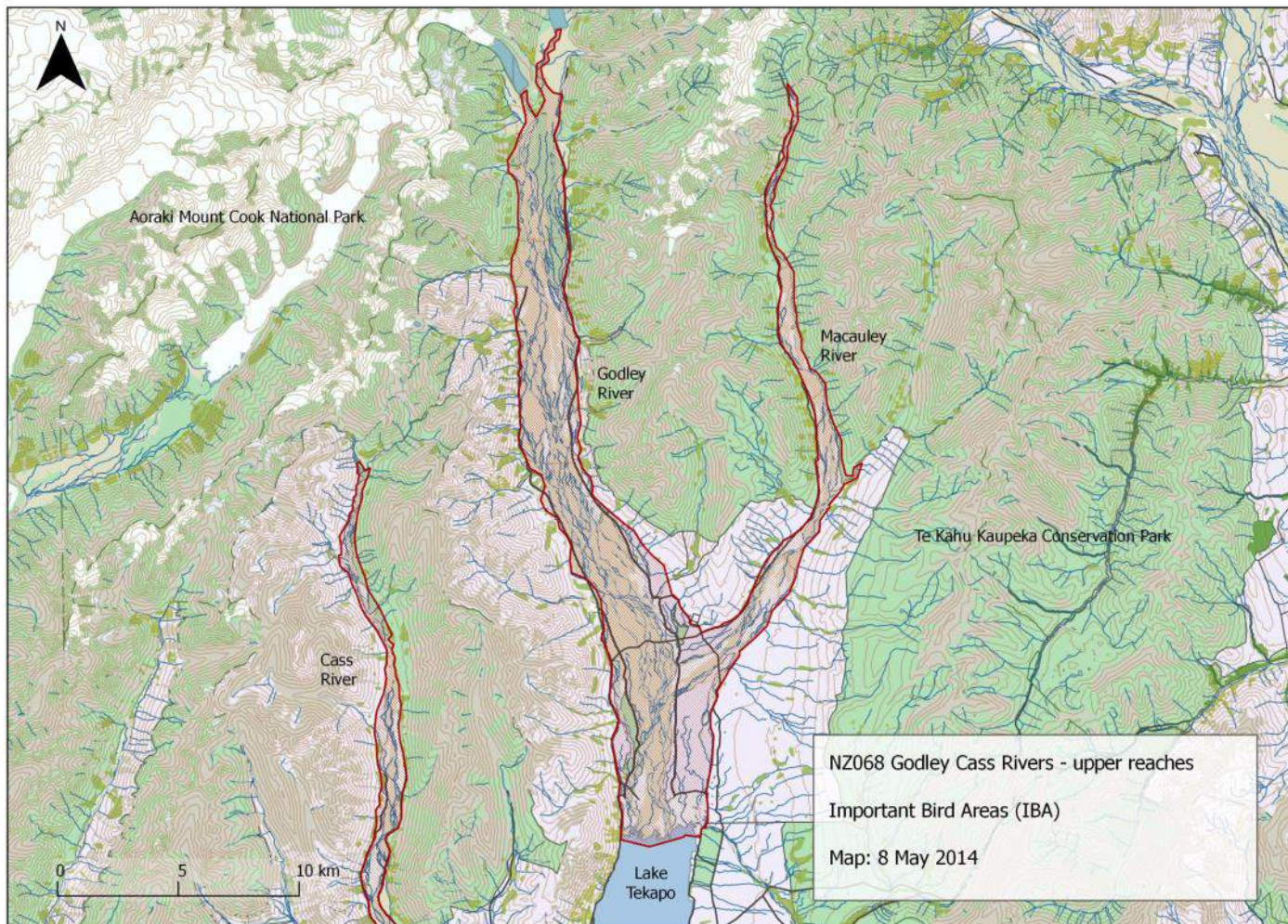
Location	New Zealand, Canterbury
Central coordinates	43.782670°S, 170.525442°E (Godley delta)
IBA criteria	A1, A4ii
Area	18,335 ha
Altitude	710 - 1035m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1970-1995	26-81	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1979-1993	70-224	A1, A4i	EN	Nationally Vulnerable
Black Stilt	Resident	1979-1992	6-17 (individuals)	A1	CR	Nationally Critical
Wrybill	Breeding	1979-1992	41-138	A1	VU	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, NZ Shoveler, Mallard, Grey Duck, Grey Teal, NZ Scaup, Australasian Harrier, Marsh (Baillon's) Crane, Pukeko, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Caspian Tern, Californian Quail, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Fantail, Grey Warbler, Bellbird, Silvereye, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: NZ Falcon, Kea (VU).

Protected area	Designation	Relationship with IBA
Aoraki Mount Cook	National Park	Protected area overlaps site
Lake Alexandrina	Scenic Reserve	Protected area is contained within site
Cass River Delta	Government Purpose (Wildlife Management)	Protected area is contained within site



Protected area (contd.)	Designation	Relationship with IBA
Cass River Delta	Conservation Area	Protected area is contained within site
Micks Lagoon	Conservation Area	Protected area is contained within site
Godley Riverbed	Conservation Area	Protected area is contained within site

The IBA includes some small sections of river flats and or borders the Godley Peaks Conservation Area and Te Kahui Kaupeka Conservation Park .

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); Permanent Lakes, Pools, Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupin, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Bell, B.D. 1994. 1960s Waitaki bird counts. Department of Conservation File Report HAB808 (116). Twizel, Department of Conservation.

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Maloney, R.F., Rebergen, A.L., Nilsson, R.J., Wells, N.J. 1997. Bird density and diversity in braided river beds in the Upper Waitaki Basin, South Island, New Zealand. *Notornis* 44: 219-232.

O'Donnell, C.F.J., Moore, S.G.M. 1983. The wildlife and conservation of braided river systems in Canterbury. Fauna Survey

Unit Report 33. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 73 p.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albostratus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

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Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Sedgeley, J., O'Donnell, C. 2006. Assessment of the fauna values (birds & lizards) of Glenmore Pastoral Lease. Unpublished Report. Christchurch, Department of Conservation.

NZo69	Tasman River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	43.905610°S, 170.175116°E (Tasman delta)
IBA criteria	A1, A4ii
Area	6,380 ha
Altitude	530 - 715m
Year of Assessment	2013

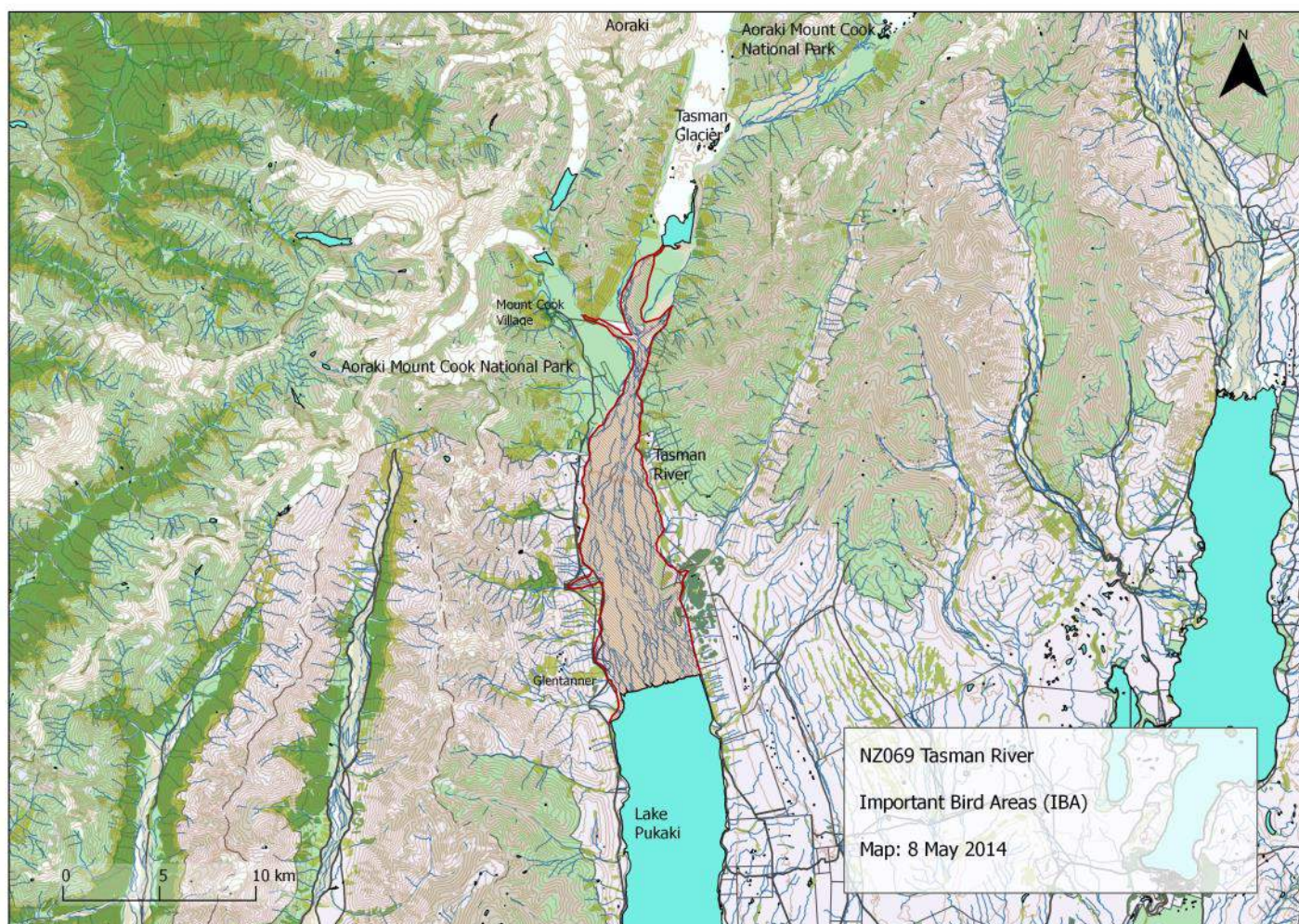
Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1992-1998	7,609-13,592	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1962-2008	38-58	A1, A4i	EN	Nationally Vulnerable
Black Stilt	Resident	1992	14 (individuals)	A1	CR	Nationally Critical
Wrybill	Breeding	1992	151 (individuals)	A1	VU	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, White-faced Heron, Canada Goose, Paradise Shelduck, NZ Shoveler, Grey Teal, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Fantail, Grey Warbler, Silvereye, Bellbird, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: NZ Falcon, , Kea (VU), Caspian Tern.

Protected area	Designation	Relationship with IBA
Aoraki Mount Cook	National Park	Protected area overlaps with site
Mt Cook Station	Conservation Area	Protected area overlaps with site

The IBA also borders sections of the protected areas listed above.



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupin; Pasture grasses & rank weeds	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Bell, B.D. 1994. 1960s Waitaki bird counts. Department of Conservation File Report HAB808 (116). Twizel, Department of Conservation.
- Cleland, S., Aitcheson, S., Barr, T., Stevenson, S., Wahlberg, E., Poritt, H., Fairhall, M., Murray, D., Nelson, D., Maloney, R. 2008. Predator Control Project report for Kaki Recovery Programme. A: Tasman Valley. B: Ahuriri Valley. Unpublished report. Twizel, Department of Conservation.
- DOC River Survey Database 2013.
- Maloney, R.F., Rebergen, A.L., Nilsson, R.J., Wells, N.J. 1997. Bird density and diversity in braided river beds in the Upper Waitaki Basin, South Island, New Zealand. *Notornis* 44: 219–232.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Wrybill on nest, Tasman River. Photo: Craig McKenzie



NZ070	Hopkins Dobson Rivers	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	44.106878°S, 169.874554°E (Hopkins Dobson confluence)
IBA criteria	A1
Area	9,631 ha
Altitude	530 - 890m
Year of Assessment	2013

Populations of IBA trigger species:

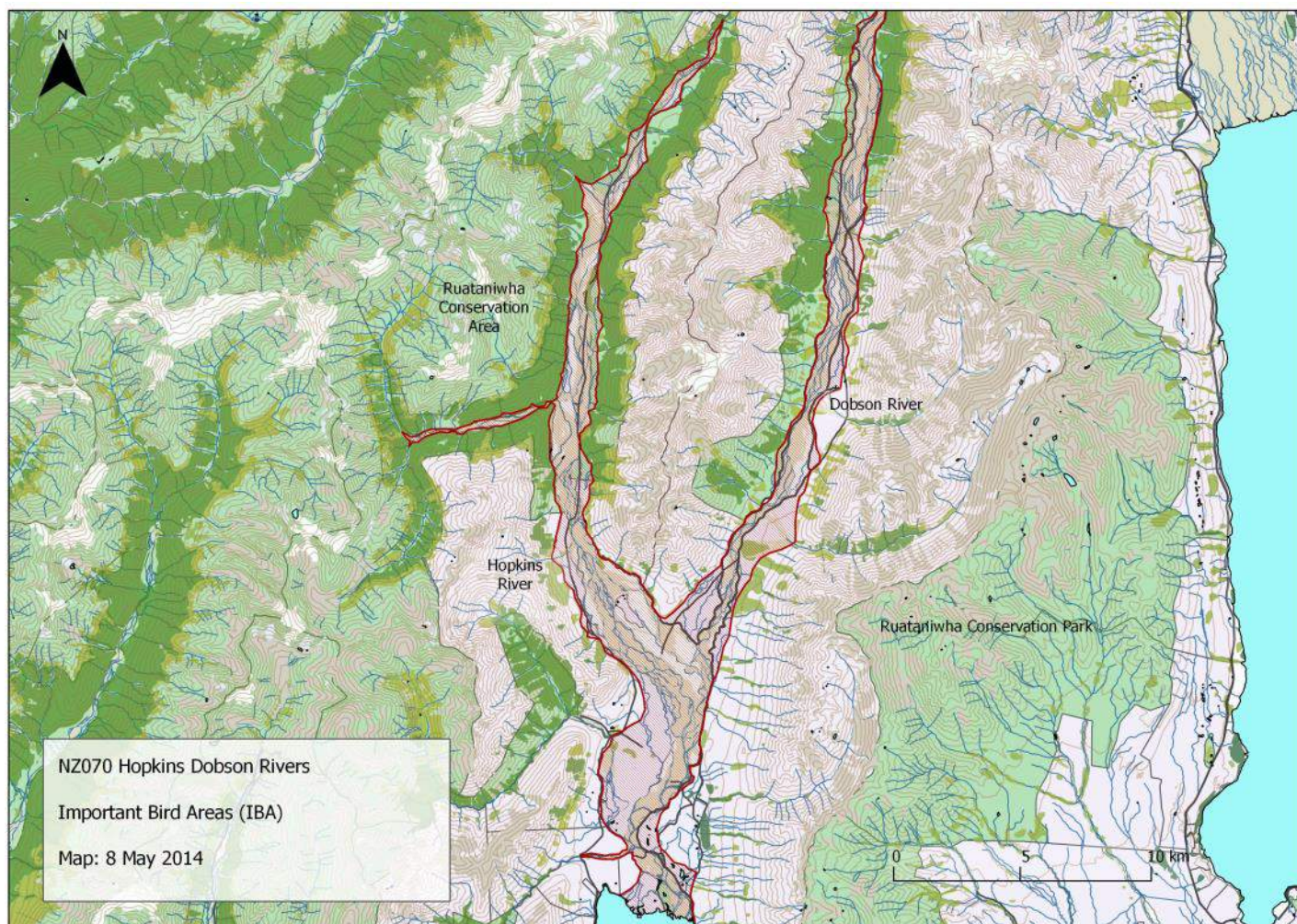
Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1970-1995	9 (individuals)	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1962-1994	35-71	A1, A4i	EN	Nationally Vulnerable
Black Stilt	Resident	1962-1994	3 (individuals)	A1	CR	Nationally Critical
Wrybill	Breeding	1992-1994	7-37	A1	VU	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, NZ Shoveler, Grey Teal, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, NZ Falcon, Marsh (Baillon's) Crake, Pukeko, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Caspian Tern, Rock Pigeon, Californian Quail, Shining Cuckoo, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Tomtit, South Island Fantail, Grey Warbler, Silvereye, Bellbird, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: NZ Falcon, Kea (VU).

Protected area	Designation	Relationship with IBA
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The IBA borders extensive sections of the Ruataniwha Conservation Park and includes a small area of the Ruataniwha Conservation Area near the head of Lake Ohau.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupin; Pasture grasses & rank weeds	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Bell B.D. 1994. 1960s Waitaki bird counts. Department of Conservation File Report HAB808 (116). Twizel, Department of Conservation.

DOC River Survey Database 2013.

Maloney, R.F., Rebergen, A.L., Nilsson, R.J., Wells, N.J. 1997. Bird density and diversity in braided river beds in the Upper Waitaki Basin, South Island, New Zealand. *Notornis* 44: 219–232.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962–2008. *New Zealand Journal of Ecology* 35: 32–43

NZ071	Ohau Pukaki Tekapo Rivers	Canterbury
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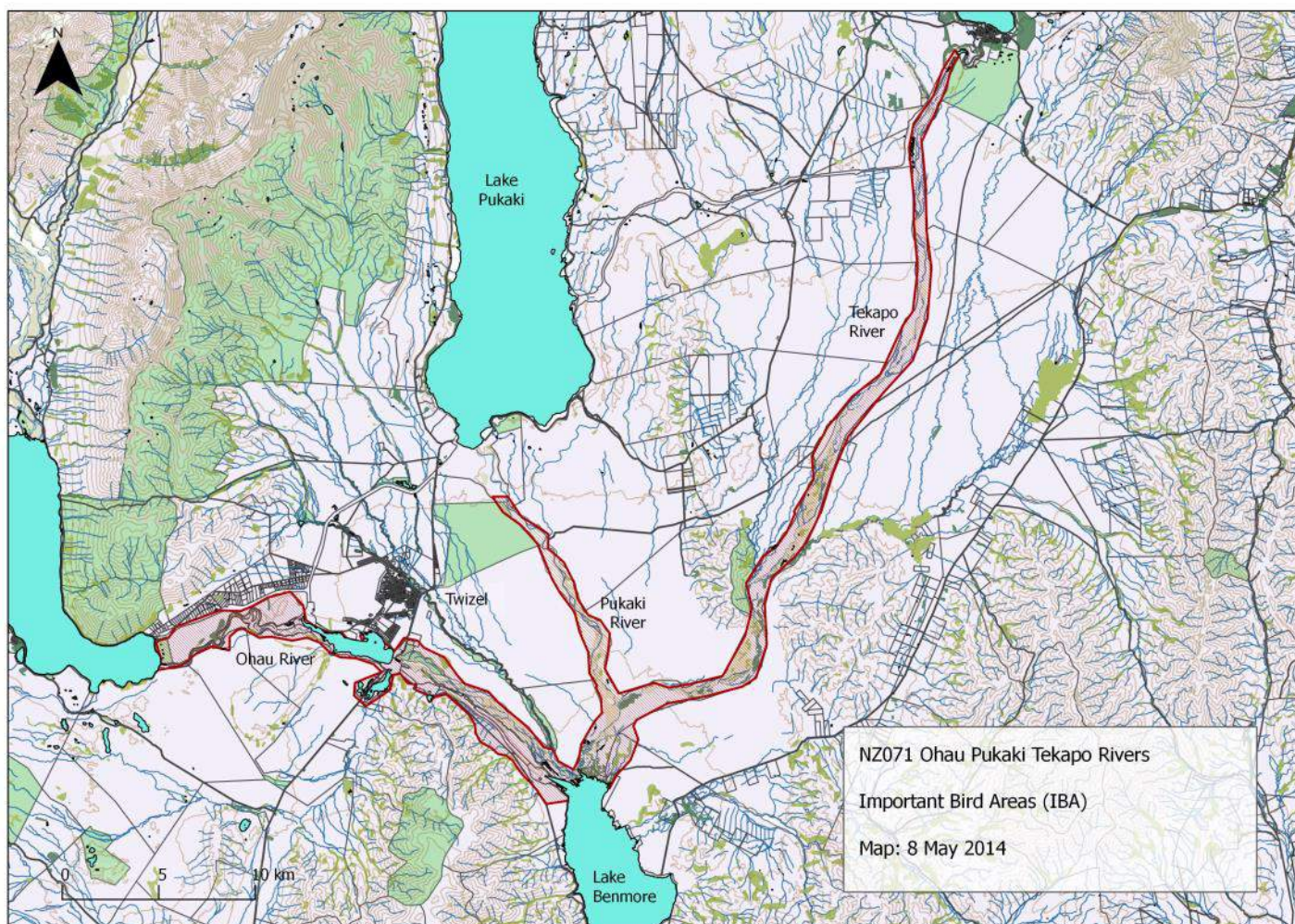
Location	New Zealand, Canterbury
Central coordinates	44.313335°S, 170.231712°E (Pukaki Tekapo confluence)
IBA criteria	A1, A4ii
Area	9,810 ha
Altitude	370 - 670m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	2009-2012	35-45	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	2009-2012	218-517	A1, A4i	EN	Nationally Vulnerable
Black Stilt	Resident	1991-1994	C.10	A1, A4i	CR	Nationally Critical
Wrybill	Breeding	1991-1994	C.21	A1	VU	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, NZ Shoveler, Grey Teal, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, Marsh (Baillon's) Crake, Pukeko, Australian Coot, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Caspian Tern, Rock Pigeon, Californian Quail, NZ Kingfisher, Welcome Swallow, NZ Pipit, Shining Cuckoo, South Island Fantail, Silvereye, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Chukor.

Protected area	Designation	Relationship with IBA
Lake Ruataniwha	Conservation Area	Protected area overlaps with site
Ohau River	Marginal Strip	Protected area is contained within site
Ohau Terminal Moraine	Scenic Reserve	Protected area is contained within site



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupins; Pasture grasses & rank weeds, willow margins	Major
Artificial - Aquatic	Water Storage Areas; Canals	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Dams & water management/use - large dams	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Bell, B.D. 1994. 1960s Waitaki bird counts. Department of Conservation File Report HAB808 (116). Twizel, Department of Conservation.

DOC River Survey Database 2013.

Maloney, R.F., Rebergen, A.L., Nilsson, R.J., Wells, N.J. 1997. Bird density and diversity in braided river beds in the Upper Waitaki Basin, South Island, New Zealand. *Notornis* 44: 219–232.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albostratus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ072	Ahuriri River	Canterbury
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Location	New Zealand, Canterbury
Central coordinates	44.470296°S, 169.988365°E (SH8 bridge Omarama)
IBA criteria	A1, A4ii
Area	8972 ha
Altitude	370 - 1000m
Year of Assessment	2013

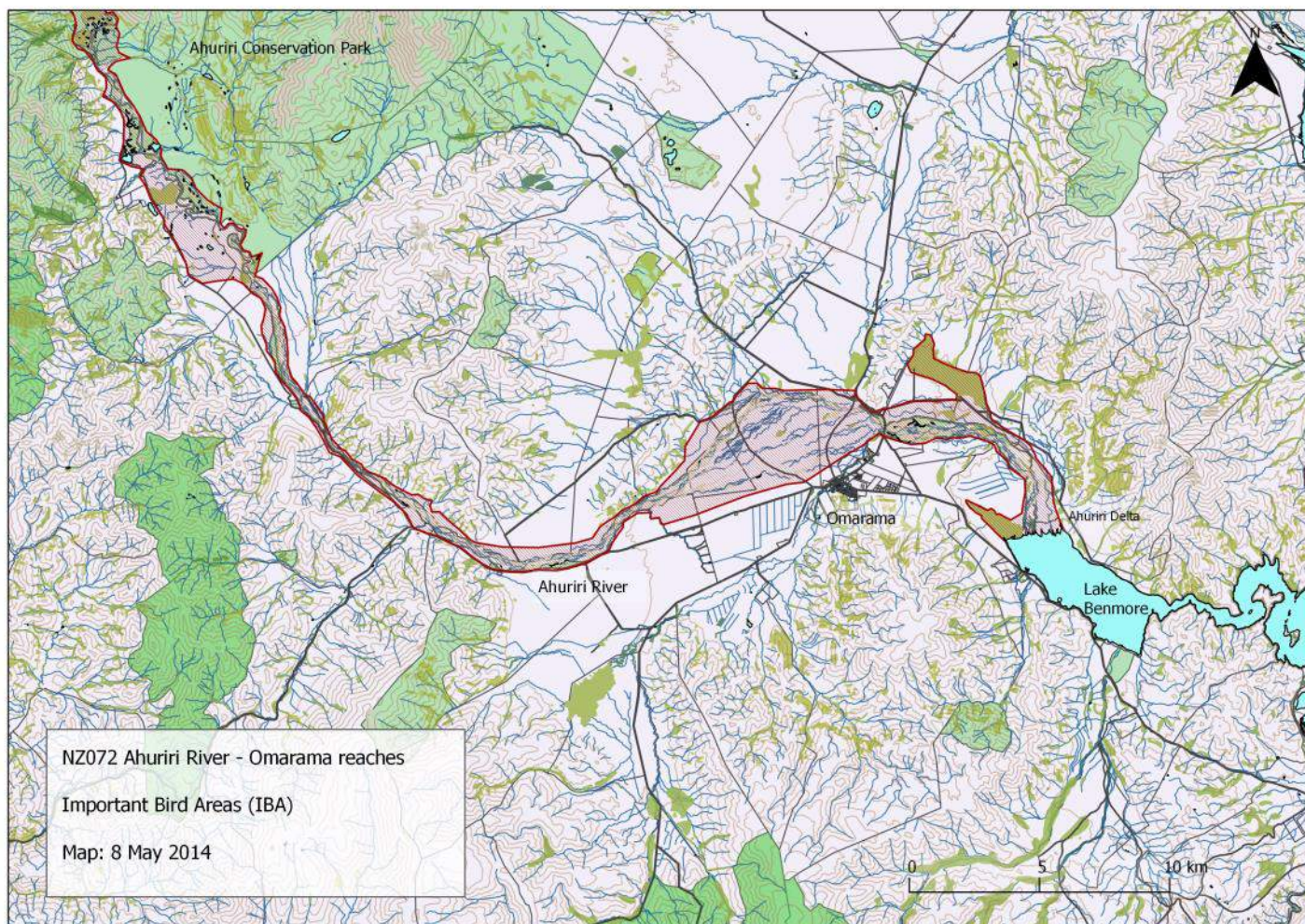
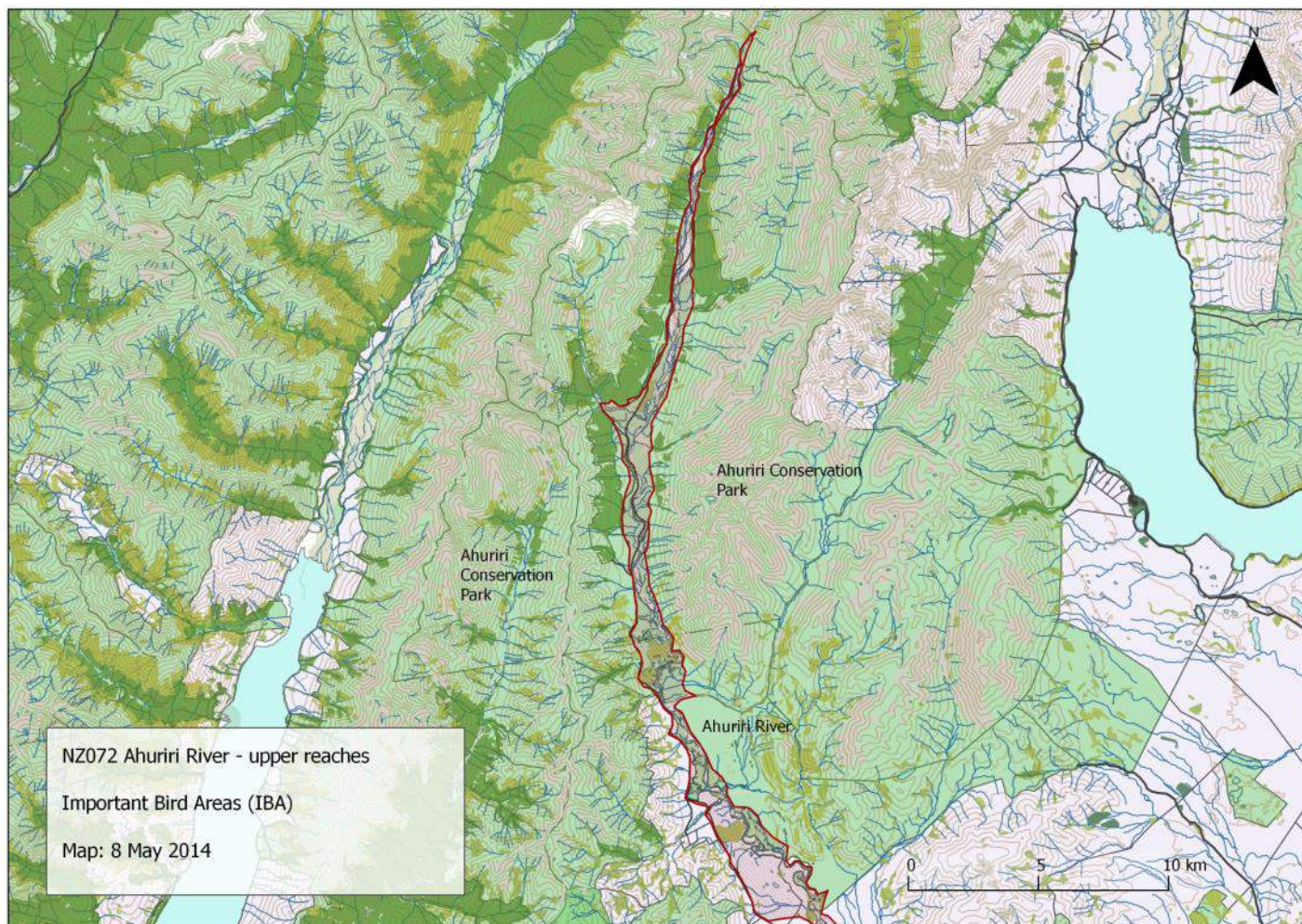
Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1960-2001	142-221	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1960-2001	201-296	A1, A4i	EN	Nationally Vulnerable
Black Stilt	Resident	1960-2001	31-34 (individuals)	A1, A4i	CR	Nationally Critical
Wrybill	Breeding	1960-2001	19-28	A1	VU	Nationally Vulnerable
Australasian Bittern	Resident		Resident	A1	EN	Nationally Endangered

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, NZ Shoveler, Grey Teal, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, Marsh (Baillon's) Crake, Spotless Crake, Pukeko, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Caspian Tern, Rock Pigeon, Californian Quail, Shining Cuckoo, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Tomtit, South Island Fantail, Grey Warbler, Silvereye, Bellbird, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: NZ Falcon.

Protected area	Designation	Relationship with IBA
Ahuriri	Marginal Strip	Protected area is contained within site
Ben Avon	Marginal Strip	Protected area is contained within site
Lower Ahuriri Riverbed	Conservation Area	Protected area is contained within site
Ben Omar Wetland	Government Purpose (Wildlife Management)	Protected area is contained within site

The IBA includes significant areas of the Ahuriri Conservation Park, especially in the upper reaches.



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupins; Pasture grasses & rank weeds; willow margins	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

References:

Bell, B.D. 1994. 1960s Waitaki bird counts. Department of Conservation File Report HAB808 (116). Twizel, Department of Conservation.

DOC River Survey Database 2013.

Maloney, R.F., Rebergen, A.L., Nilsson, R.J., Wells, N.J. 1997. Bird density and diversity in braided river beds in the Upper Waitaki Basin, South Island, New Zealand. *Notornis* 44: 219–232.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Robertson, C.J.R., Law, E., de Hamel, R .J.B., Wakelin, D.J., Courtney, S.P. 1984. Habitat requirements of wetland birds in the lower Waitaki River catchment, New Zealand. Occasional Publication 6. Wellington, New Zealand Wildlife Service, Department of Internal Affairs. 769 p.

Robertson C.J.R., Hyvönen P., Fraser M.J., Pickard C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Orni-

NZ087	Lower Clutha River Mata-Au	Otago
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Location	New Zealand, Otago
Central coordinates	45.818571°S, 169.527283°E (Beaumont Bridge), 46.345091°S, 169.810524°E (Clutha R. mouth - Koau Branch)
IBA criteria	A1
Area	3,155 ha
Altitude	0 - 50m
Year of Assessment	2013

Populations of IBA trigger species:

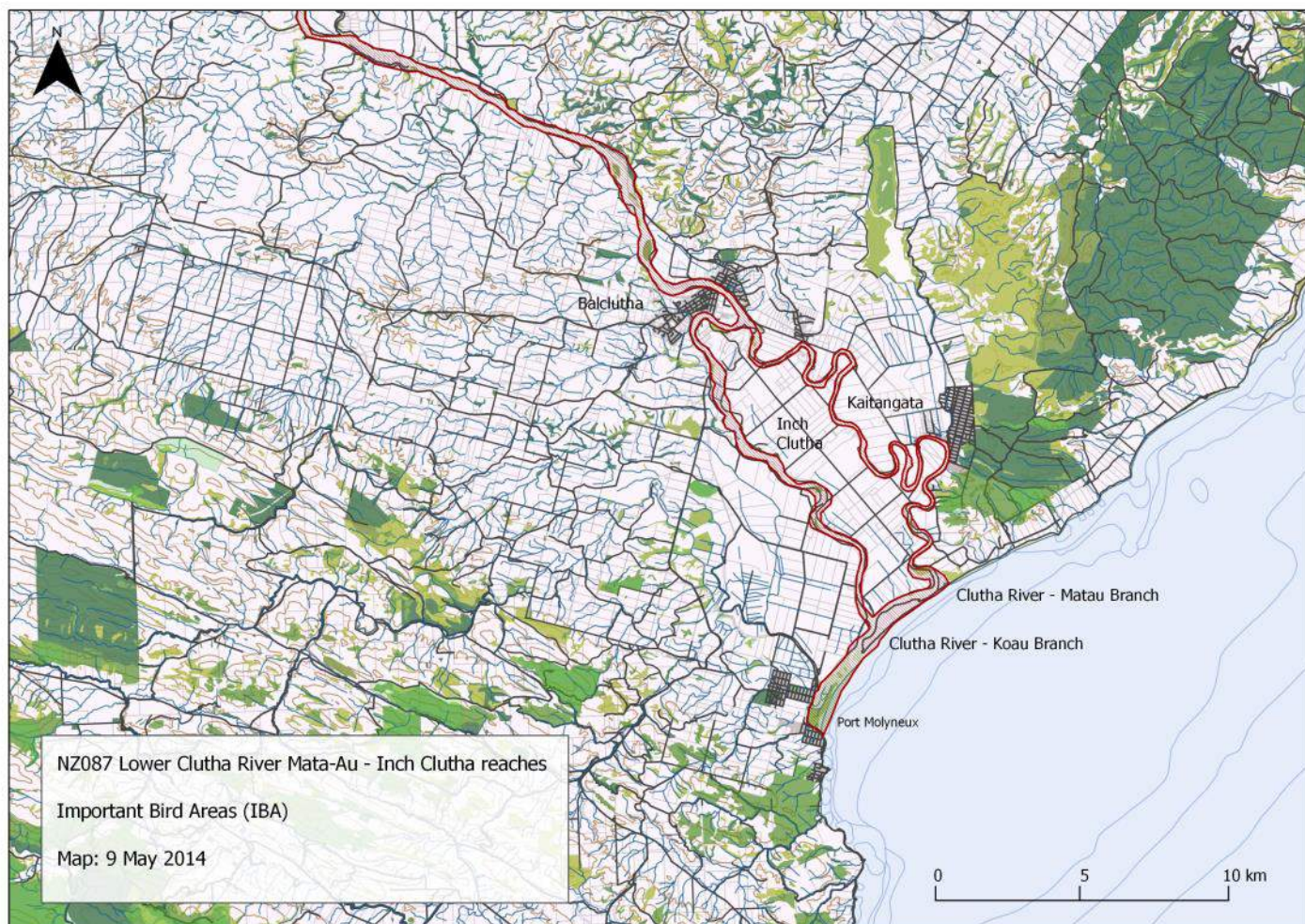
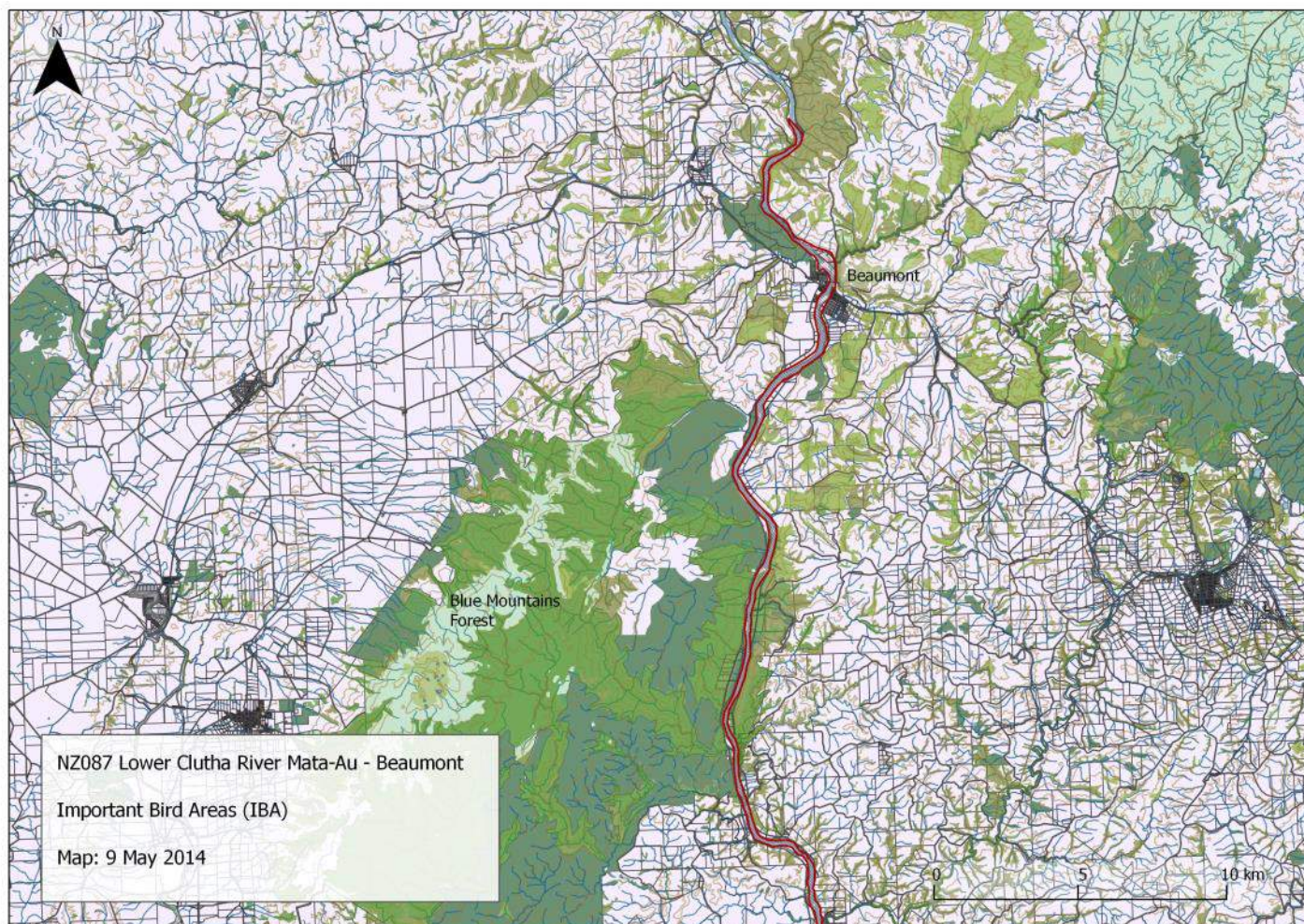
Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1985	494 (nests)	A1, A4i	EN	Nationally Critical
Black-fronted Tern ¹	Breeding	1985	12 (individuals)	A1	EN	Nationally Vulnerable

¹ Recent (2013) ad-hoc observations from the Beaumont bridge and comments from locals suggest a greater number breeding on islands both upstream and downstream from the bridge.

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Paradise Shelduck, Grey Duck, Australasian Harrier, Variable Oystercatcher, Spur-winged Plover, Southern Black-backed Gull, Red-billed Gull, Black Swan, Mallard, Rock Pigeon, NZ Pipit, Grey Warbler, Silvereye, Bellbird, Tui, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded include: Royal Spoonbill, South Island Pied Oystercatcher, Eastern Bar-tailed Godwit, Pied Stilt, Banded Dotterel, Caspian Tern, White-fronted Tern.

Protected area	Designation	Relationship with IBA
Puerua	Wildlife Management Reserve	Protected area contained within site
Clutha River Mouth	Conservation Area	Protected area contained within site
Clutha River	Marginal Strip	Protected area contained within site
Gull Island	Conservation Area	Protected area contained within site
Clydevale/Clutha River	Conservation Area	Protected area contained within site

The IBA includes sections of riverbank and an island, part of the Blue Mountains Forest Conservation Area. It also borders some of the Tupeka West “Scenic Reserve.” Conservation Area.



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Intertidal	Shingle Shoreline	Minor
Marine Coastal/Supratidal	Rivermouths (Estuary and Spit); Coastal Brackish Lagoons	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds; Small Swamps	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech along margins of IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Domestic & urban waste water - run-off	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Hughey, K.F.D., Smith, L.A., Preston, D.C. 1986. Birds of the lower Clutha River, their distribution and habitat use. Occasional Publication 11. Wellington, New Zealand Wildlife Service, Department of Internal Affairs.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZo88	Hunter River	Otago
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Location	New Zealand, Otago
Central coordinates	44.277286°S, 169.457932°E (Hunter delta)
IBA criteria	A1
Area	2,759 ha
Altitude	348 - 560m
Year of Assessment	2013

Populations of IBA trigger species:

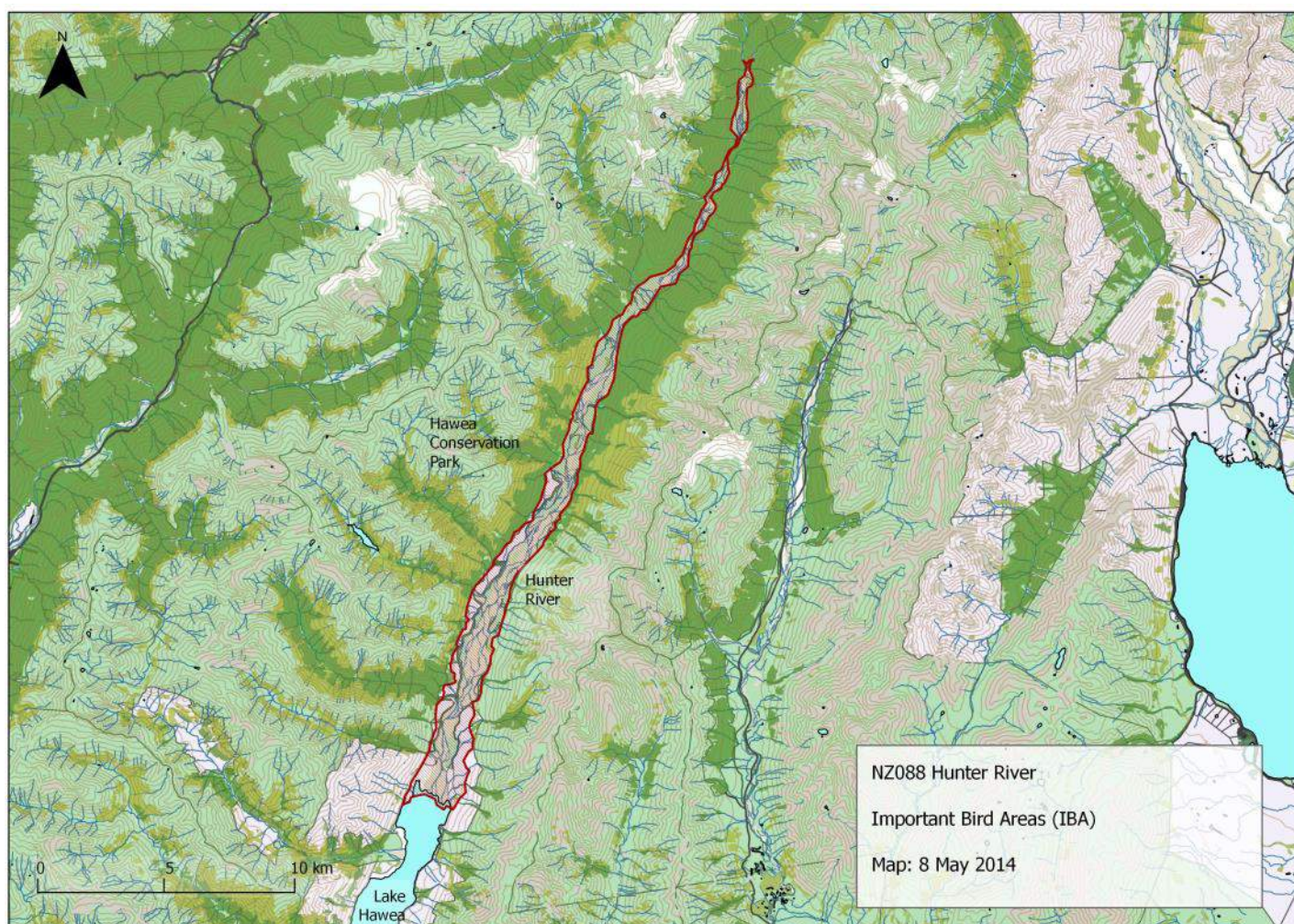
Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1969-2010	66-193	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1970-1995	44-62	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Fantail, South Island Tomtit, Grey Warbler, Silvereye, Bellbird, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Little Shag, NZ Falcon.

Protected area	Designation	Relationship with IBA
Hunter River	Marginal Strip	Protected area contained within site
Hunter River	Conservation Area	Protected area contained within site

The IBA includes areas (river flats) of the Hawea Conservation Park.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupins; Pasture grasses & rank weeds; willow margins	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Child, P. 1960. The Hunter Valley, north-west Otago. *Notornis* 8: 189–191.
- Gaud, F. 2007. Bird river survey, Hunter River, November 2007. Unpublished report. Wanaka, Department of Conservation
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

NZo89	Makarora	Otago
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Location	New Zealand, Otago
Central coordinates	44.273783°S, 169.185591°E (Makarora Wilkin confluence)
IBA criteria	A1
Area	4,080 ha
Altitude	279 - 400m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1966-2009	142-344	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1970-1995	16-36	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, NZ Falcon, South Island Pied Oystercatcher, Pied Stilt, Wrybill (VU), Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Fantail, South Island Tomtit, Grey Warbler, Silvereye, Bellbird, Tui, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Little Shag.

NB: Yellowhead (EN), Kea (VU), Kaka (EN), Yellow-crowned Parakeet (NT), Long-tailed Cuckoo (LC), Shining Cuckoo (LC), Morepork (LC), South Island Robin (LC), Brown Creeper (LC) and Rifleman (LC) are found in adjacent forest areas (Mount Aspiring National Park). These will be included in the IBA network in the next round (i.e. identifying sites triggered primarily by land-, water- and shore- birds).

Protected area	Designation	Relationship with IBA
Makarora River	Marginal Strip	Protected area contained within site
Wilkin River River	Marginal Strip	Protected area contained within site

The IBA includes areas (river flats) of the Mount Aspiring National Park in the Makarora and Wilkin River valleys.



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupins; Pasture grasses & rank weeds; willow margins	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Golding, C. 2006. Makarora River bird survey: October 2006. Unpublished report, Wanaka, Department of Conservation.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albosriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZogo	Matukituki River	Otago
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Location	New Zealand, Otago
Central coordinates	44.481075°S, 168.819695°E (confluence of East and West Branches)
IBA criteria	A1
Area	6,015 ha
Altitude	279 - 440m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1970-2011	320-952	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1971-2007	39-92	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Fantail, South Island Tomtit, Grey Warbler, Silvereye, Bellbird, Tui, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Black Shag, Little Shag, NZ Falcon, Black Swan.

NB: Kea (VU), Kaka (EN), Yellow-crowned Parakeet (NT), Long-tailed Cuckoo (LC), Shining Cuckoo (LC), Morepork (LC), Brown Creeper (LC) and Rifleman (LC) are found in adjacent forest areas; these will possibly be included in the IBA network in the next round (i.e. identifying sites triggered primarily by land-, water- and shore- birds).

Protected area	Designation	Relationship with IBA
Matukituki River	Marginal Strip	Protected area contained within site
West Wanaka Bluffs	Conservation Area	Protected area overlaps site
Matakitaki Bluff	Conservation Area	Protected area overlaps site
Little Boggy Wetlands	Conservation Area	Protected area contained within site
Matakitaki	Wetland Reserve	Protected area contained within site
Big Boggy Wetlands	Conservation Area	Protected area contained within site

The IBA includes borders and areas (river flats) of the Mount Aspiring National Park.



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupins; Pasture grasses & rank weeds; willow margins	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albastriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Thorne, S. 2005. Matukituki River survey. Unpublished report. Wanaka, Department of Conservation.

NZ091	Dunstan Upper Clutha River	Otago
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Location	New Zealand, Otago
Central coordinates	44.932603°S, 169.257946°E (Dunstan Clutha delta)
IBA criteria	A1
Area	2,236 ha
Altitude	200 - 279m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-fronted Tern	Breeding	2000-2012	35 (nests)	A1, A4i	EN	Nationally Vulnerable

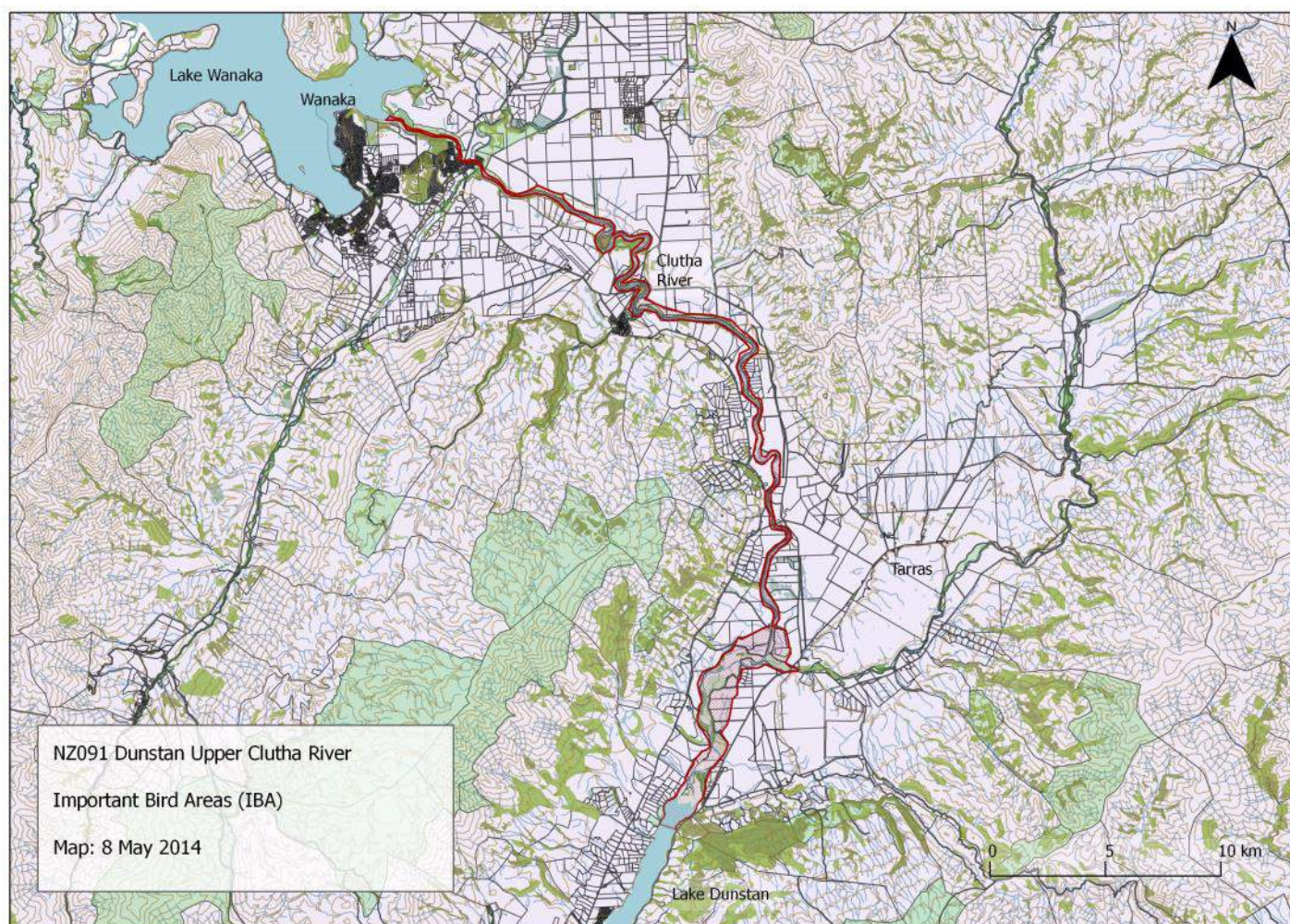
Black Stilt (CR) and Black-billed Gull (EN). Have also been recorded on the river and at the head of Lake Dunstan.

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Australasian Crested Grebe, Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, NZ Shoveler, Grey Teal, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, Marsh (Baillon's) Crake, Pukeko, Australian Coot, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Caspian Tern, Californian Quail, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Shining Cuckoo, South Island Fantail, Silvereye, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Protected area	Designation	Relationship with IBA
Clutha River	Marginal Strip	Protected area contained within site

The IBA borders the Hikuwai Conservation Area and Dublin Bay - Outlet - Albert Town recreation Reserve.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds; Swamps; Permanent Inland Delta; Permanent Freshwater Lake (head of Lake Dunstan)	Major
Introduced Vegetation	Broom, gorse, lupin; Pasture grasses & rank weeds; Willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (rivers)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ092	Dart Rees Rivers	Otago
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Location	New Zealand, Otago
Central coordinates	44.773793°S, 168.325396°E (Dart Bridge)
IBA criteria	A1, (A4ii)
Area	6,387 ha
Altitude	308 - 500m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1967-2007	129-352	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1967-2010	34-73	A1, A4i	EN	Nationally Vulnerable
Wrybill	Breeding	1967-2007	25-41 (individuals)	A1	VU	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Pigeon, NZ Kingfisher, Shining Cuckoo (LC), Welcome Swallow, NZ Pipit, South Island Fantail, South Island Tomtit, Grey Warbler, Silvereye, Bellbird, Tui, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: NZ Falcon, White-winged Black Tern.

NB: Yellowhead (EN), Kea (VU), Kaka (EN), Yellow-crowned Parakeet (NT), Long-tailed Cuckoo (LC), Shining Cuckoo, Morepork (LC), South Island Robin (LC), Brown Creeper (LC) and Rifleman (LC) are found in adjacent forest areas (Mount Aspiring National Park); these will be included in the IBA network in the next round (i.e. identifying sites triggered primarily by land-, water- and shore- birds).

Protected area	Designation	Relationship with IBA
Glenorchy Lagoon	Wildlife Management Reserve	Protected area contained within site
Pt Run 701 (borders the Glenorchy Lagoon)	Conservation Area	Protected area overlaps site
Kinloch Foreshore “Reserve”	Conservation Area	Protected area overlaps site
Kinloch Wetlands	Conservation Area	Protected area contained within site
Dart River	Marginal Strip	Protected area contained within site
Woodbine Island	Conservation Area	Protected area contained within site



Protected area (contd.)	Designation	Relationship with IBA
Dart Bridge	Conservation Area	Protected area contained within site
Dart Beach	Conservation Area	Protected area contained within site
Rees River	Marginal Strip	Protected area contained within site
Diamond Lake and Lake Reid	Wildlife Management Reserve	Protected area contained within site
Rees River	Conservation Area	Protected area contained within site

The IBA borders and includes areas of the Munt Aspiring National Park, Routeburn Scenic Reserve, Mount Alfred Conservation Area and Recreation Reserve, Lower Dart Conservation Area,

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupins; Pasture grasses & rank weeds; willow margins	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

References:

- Lawrence, B. 2007. Dart braided river bird survey, October 2001. Unpublished report, Queenstown, Department of Conservation.
- McKinlay, B. 1995. Dart and Rees River survey. Unpublished file report WAT 4/3. Dunedin, Department of Conservation.
- McKinlay, B. , Smale, A. 2001. The effect of jetboat wake on braided riverbed birds on the Dart River. *Notornis* 48: 72-75
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43



Black-fronted Tern on nest in storm, Dart River.
Artwork: Chris Gaskin

NZ093	Greenstone Caples Rivers	Otago
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Location	New Zealand, Otago
Central coordinates	44.932238°S, 168.327370°E (Greenstone Caples confluence)
IBA criteria	A1
Area	819 ha (Greenstone) 655 ha (Caples)
Altitude	308 - 620m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull ¹	Breeding	1996	No counts	A1	EN	Nationally Critical
Black-fronted Tern ¹	Breeding	1996	No counts	A1	EN	Nationally Vulnerable
Weka	Resident		Present	A1	VU	Nationally Vulnerable

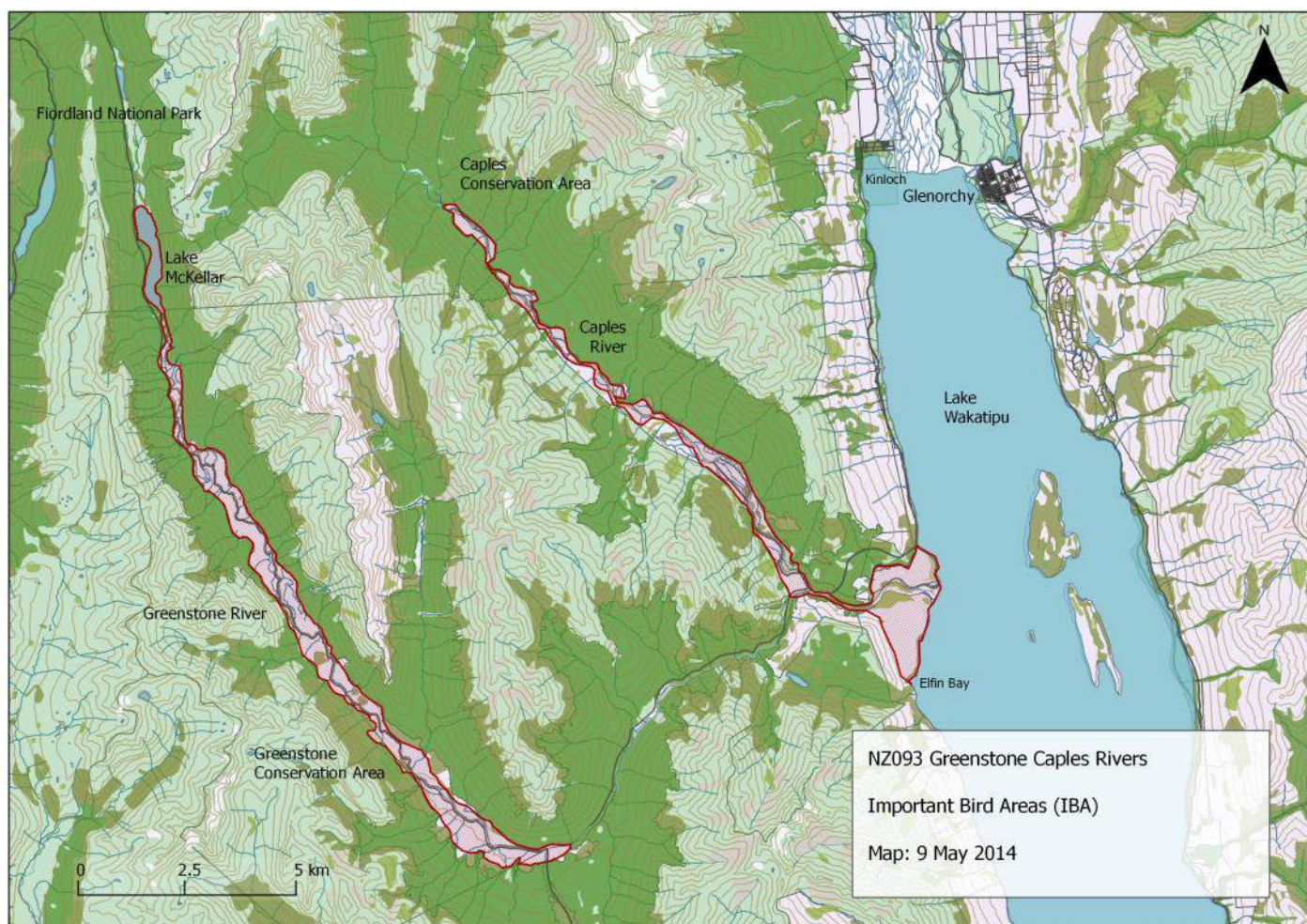
¹ Both these species are reported for the two valleys with 'large' (Black-billed Gull) and 'small' (Black-fronted Tern) colonies recorded for the Lower Clutha Flats (Cromarty & Scott 1996).

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Kingfisher, Shining Cuckoo, Welcome Swallow, NZ Pipit, South Island Fantail, South Island Tomtit, Grey Warbler, Silvereye, Bellbird, Tui, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Little Shag, NZ Falcon, NZ Pigeon.

NB: Kea (VU), Kaka (EN), Yellow-crowned Parakeet (NT), Long-tailed Cuckoo (LC), Morepork (LC), South island Robin (LC), Brown Creeper (LC) and Rifleman (LC) are found in adjacent forest areas; these may be included in the IBA network in the next round (i.e. identifying sites triggered primarily by land-, water- and shore- birds).

Protected area	Designation	Relationship with IBA
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Almost the entire IBA borders Caples Conservation Area, Greenstone Road Recreation Reserve,
Some sections of the Lake Rere Recreation Reserve and Fiordland National Park are included in the IBA.



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds (Braided River); , Swamps; Permanent inland Deltas	Major
Introduced Vegetation	Lupins; Pasture grasses & rank weeds; willow margins	Major
Grasslands	Tussock on river flats; also Tundra-like mat plants	Major
Shrubland	Matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by lake and river users.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd

Threat Level	Notes	Timing	Scope	Severity
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

References:

Cromarty, P (Compiler) and Scott, D.A. (Ed) 1996, A directory of wetlands in New Zealand. Department of Conservation. Available online.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ094	Nevis Shotover Rivers	Otago
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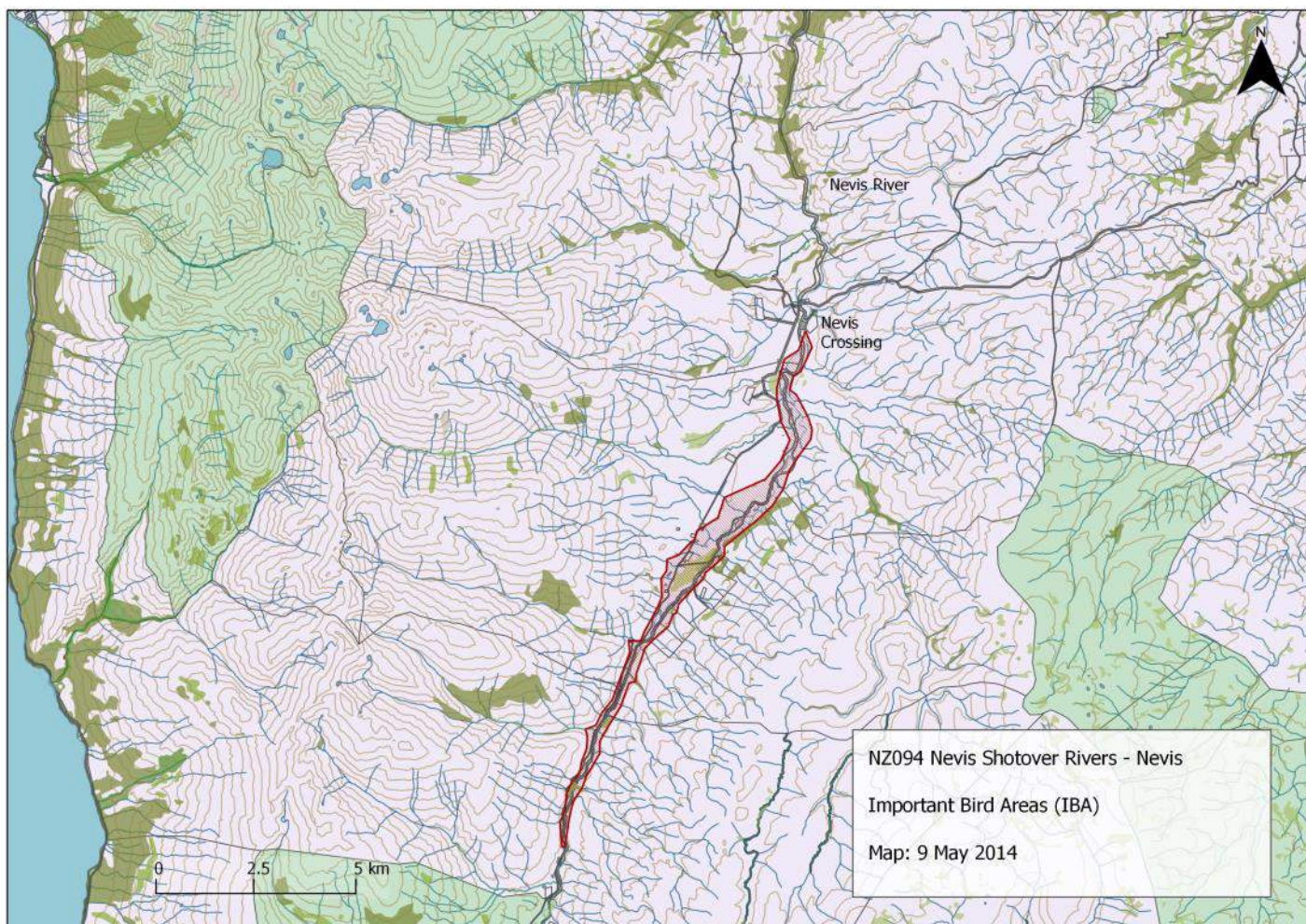
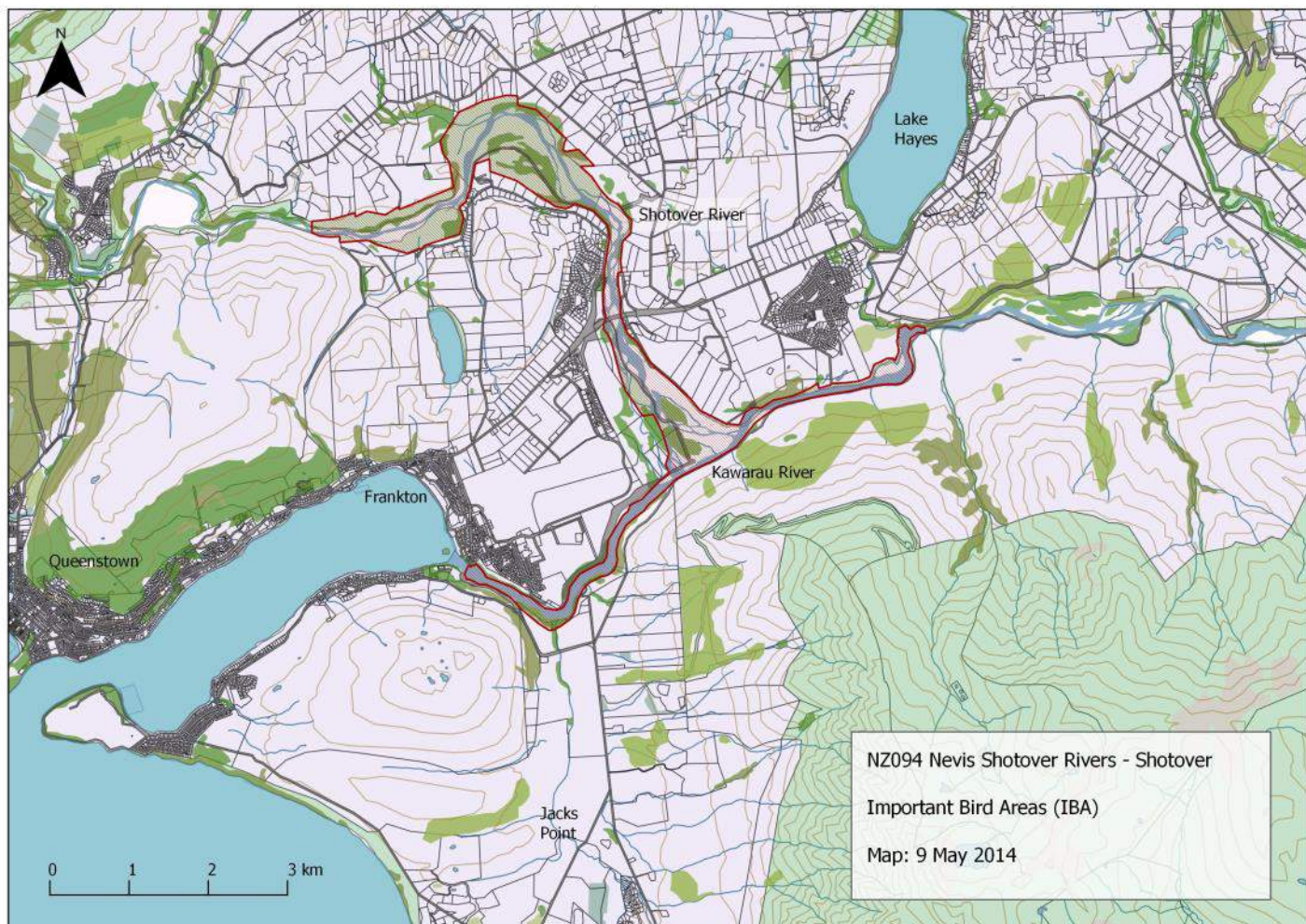
Location	New Zealand, Otago
Central coordinates	45.174293°S, 168.996162°E (Nevis Crossing)
IBA criteria	A1
Area	685 ha
Altitude	650 - 700m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding		No counts	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1967-2008	13-52	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: White-faced Heron, Paradise Shelduck, Australasian Harrier, NZ Falcon, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Pipit, Silvereye, Bellbird, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: NZ Falcon.

Protected area	Designation	Relationship with IBA
Kawerau River	Marginal Strip	Protected area overlaps site
Shotover River Sewage Treatment	Conservation Area	Protected area contained within site
Tuckers Beach	Wildlife Management Reserve	Protected area contained within site
Tuckers Beach	Recreation Reserve	Protected area contained within site
Shotover River	Marginal Strip	Protected area overlaps site
Nevis River Catchment	Marginal Strips	Protected area overlaps site



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds; Swamps; Permanent Inland Delta; Permanent Freshwater Lake (head of Lake Dunstan)	Major
Introduced Vegetation	Broom, gorse, lupin; Pasture grasses & rank weeds; Willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (rivers)	Happening now	Some of area/ population (10-49%)	No or imperceptible deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Child P 1975. Observations on altitudes reached by some birds in central and northwest Otago. *Notornis* 22: 143–150.
- McKinlay, B. 1994. River survey lower Shotover. Unpublished file report WAT 4/3. Dunedin, Department of Conservation.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ095	Manuherikia	Otago
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Location	New Zealand, Otago
Central coordinates	44.855838°S, 169.916353°E (head of Falls Dam lake)
IBA criteria	A1
Area	1,406 ha
Altitude	570 - 700m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1967-2010	58-68	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1967-2010	19-25 ¹	A1, A4i	EN	Nationally Vulnerable

¹ NB: Likely numbers are higher than this as in 2010 (the most recent survey) recorded 25 pairs plus another two uncounted colonies.

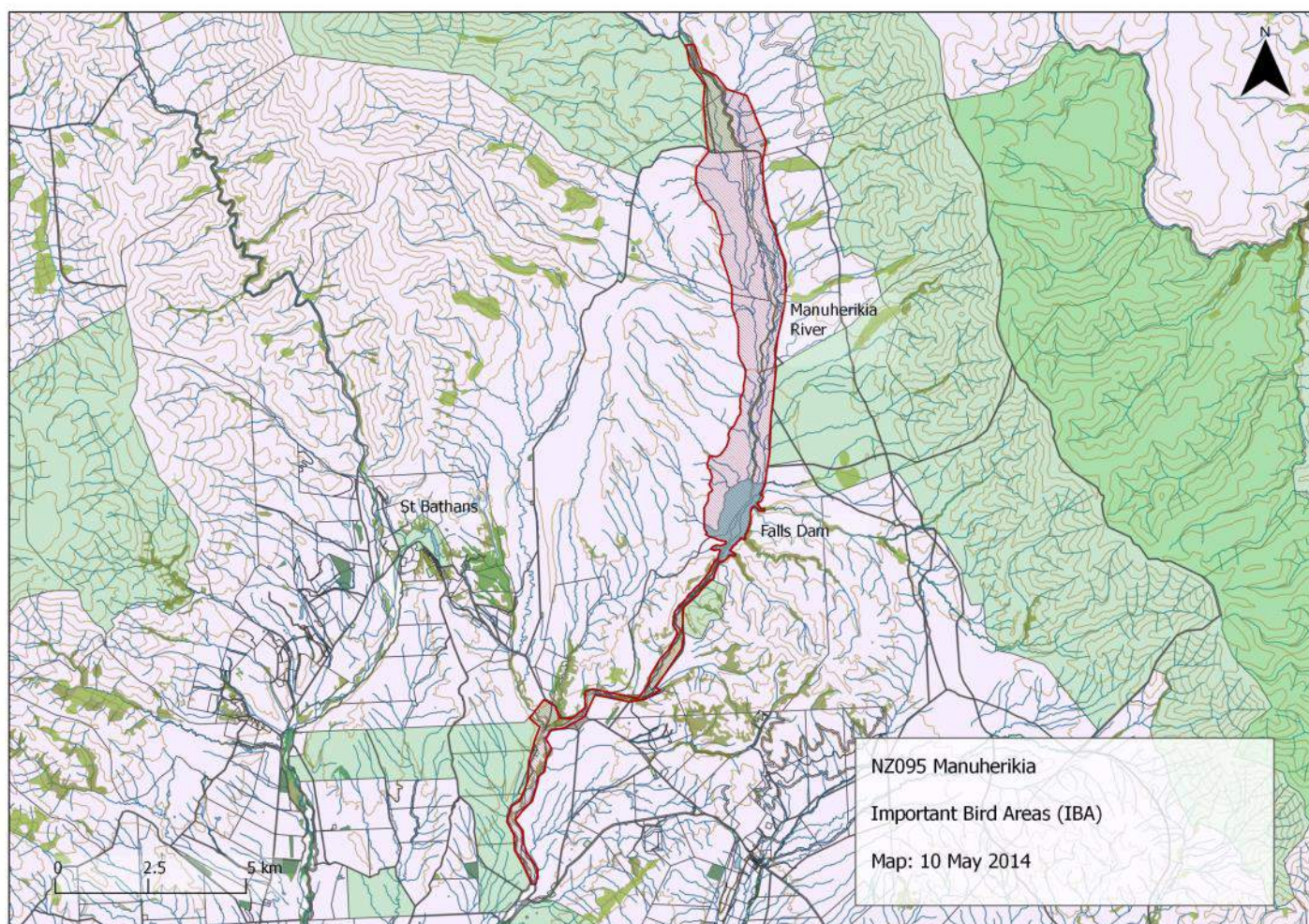
Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: White-faced Heron, Black Swan, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Rock Pigeon, NZ Pipit, Silvereye, Bellbird, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

NB: The 'St Bathans fauna' from 16-19 millions years ago is described from a remarkable set of fossils found in this area by palaeontologists T. Worthy, P. Scofield and A. Tennyson : Includes over 20 bird species - six kinds of duck, an eagle, an adzebill, two birds like small weka, a big gull, a pigeon, three kinds of parrot, an owlet-nightjar, a swift, a diving petrel, a goose and three other species, one like a crow - all extinct.

Protected area	Designation	Relationship with IBA
Manuherikia River	Marginal Strip	Protected area contained within site

The IBA includes some area of the Oteake Conservation Park and borders the Fiddlers Flat and Michael Peak Conservation Areas.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds; Swamps; Permanent Inland Delta; Permanent Freshwater Lake (head of Lake Dunstan)	Major
Introduced Vegetation	Broom, gorse, lupin; Pasture grasses & rank weeds; Willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- McKinlay, B. 1990. Manuherikia River survey. Unpublished file report BIR 7. Dunedin, Department of Conservation.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

NZ097	Mataura River	Southland
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Location	New Zealand, Southland
Central coordinates	45.880688°S, 168.799610°E (Mataura Waikaia confluence)
IBA criteria	A1, A4ii
Area	9,029 ha (total area NZ097)
Altitude	5 - 500m
Year of Assessment	2013

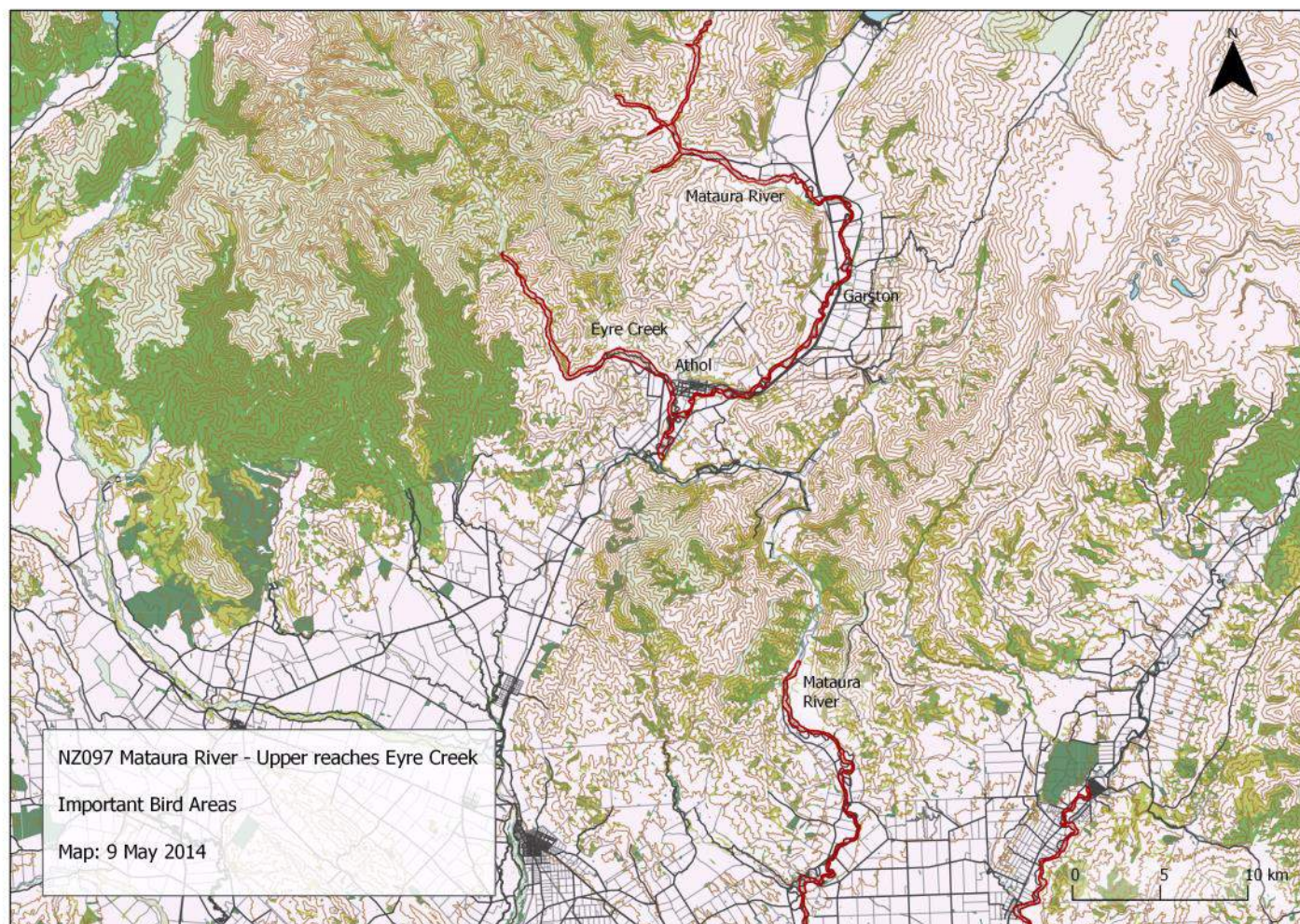
Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1947-2006	6,063-30,887	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1983-2001	40-43	A1, A4i	EN	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Endangered

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Grey Teal, Mallard, Grey Duck, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Shining Cuckoo, South Island Fernbird, South Island Fantail, Silvereye, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: NZ Falcon.

Protected area	Designation	Relationship with IBA
Toetoes Harbour Spit	Conservation Area	Protected area contained within site
Waituna Wetland	Scientific Reserve	Protected area contained within site
Not named	Marginal Strip	Protected area contained within site
Mataura River (Various sites)	Conservation Area	Protected area contained within site
Waikaia River	Conservation Area	Protected area contained within site





IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Estuary	Minor
Marine Intertidal	Sandy Shoreline, Beach and Spit; Rocky Shoreline; Salt Marshes	Minor
Marine Coastal/Supratidal	Coastal Sand Dunes	Minor
Wetlands (inland)	Shrub Dominated Wetlands	Major
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Black-billed Gulls, and to a lesser extent Black-fronted Terns will feed on adjacent pasture, especially during or immediately following ploughing. They will also hawk flying insects over pasture, riverbeds and even forested areas.



Southland is the stronghold for Black-billed Gulls. Photo shows massed fledglings, Otama North colony, Matura River. Photo: Rachell McClellan.

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Domestic & urban waste water - run-off	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- Keedwell, R.J. 2002. Black-fronted terns and banded dotterels: causes of mortality and comparisons of survival. Unpublished PhD thesis, Massey University, Palmerston North, New Zealand. 194 p.
- McClellan, R. 2008. The Ecology and Management of Southland's Black-billed Gulls. Thesis for the degree of Doctor of Philosophy, University of Otago, Dunedin. 253 pp.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albastriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ098	Bluff Harbour Awarua Bay	Southland
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Location	New Zealand, Southland
Central coordinates	46.568007°S, 168.330545°E (Rabbit Islet)
IBA criteria	A1, A4ii
Area	8,965 ha
Altitude	0 - 14m
Year of Assessment	2013

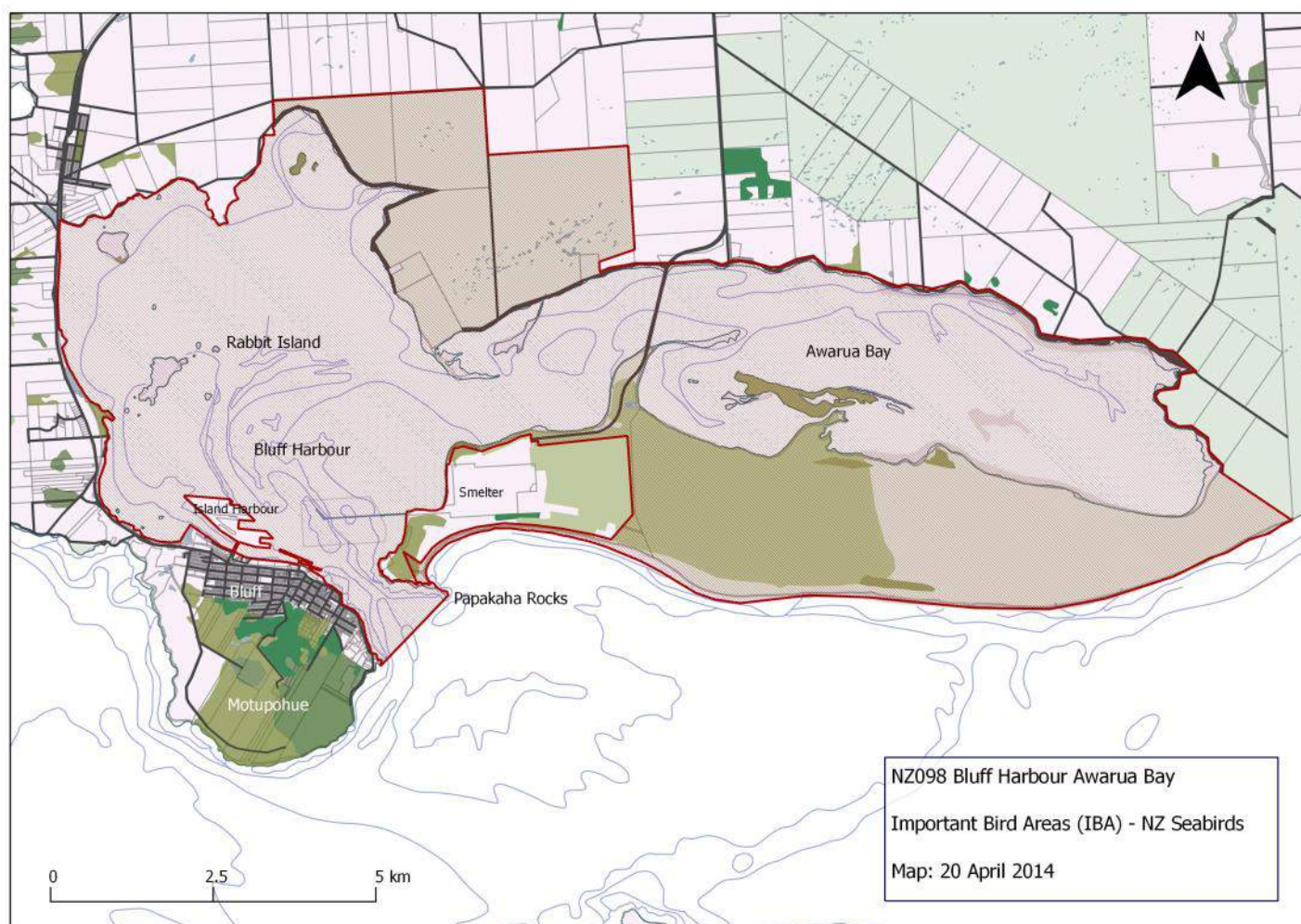
Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Stewart Island Shag	Breeding	1955-2013	77-155 (nests)	A1, A4ii	VU	Nationally Vulnerable
Black-billed Gull	Non-breeding		No counts	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Non-breeding		No counts	A1	EN	Nationally Vulnerable
New Zealand Dotterel (Southern Red-breasted Plover) ¹	Non-breeding	1997-2013	77-82	A1, A4i	EN	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Vulnerable

¹ Considered full species by IUCN/BirdLife/Handbook of the Birds of the World.

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Pied Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Grey Teal, NZ Shoveler, Mallard, NZ Scaup, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Australasian Harrier, Pukeko, Marsh Crake, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Shining Cuckoo, Rock Pigeon, South Island Fernbird, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Skylark, Hedgesparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Spotted Shag, White Heron, Royal Spoonbill, Cattle Egret, Wrybill (VU), South Island Oystercatcher, Pacific Golden Plover, Turnstone, Red (Lesser) Knot, Sharp-tailed Sandpiper, Pectoral Sandpiper, Curlew Sandpiper, Red-necked Stint, Grey Plover, Mongolian Dotterel, Marsh Sandpiper, Sanderling, Far Eastern Curlew, Asiatic Whimbrel, Eastern Bar-tailed Godwit, Arctic Tern, White-winged Black Tern, Little Tern.

Protected area	Designation	Relationship with IBA
Tiwai Spit	Conservation Area	Protected area contained within site
Seaward Moss	Conservation Area	Protected area overlaps site
Awarua Plains	Conservation Area	Protected area contained within site
Unnamed	Marginal strip	Protected area contained within site



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Estuary	Major
Marine Intertidal	Sandy Shoreline, Beach and Spit; Rocky Shoreline; Salt Marshes	Major
Marine Coastal/Supratidal	Coastal Sand Dunes	Major
Artificial Aquatic	Marine Anthropogenic Structures	Minor
Wetlands (inland)	Shrub Dominated Wetlands	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds	Major
Shrubland	Manuka; bracken	Major

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by harbour users - disturbance of nesting & roosting shags.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Residential and commercial development	Industrial Development	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Domestic & urban waste water - run-off	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Storms	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Lalas, C., Perriman, L. 2012. Distribution and abundance of Stewart Island shags (*Leucocarbo chalconotus*). Department of Conservation, Dunedin.

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ099	Omaui Island and Oreti (New) Estuary	Southland
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Location	New Zealand, Southland
Central coordinates	46.452583°S, 168.327971°E (Bushy Point)
IBA criteria	A1
Area	C. 4450 ha
Altitude	0 - 11m
Year of Assessment	2013

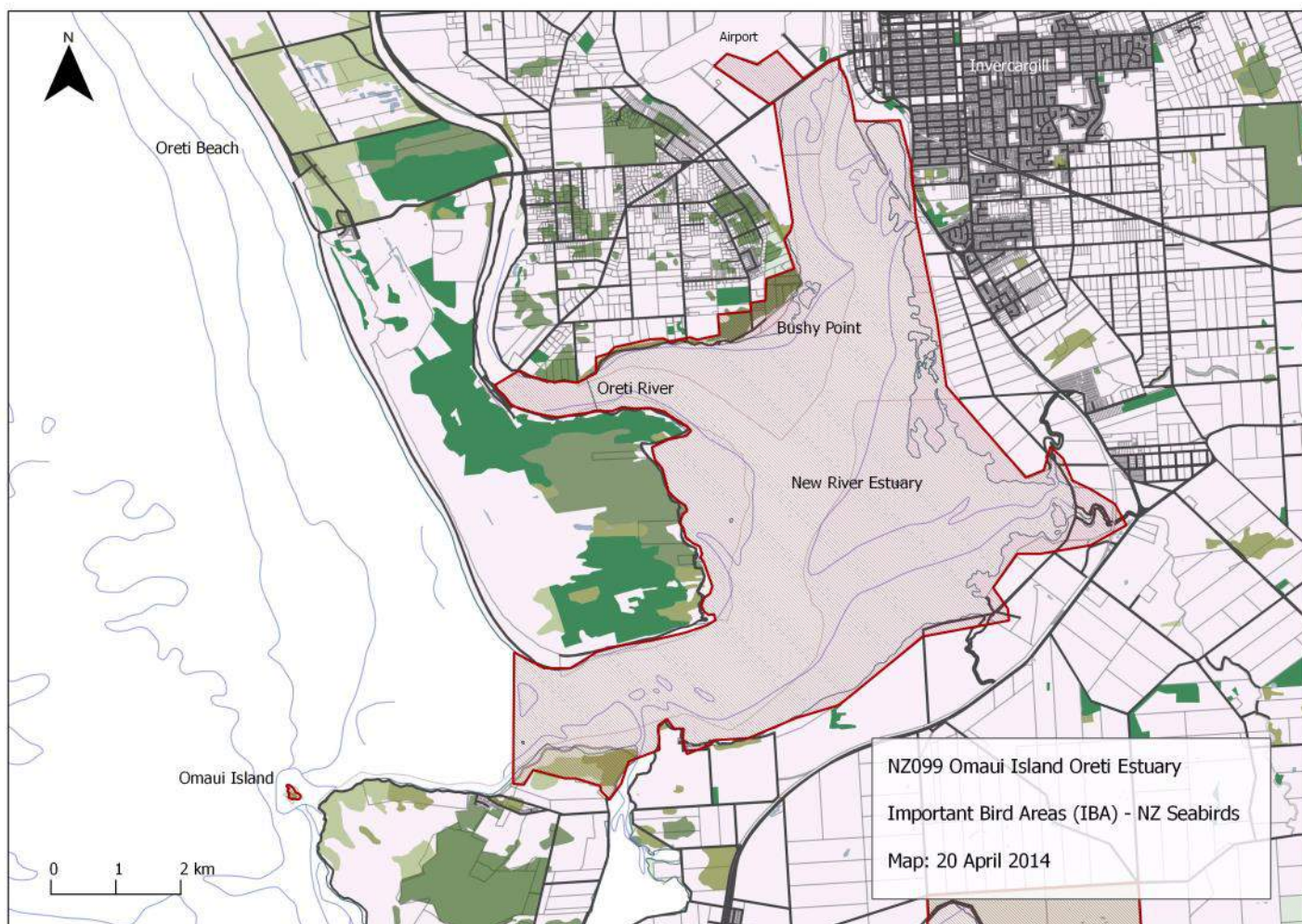
Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Stewart Island Shag	Breeding	1991-2011	65 (nests)	A1	VU	Nationally Vulnerable
Black-billed Gull	Non-breeding	2013-2016	26-45 (individuals)	A1	EN	Nationally Critical
Australasian Bittern	Resident		Present	A1	EN	Nationally Vulnerable

Black-fronted Tern (EN) and NZ Dotterel (Southern Red-breasted Plover) (EN) have been recorded in the estuary. As P. Rhodes (pers. comm.) notes: “there are few keen birding people down here and parts of the estuary, especially the shell-banks are quite tricky to get to so that there are probably far more Black-billed gulls and possibly Black-fronted terns that never get reported.”

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Sooty Shearwater, Spotted Shag, Black Shag, Pied Shag, Little Shag, Spotted Shag, White-faced Heron, White Heron, Royal Spoonbill, Paradise Shelduck, Grey Teal, NZ Shoveler, NZ Scaup, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Australasian Harrier, Pukeko, Marsh Crake, South Island Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, South Island Fernbird, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Mallard, Rock Pigeon, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Cattle Egret, Glossy Ibis, Pacific Golden Plover, Turnstone, Red (Lesser) Knot, Sharp-tailed Sandpiper, Pectoral Sandpiper.

Protected area	Designation	Relationship with IBA
Omaui Island	Conservation Area	Protected area contained within site
Mokomoko Inlet	Conservation Area	Protected area contained within site
Unnamed	Marginal Strip	Protected area contained within site
Otatara South	Scenic Reserve	Protected area contained within site
Oreti River, Bushy Point	Conservation Area	Protected area contained within site
Bushy Point	Conservation Area	Protected area contained within site



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Estuary	Major
Marine Intertidal	Sandy Shoreline, Beach and Spit; Rocky Shoreline; Salt Marshes	Major
Marine Coastal/Supratidal	Coastal Sand Dunes; Rocky Offshore Island	Major
Artificial Aquatic	Marine Anthropogenic Structures	Minor
Wetlands (inland)	Shrub Dominated Wetlands	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds	Major
Shrubland	Manuka; bracken	Major
Forest	Podocarp forest (Bushy Point)	Minor

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Human intrusions and disturbance	Recreational activities - disturbance of nesting & roosting shags.	Happening now	Small area/few individuals (<10%)	Imperceptible deterioration
Residential and commercial development	Industrial Development	Happening now	Some of area/population (10-49%)	Slow but significant deterioration

References:

Cooper, W., McClelland, P. 1991. The Birds of Omaui and Pig Islands. *Notornis* 39: 316-318

Ornithological Society of NZ (OSNZ/Birds NZ) National Wader Database 2013.

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ100	Oreti River	Southland
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Location	New Zealand, Southland
Central coordinates	45.716668°S, 168.430796°E (Lumsden bridge)
IBA criteria	A1, A4ii
Area	7,640 ha
Altitude	60 - 460m
Year of Assessment	2013

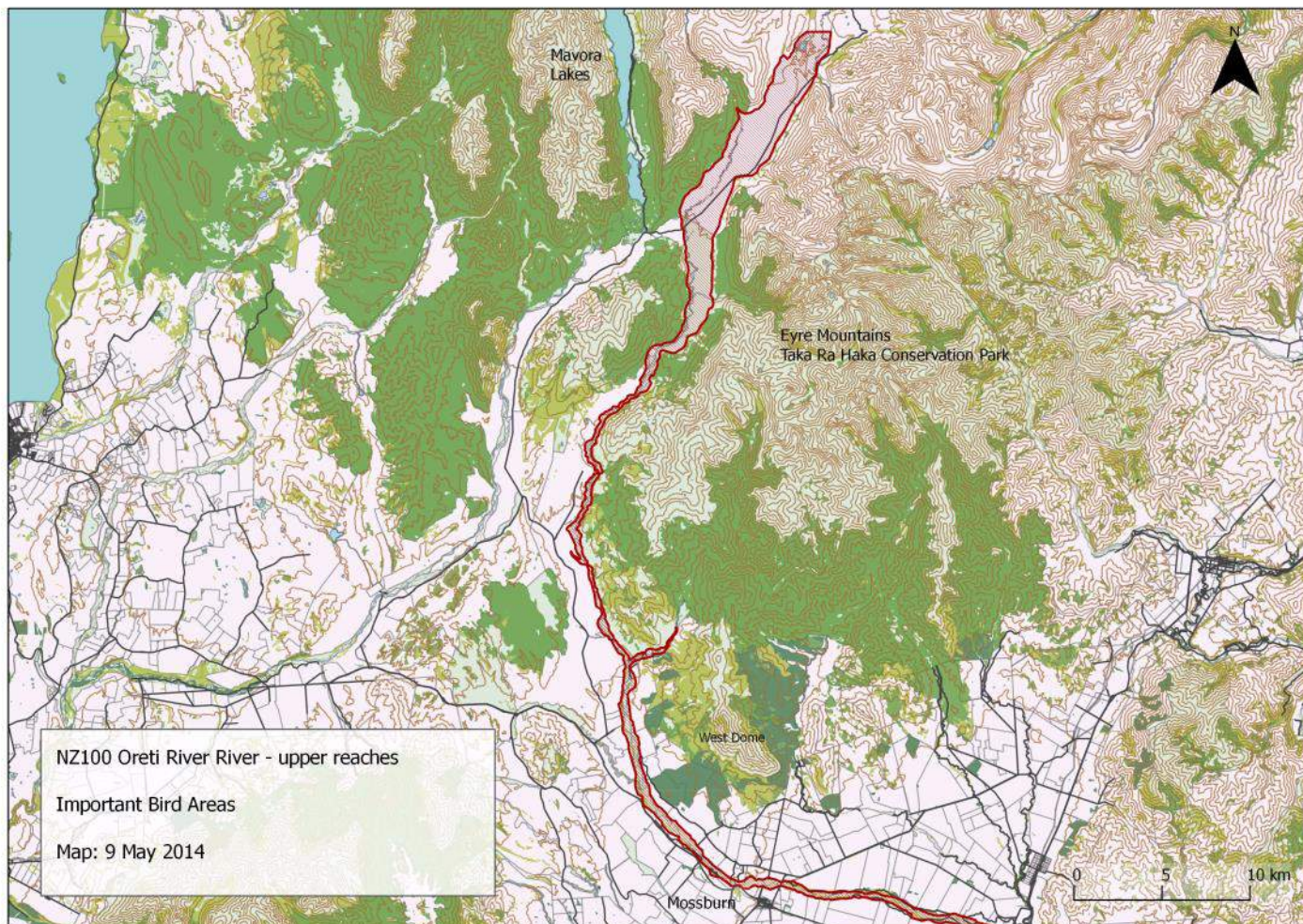
Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1949-2006	7,198- 28,324	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1986	298 (individuals)	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Grey Teal, Mallard, Grey Duck, Australasian Harrier, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, Spur-winged Plover, Southern Black-backed Gull, Rock Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, Shining Cuckoo, South Island Fantail, Silvereye, Bellbird, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Protected area	Designation	Relationship with IBA
Oreti River, Centre Bush	Conservation Area	Protected area contained within site
Oreti River, South Benmore	Conservation Area	Protected area contained within site
Oreti River, Dipton (incl. South Dipton)	Conservation Area	Protected area contained within site
Oreti River	Marginal Strip	Protected area overlaps site
Oreti River, Lumsden	Conservation Area	Protected area contained within site
Oreti River, Lowther	Conservation Area	Protected area contained within site
Oreti River, Mossburn	Conservation Area	Protected area contained within site
Coal Hill Windley River	Conservation Area	Protected area overlaps site
Von River	Marginal Strip	Protected area overlaps site

The IBA borders with and includes areas of the Snowdon Forest Conservation Area and Eyre Mountains/Taka Ra Haka Conservation Park.



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA.	Minor

Black-billed Gulls, and to a lesser extent Black-fronted Terns will feed on adjacent pasture, especially during or immediately following ploughing. They will also hawk flying insects over pasture, riverbeds and even forested areas.

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

Gaze, P.D. (compiler) 1988. Classified Summarised Notes, South Island, 1 July 1986 to 30 June 1987. *Notornis* 35: 311–323.

McClellan, R. 2008. The Ecology and Management of Southland's Black-billed Gulls. Thesis for the degree of Doctor of Philosophy, University of Otago, Dunedin. 253 pp.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albosriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Black-billed Gulls feeding behind a tractor and plough near Mossburn.
Photo: Chris Gaskin



NZ101	Aparima River	Southland
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Location	New Zealand, Southland
Central coordinates	46.033113°S, 168.112707°E (Winton Wreys Bush Highway bridge)
IBA criteria	A1, A4ii
Area	3,717 ha
Altitude	0 - 400m
Year of Assessment	2013

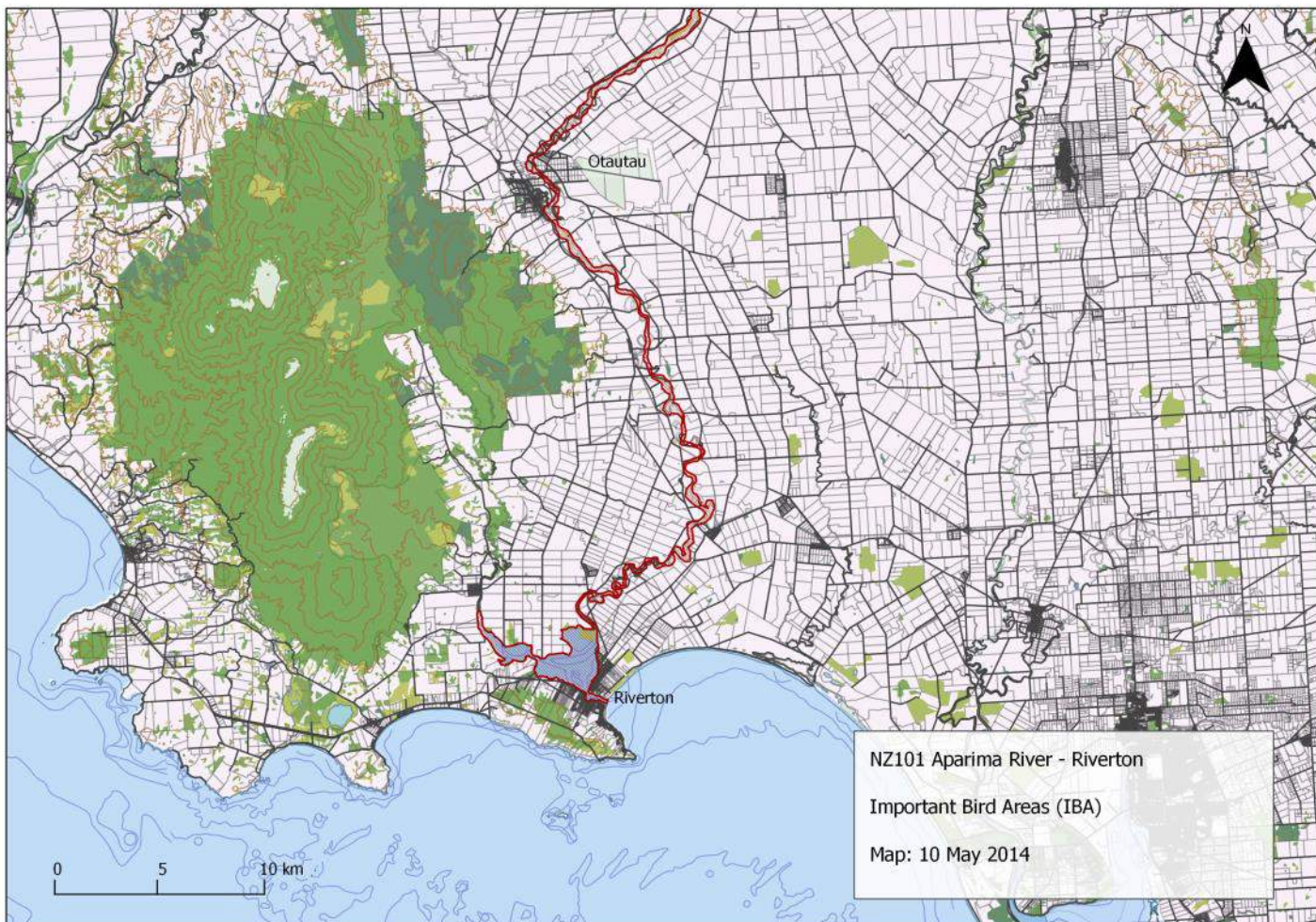
Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1951-2006	5,070-16,769	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1985-2007	59-67	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Pied Shag, Little Shag, White-faced Heron, Black Swan, Canada Goose, Paradise Shelduck, Grey Duck, Grey Teal, NZ Shoveler, NZ Scaup, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Australasian Harrier, Pukeko, South Island Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Black-fronted Dotterel, NZ Kingfisher, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, Silvereye, Bellbird, Mallard, Rock Pigeon, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Spotted Shag, White Heron, Royal Spoonbill, Cattle Egret, Pacific Golden Plover, Turnstone, Red (Lesser) Knot, Sharp-tailed Sandpiper, Red-necked Stint, Eastern Bar-tailed Godwit, Little Tern.

Protected area	Designation	Relationship with IBA
Gummies Bush	Conservation Area	Protected area contained within site
Aparima River	Marginal Strip	Protected area contained within site
Fairfax	Conservation Area	Protected area contained within site
Hodgekinson	Conservation Area	Protected area contained within site
Aparima River, Wreys Bush (incl. Crown Land)	Conservation Area	Protected area contained within site
Aparima River, Awatata	Conservation Area	Protected area contained within site
Aparima River, Gowan Hill	Conservation Area	Protected area contained within site
Aparima River, Avondale	Conservation Area	Protected area contained within site
Aparima River, Dunrobbin	Conservation Area	Protected area contained within site

The IBA includes a small section of the Takitimu Conservation Area



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Estuary	Minor
Marine Intertidal	Sandy Shoreline, Beach; Salt Marshes	Minor
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Black-billed Gulls, and to a lesser extent Black-fronted Terns will feed on adjacent pasture, especially during or immediately following ploughing. They will also hawk flying insects over pasture, riverbeds and even forested areas.

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

McClellan, R. 2008. The Ecology and Management of Southland's Black-billed Gulls. Thesis for the degree of Doctor of Philosophy, University of Otago, Dunedin. 253 pp.

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobistriatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ102	Waiau River	Southland
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Location	New Zealand, Southland
Central coordinates	45.794459°S, 167.631111°E (Monowai bridge)
IBA criteria	A1, A4ii
Area	5,057 ha
Altitude	0 - 180m
Year of Assessment	2013

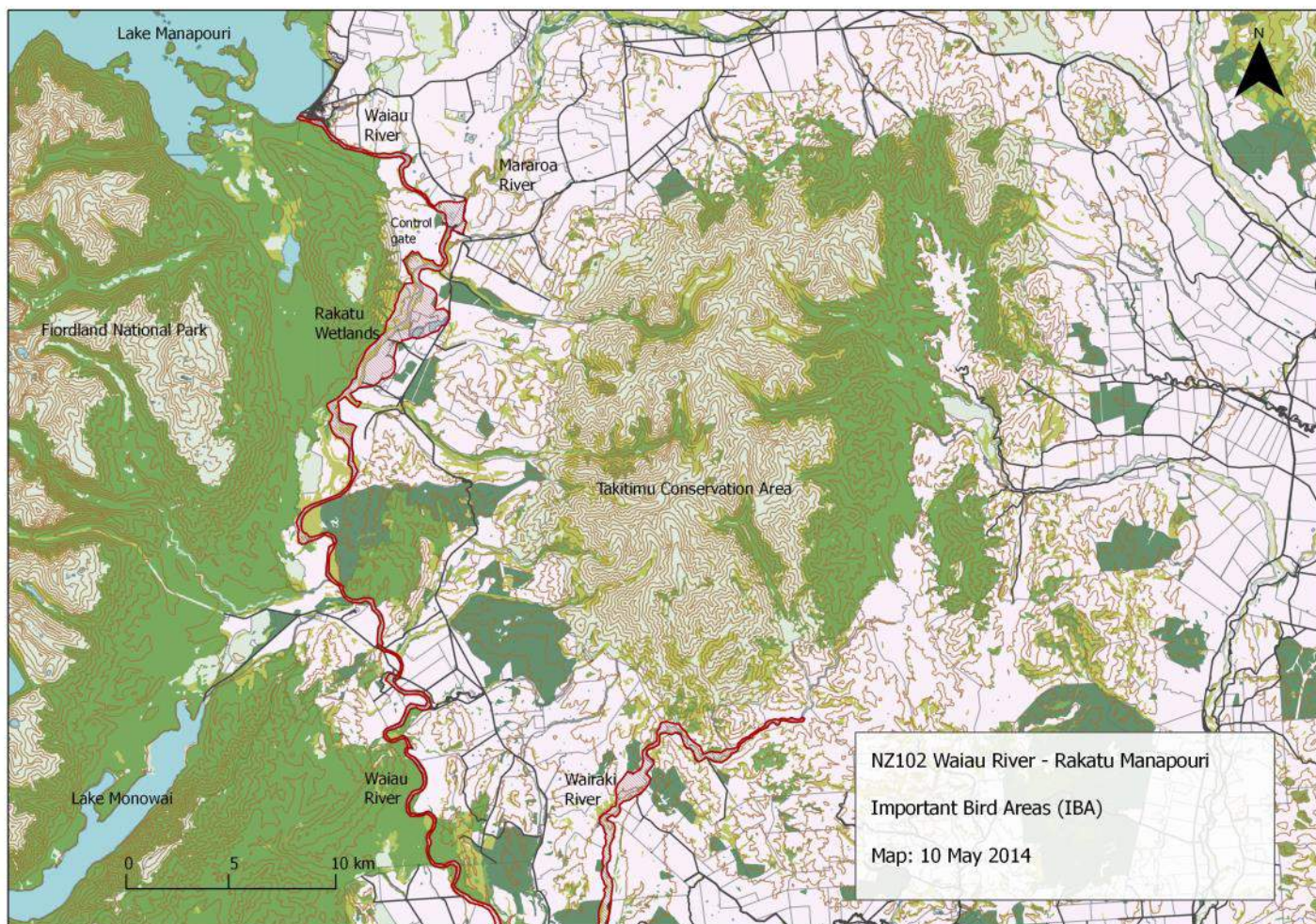
Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1951-2006	2,374-5,789	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	1993-1999	16-20	A1	EN	Nationally Vulnerable
Australasian Bittern	Breeding		Present	A1	EN	Nationally Endangered

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Pied Shag, Little Shag, Spotted Shag, White-faced Heron, Pukeko, Australian Coot, Black Swan, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Grey Teal, NZ Shoveler, NZ Scaup, Australasian Harrier, NZ Falcon, Pukeko, Marsh (Baillon's) Crake, South Island Oystercatcher, Variable Oystercatcher, Pied Stilt, Banded Dotterel, Southern Black-backed Gull, Red-billed Gull, Caspian Tern, White-fronted Tern, Rock Pigeon, NZ Kingfisher, South Island Fernbird, Welcome Swallow, NZ Pipit, Grey Warbler, South Island Fantail, South Island Tomtit, Silvereye, Bellbird, Tui, Skylark, Hedge Sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie. Other species recorded: Eastern Bar-tailed Godwit.

Protected area	Designation	Relationship with IBA
Ferry Reserve	Conservation Area	Protected area contained within site
Waiau River Mouth	Conservation Area	Protected area contained within site
Waiau River, Piko Piko	Conservation Area	Protected area contained within site
Waiau River	Marginal Strips	Protected area contained within site
Waiau River, Clifden	Conservation Area	Protected area contained within site
Clifden	Scientific Reserve	Protected area contained within site
Wairaki River, Otahu	Conservation Area (incl. marginal strips)	Protected area contained within site
Waiau River, Monowai Road	Conservation Area	Protected area contained within site

The IBA includes borders with and/or includes areas of the Dean Forest Conservation Area, Mangapiri Forest Conservation Area, Jericho Forest Conservation Area, Paddock Hill Conservation and Fiordland National Park. Significant wetland restoration at Rakatu Wetlands and Te Wae Wae Lagoons through Waiau Wildlife Habitat Enhancement Trust.



IUCN Habitat	Habitat detail	Extent (% of site)
Marine Neritic (Submergent Nearshore)	Subtidal Sandy-Mud; Estuary	Minor
Marine Intertidal	Sandy Shoreline, Beach; Salt Marshes	Minor
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds; Swamp and Shrub Dominated Wetlands; Permanent Freshwater Pools (Rakatu Wetlands)	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major

Black-billed Gulls, and to a lesser extent Black-fronted Terns will feed on adjacent pasture, especially during or immediately following ploughing. They will also hawk flying insects over pasture, riverbeds and even forested areas.

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of surface & ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Pollution	Agricultural & forestry effluents - nutrient loads (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- McClellan, R. 2008. The Ecology and Management of Southland's Black-billed Gulls. Thesis for the degree of Doctor of Philosophy, University of Otago, Dunedin. 253 pp.
- McClelland TJ 1996. Waiau River Aquatic Birds December 1995 and March 1996. June 1999. Unpublished report prepared for the Waiau River working party of the Southland Regional Council. Invercargill, Teri McClelland Environmental Resources.
- McClelland TJ 1999. Waiau River aquatic birds breeding survey summary. May 1999. Unpublished report to Meridian Energy, Christchurch. Invercargill, Teri McClelland Environmental Resources.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns

(*Chlidonias albostratus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Sagar, P.M. 1994. Aquatic birds of the Waiau River November 1993 and March 1994. NIWA Miscellaneous Report 168 (unpublished). Christchurch, National Institute of Water and Atmospheric Research.

NZ103	Mararoa River	Southland
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Location	New Zealand, Southland
Central coordinates	45.542367°S, 167.887487°E (The Key bridge)
IBA criteria	A1
Area	2,675 ha
Altitude	180 - 600m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1947-2008	403-1,000	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding	2008	91	A1, A4i	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, NZ Falcon, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Welcome Swallow, NZ Pipit, South Island Fantail, Silvereye, Rock Pigeon, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Protected area	Designation	Relationship with IBA
Mararoa River	Marginal Strips	Protected area contained within site
Mararoa River, Wilderness	Conservation Area	Protected area contained within site
Wilderness	Scientific Reserve	Protected area contained within site

The IBA borders and includes sections of the Snowden Forest Conservation Area.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA.	Minor

Black-billed Gulls, and to a lesser extent Black-fronted Terns will feed on adjacent pasture, especially during or immediately following ploughing. They will also hawk flying insects over pasture, riverbeds and even forested areas.



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- McClellan, R. 2008. The Ecology and Management of Southland's Black-billed Gulls. Thesis for the degree of Doctor of Philosophy, University of Otago, Dunedin. 253 pp.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

NZ104	Whitestone River	Southland
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Location	New Zealand, Southland
Central coordinates	45.460913°S, 167.788439°E (SH94 bridge)
IBA criteria	A1
Area	1,067 ha
Altitude	255 - 560m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding	1997-1998	1,000 (nests)	A1, A4i	EN	Nationally Critical
Black-fronted Tern	Breeding		No count	A1	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, Australasian Harrier, NZ Falcon, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, Rock Pigeon, Welcome Swallow, NZ Pipit, South Island Fantail, Silvereye, Skylark, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

Protected area	Designation	Relationship with IBA
Whitestone River	Marginal Strips	

The IBA borders and includes sections of the Snowdon Forest Conservation Area.

IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds	Major
Introduced Vegetation	Broom, gorse, pasture grasses & rank weeds, willow margins	Major
Grasslands	Tussock on river flats (upper reaches)	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA.	Minor

Black-billed Gulls, and to a lesser extent Black-fronted Terns will feed on adjacent pasture, especially during or immediately following ploughing. They will also hawk flying insects over pasture, riverbeds and even forested areas.



Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users - includes dogs.	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Water management/use - abstraction of ground water (agricultural use)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

- McClellan, R. 2008. The Ecology and Management of Southland's Black-billed Gulls. Thesis for the degree of Doctor of Philosophy, University of Otago, Dunedin. 253 pp.
- O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albostratus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43
- Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

NZ105	Eglington River	Fiordland
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Location	New Zealand, Southland
Central coordinates	45.054242°S, 167.987652°E (West East Branches confluence)
IBA criteria	A1
Area	2,455 ha
Altitude	204 - 477m
Year of Assessment	2013

Populations of IBA trigger species:

Species	Season	Period	Population estimate (pairs)	IBA criteria	IUCN cat.	NZ Threat Class.
Black-billed Gull	Breeding		No counts	A1	EN	Nationally Critical
Black-fronted Tern	Breeding	1992	9-17	A1	EN	Nationally Vulnerable
Australasian Bittern	Resident		Present	A1	EN	Nationally Vulnerable

Ornithological information: Besides the trigger species the following species are confirmed or likely to be breeding: Black Shag, Little Shag, White-faced Heron, Canada Goose, Paradise Shelduck, Mallard, Grey Duck, NZ Scaup, Australasian Harrier, NZ Falcon, Marsh (Baillon's) Crake, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Spur-winged Plover, Southern Black-backed Gull, NZ Pigeon, NZ Kingfisher, Welcome Swallow, NZ Pipit, South Island Fantail, South Island Tomtit, Grey Warbler, Silvereye, Bellbird, Tui, Skylark, Hedge-sparrow, Blackbird, Song Thrush, Yellowhammer, Chaffinch, Greenfinch, Goldfinch, Redpoll, House Sparrow, Starling, Australian Magpie.

NB: Blue Duck (EN), Yellowhead (EN), Kaka (EN), Yellow-crowned Parakeet (NT), Long-tailed Cuckoo (LC), Shining Cuckoo (LC) Morepork (LC), South Island Robin (LC), Brown Creeper (LC) and Rifleman (LC) are found in adjacent forest areas; these will be included in the IBA network in the next round (i.e. identifying sites triggered primarily by land-, water- and shore-birds).

Protected area	Designation	Relationship with IBA
The IBA is almost entirely located within the Fiordland National Park. There is a small area at Boyd Creek which is outside the national park.		



IUCN Habitat	Habitat detail	Extent (% of site)
Wetlands (inland)	Permanent Rivers; Extensive River Gravel Beds	Major
Introduced Vegetation	Broom, lupin, pasture grasses & rank weeds	Major
Grasslands	Tussock on river flats	Major
Shrubland	Manuka, matagouri (<i>Discaria toumatou</i>), bracken	Major
Forest	Southern beech on river flats and along margins of the IBA.	Minor

Black-billed Gulls, and to a lesser extent Black-fronted Terns will feed on adjacent pasture, . They will also hawk flying insects over pasture, riverbeds and even forested areas.

Threats to the site (pressure) - IUCN Classifications

Threat Level	Notes	Timing	Scope	Severity
Invasive & other problematic species, genes & diseases	Invasive alien species - mustelids, cats, rats, hedgehogs	Happening now	Some of area/ population (10-49%)	Moderate to rapid deterioration
Human intrusions and disturbance	Recreational activities by river users	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration

Threats to the site (pressure) - contd.

Threat Level	Notes	Timing	Scope	Severity
Natural system modifications	Weed encroachment on nesting sites (rivers)	Happening now	Some of area/ population (10-49%)	Slow but significant deterioration
Climate change and severe weather	Floods	Likely in short term (within 4 years)	Some of area/ population (10-49%)	Moderate to rapid deterioration

References:

O'Donnell, C.F.J., Hoare, J.M. 2011. Meta-analysis of status and trends in breeding populations of black-fronted terns (*Chlidonias albobristatus*) 1962-2008. *New Zealand Journal of Ecology* 35: 32-43

Robertson, C.J.R., Hyvönen, P., Fraser, M.J., Pickard, C.R. 2007. *Atlas of bird distribution in New Zealand 1999-2004*. Ornithological Society of New Zealand, Inc. Wellington.

Table 1 Global populations for New Zealand breeding seabirds (BirdLife International).

Common name	Cat	Pop. size (breeding pairs)	Pop. size (inds)	1% Glob- al pop	Year	Population justification
Southern Rockhopper Penguin	VU	C. 1230000	1000000-2499999	10000	2010	The population has been estimated at just over 1.23 million pairs (Birdlife International 2010). The Falkland Islands (Malvinas), with 55 distinct breeding colonies, had a total of 210,418 breeding pairs in 2005. Isla de los Estados (Argentina) had 173,793 in 1998. In Chile, there are large colonies on Isla Diego Ramirez (132,721 pairs in 2002), Isla Noir (158,200 pairs in 2005) and Isla Ildefonso (86,400 pairs in 2006). In the Indian Ocean there are populations on the Prince Edward Islands (80,000 pairs in 2008/2009 [Crawford <i>et al.</i> 2009]) (South Africa), Crozet Islands (152,800 pairs in 1982), Kerguelen Islands (85,500 pairs in 1985) (French Southern Territories) and Heard Island (10,000 pairs in 1987) (Heard and McDonald Islands [to Australia]). There are also significant populations on Campbell Island (51,000 pairs in 1986) (New Zealand) and Macquarie (37,500 pairs in 2007) (Australia) (BirdLife International 2010). Several populations have experienced major long-term population crashes. Approximately 1.5 million pairs are estimated to have been lost from Campbell Island (94% of the original total) between 1942 and 1986 (Cunningham and Moors 1994), and the Falkland Islands (Malvinas) population fell by around 1.4 million pairs between 1932 and 2005 (87% of the original total) (Pütz <i>et al.</i> 2003). Several other sites appear to have suffered severe declines. Between 1994/1995 and 2008/2009, numbers at Marion Island decreased by about 70%, from 160,000 pairs to 42 000 pairs (Crawford <i>et al.</i> 2009). Population modelling, based on those breeding sites that have been accurately surveyed, indicates that over the past 37 years (three generations) the number of Southern Rockhopper Penguins has declined by 34% (BirdLife International 2010).
Fiordland Penguin	VU	2500-3000	5000-6000	50	2000	The population has been estimated at c.5,000-6,000 mature individuals (McLean 1997). HBW (2015) estimates 2500-300 breeding pairs
Snares Penguin	VU	26000-31000	93000	930	2012	A survey in 2010 found 25,905 nests on North-East Island and 5,161 nests on Broughton (J. Hiscock. 2012), suggesting that there are c.31,000 pairs, or c.62,000 mature individuals. This is assumed to equate to a total population of c.93,000 individuals.
Erect-crested Penguin	EN	67000	195000-210000	1300	2011	The total population is estimated at 130,000-140,000 mature individuals, based on estimates of 26,000 breeding pairs on the Bounty Islands in 2011 and 41,000 pairs on the Antipodes Islands in 2011 (J. Hiscock <i>in litt.</i> 2012). Based on the assumption that mature individuals account for around 2/3 of the total population, there are estimated to be c.195,000-210,000 individuals.
Little Penguin	LC	500000-1000000		5000	1992	The global population size has not been quantified, but the population in Australia is estimated as under 1,000,000 individuals (del Hoyo <i>et al.</i> 1992).
Yellow-eyed Penguin	EN	1626-1676	5900-7000	350	2000	Moore (1992) estimated a total population of 5,930-6,970 birds in 1988/1989, comprising 3,560 -4,180 breeders and 2,370-2,790 non-breeders (McKinlay 2001).
Southern Royal Albatross	VU		27200	272	2008	The Campbell population is estimated at 7,855 breeding pairs between 2004-2008 (ACAP 2009). In 2001, 69 pairs were present on Enderby (Childerhouse <i>et al.</i> 2003), and c.20 breed on Auckland and Adams Islands combined (Croxall and Gales 1998). An estimate of c7,900 annual breeding pairs is equivalent to c.27,200 mature individuals, based on the ratio used by Croxall and Gales (1998).
Antipodean Albatross	VU	15000-17000	44500 (mature)	445	2009	ACAP (2009).
Northern Royal Albatross	EN	6500-7000	C.34000	340	1991	The largest population (99%) is on the Chatham Islands, with 1% of the population on Taiaroa Head, on the mainland of South Island, New Zealand. There has not been a successful run of annual photographs over the past 8 years to enable updated estimates of the breeding population of this biennial breeder (C. J. R. Robertson 2008). However, air photographic counts on the Chatham Islands in the 1970s (1972-1975) and 1990s (1989-1991) recorded a total of 6,500-7,000 total breeding pairs. The number of pairs breeding each year was estimated as 5,200 pairs, based on a count in 1995. This is equivalent to a total population of 17,000 mature individuals. A count in 2002 recorded 5,800 pairs on the Chatham Islands (counted at the end of egg laying), with a probable 1,700 pairs on sabbatical after breeding in the previous season (C. J. R. Robertson <i>in litt.</i> 2008). However, since the estimate of 17,000 mature individuals is based on data from multiple years, this is the estimate used here. It roughly equates to 25,000-26,000 individuals in total. Around 25 pairs breed each year at Taiaroa Head, including five hybrids (descended from cross with female Southern Royal Albatross <i>D. epomophora</i>). Two individuals of <i>D. sanfordi</i> , both breeding with <i>D. epomophora</i> partners, have been recorded on Enderby Island.
Light-mantled Albatross	NT	C.30000	87000	580	1998	Information on population status and trend is most well known on Possession Island (Crozet Islands), where there were 916 pairs in 2006 (Delord <i>et al.</i> 2008) There are c.1,949 pairs in the Crozet group, 1,250 pairs on Macquarie Island (ACAP 2012), 5,000-7,500 pairs on South Georgia, 3,000-5,000 pairs on Kerguelen, c.5,000 pairs on the Auckland Islands, at least 1,600 pairs on Campbell Island, 170 pairs on the Antipodes Islands, 200-500 pairs on Heard Island (Croxall and Gales 1998; Taylor 2000), and 350 pairs on Marion Island and 129 pairs on Prince Edward

Common name	Cat	Pop. size (breeding pairs)	Pop. size (inds)	1% Glob- al pop	Year	Population justification
Light-mantled Albatross <i>contd.</i>						Island (ACAP 2012). The total annual breeding population is estimated at 19,000-24,000 pairs, roughly equivalent to 58,000 mature individuals (and 87,000 individuals in total) in this biennially breeding species - Croxall and Gales (1998) estimated c. 21,600 pairs.
Buller's Albatross	NT	C.32000	64000	640	1999	The estimated annual breeding population is 31,939 pairs, made up of 8,877 pairs on the Snares Islands, 4,912 pairs on the Solander Islands, 16,000 pairs on the Forty-Fours, 2,130 pairs on Big and Little Sister Islands in the Chatham Island group, and 20 pairs on Rosemary Rock, Three Kings Islands off North Island.
Indian Yellow-nosed Albatross	EN	36500	160000-180000	1600	2010	The total population is estimated at 41,580 pairs per year, equating to 83,160 mature individuals, and perhaps more than 160,000 individuals of all age classes, using the ratios presented by Gales (1998).
Grey-headed Albatross	EN	C.74200	C.2500000	2500	2012	There are an estimated c.95,000 pairs breeding per year of this biennially breeding species, based on annual breeding population estimates of 47,674 pairs on South Georgia in 2004 (Poncet <i>et al.</i> 2006), 17,187 pairs in Chile in 2003 (Robertson <i>et al.</i> 2007), 7,905 pairs on Kerguelen in 1985 (Weimerskirch <i>et al.</i> 1988), 7,800 pairs on Campbell Island (Moore 2004), 6,709 pairs on Marion Island in 2013 (ACAP unpubl. data), 5,946 on Crozet in 1982 (Jouventin <i>et al.</i> 1984), 2,000 pairs on Prince Edward Island in 2009 (Ryan <i>et al.</i> 2009) and 69 pairs on Macquarie Island in 2013 (ACAP unpubl. data). This is thought to be equivalent to at least 250,000 mature individuals (Croxall and Gales 1998, Brooke 2004).
Chatham Albatross	VU	11000	11000-16000	110	2007	Ground counts between 1999-2003 revealed c.5,300 occupied sites (Robertson <i>et al.</i> 2003), and further counts in 2007 and 2010 gave similar figures (5,247 and 5,245 occupied sites, respectively) (Robertson <i>in litt.</i> 2008, Fraser <i>et al.</i> 2011). This gives a total estimated global population of c.11,000 mature individuals, roughly equating to c.16,000 individuals in total.
Campbell Albatross	VU	24600	49000	490	1997	The breeding population is estimated to number 24,600 pairs, based on surveys from 1995-1997.
Black-browed Albatross	NT	C.700000	2100000	21000	2010	The annual breeding population in the Falkland Islands (Islas Malvinas) was estimated at 475,500-535,000 pairs in 2010 (Wolfaardt 2012). In Chile there were 55,000 pairs on Diego Ramirez in 2003, 58,000 pairs on Ildefonso in 2012 (Robertson <i>et al.</i> 2013), and 15,500 pairs on Diego de Almagro in 2002 (Lawton <i>et al.</i> 2003). If an assumption is made that the South Georgia (Georgias del Sur) population is declining at the same rate as the colony on Bird Island (c.4% pa) then the population there may have declined to c.56,000 pairs by 2012 (ACAP unpubl. data). There are an estimated c.5,800 pairs in other populations (Antipodes, Campbell, Heard and MacDonald, Crozet, Kerguelen, Macquarie, Snares; ACAP unpubl. data), giving a total of c.700,000 pairs (1,400,000 mature individuals), very roughly equating to 2,100,000 individuals.
Salvin's Albatross	VU		90000	900	1998/2010-2011	Clark (1998) estimated 30,750 breeding pairs on the Bounty Islands, which represents 99% of the global population; this is equivalent to 61,500 mature individuals, or roughly 90,000 total individuals. Western Chain (Snares) population was estimated at 1111 pairs (2010-2011)
White-capped Albatross	NT	100,501 (annual)	100000-499999	2000	2012	The annual breeding population was estimated at 100,501 pairs in 2012, but in recent years estimates have ranged from as high as 116,025 pairs in 2006 and as few as 73,838 in 2009. The 2012 estimate equates to c.201,000 mature individuals, but this species is now considered to be a biennial breeder, meaning that the total population may in fact be much larger.
White-bellied Storm-petrel	LC	100,000	300000	3000	2009	Brooke (2004) estimated the global population to number around 300,000 individuals.
Black-bellied Storm Petrel	LC	100000-150000	500000	5000	2009	Brooke (2004) estimated the global population to number around 500,000 individuals.
Grey-backed Storm Petrel	LC	10000-100000	200000	2000	2009	Brooke (2004) estimated the global population to potentially number over 200,000 individuals.
New Zealand Storm Petrel	CR		1000-2000	10	2015	Captures on Little Barrier Island in 2013 and 2014 (ie. since the discovery of their breeding) and the consequent lack of recaptures appears to indicate reasonable sized population. 1000-2000 individuals is a preliminary estimate (Rayner <i>et al unpubl.</i>)
White-faced Storm Petrel	LC		4000000	40000	2009	Brooke (2004) estimated the global population to number at least 4,000,000 individuals.
South Georgia Diving-petrel	LC	C.6000000	15000000	150000	2009	Brooke (2004) estimated the global population to number around 15,000,000 individuals.
Common Diving-petrel	LC		7000000-16000000	160000	2009	Brooke (2004) estimated the global population to exceed 16,000,000 individuals.
Cape Petrel	LC		2000000	20000	2009	Brooke (2004) estimated the global population to exceed 2,000,000 individuals.
Fulmar Prion	LC		150000-300000	150	2009	Brooke (2004) estimated the global breeding population to number 50,000-100,000 pairs, equating to 150,000-300,000 individuals.
Antarctic Prion	LC		50000000	500000	2009	Brooke (2004) estimated the global population to number around 50,000,000 individuals.
Fairy Prion	LC		5000000	50000	2009	Brooke (2004) estimated the global population to number around 5,000,000 individuals.

Common name	Cat	Pop. size (breeding pairs)	Pop. size (inds)	1% Glob- al pop	Year	Population justification
Broad-billed Prion	LC		15000000	150000	2004	Brooke (2004) estimated the global population to exceed 15,000,000 individuals.
White-chinned Petrel	VU	1200000	C.30000000	30000	2012	A global population of 1,200,000 breeding pairs, down from 1,430,000 pairs in the 1980s, is estimated based on figures from 1985-2011. This equates to an estimated global population of c.3 million mature individuals, based on the estimated number of breeding pairs extrapolated according to a ratio from Brooke (2004).
Grey Petrel	NT		400000	4000	2004	Figures suggest a very tentative world population around 400,000 individuals, a figure that could be incorrect by a factor of 2-3 either way (Brooke 2004). A tally of the most recent figures, points to at least 80,000 pairs worldwide, but this figure is thought to be only a rough estimate.
Parkinson's Petrel	VU	C.1500	5000	50	2011	The total population is c.1,300 pairs on Great Barrier Island and c.100 breeding pairs on Little Barrier Island (Bell et al. 2011), with an estimated total of c.5,000 individuals including non-breeding birds. This is roughly equivalent to 3,300 mature individuals.
Westland Petrel	VU	1000-5000	16000	160	2011	The population numbered c.20,000 individuals (roughly equivalent to 13,000 mature individuals) in 1982 and has remained stable, with c. 2,000 pairs breeding annually. The most recent population study has produced an estimate of 2,827 annual breeding pairs (95% CI: 2,143-3,510) (B. Baker in litt. 2012). Scattered burrows exist throughout the 16-km breeding area and populations in these areas may have been underestimated by up to 10%. On the basis of this information, the breeding population is not thought to exceed 4,000 annual breeding pairs (B. Baker in litt. 2012). Based on this upper estimate of c.8,000 birds breeding each year, and assuming that 25% of breeding age birds may skip breeding in any one year (as derived from long-term data sets on similar species), there are probably c.10,700 mature individuals (B. Baker in litt. 2012), assumed to equate to a total population of c.16,000 individuals.
Chatham Petrel	EN	250	1400	14	2010	Based on an age at first breeding of three years, and an estimate that at least 75% of birds will be over three years old, the latest total population estimate from 2010 of c.1,400 individuals probably includes c.1,100 mature individuals (G. Taylor 2012).
White-necked Petrel	VU	C.50000	150000	1500	1988	The total population has been estimated at c.100,000 mature individuals, roughly equivalent to 150,000 total individuals.
Cook's Petrel	VU		900000-1800000	9000	2008	M. Rayner estimates over 650,000 mature individuals on Little Barrier in 2007 and c.15,000 mature individuals on the Codfish Islands in 2008, thus the total population estimate is rounded to c.670,000 mature individuals.
Mottled Petrel	NT		1500000	15000	2004	Brooke (2004)
White-headed Petrel	LC		600000	6000	2009	Brooke (2004) estimated the global population to number around 600,000 individuals.
Grey-faced Petrel	LC		600,000-900,000	6000	2000	Populations from Taylor (2000). Formerly considered conspecific with Great-winged Petrel
Magenta Petrel	CR		150-200	8	2012	In 2012, the total population was estimated to number around 150-200 individuals, including 80-100 mature individuals (G. Taylor in litt. 2012).
Soft-plumaged Petrel	LC		5000000	50000	2009	Brooke (2004) estimated the global population to number at least 5,000,000 individuals.
Kermadec Petrel	LC		150000-200000	1500	2009	Brooke (2004) estimated the global population to number 150,000-200,000 individuals.
Black-winged Petrel	LC		8000000-10000000	80000	2009	Brooke (2004) estimated the global population to number 8,000,000-10,000,000 individuals.
Pycroft's Petrel	VU	5000-10000	30000-40000	300	2012	The total breeding population is estimated at 5,000-10,000 pairs, equating to 12,000-22,000 mature individuals, within a total population of 30,000-40,000 individuals (G. Taylor in litt. 2012).
Little Shearwater	LC		900000	9000	2009	Brooke (2004) estimated the global population to number over 900,000 individuals.
Buller's Shearwater	VU		2500000	25000	1990	The total population is estimated at 2.5 million birds (Marchant and Higgins 1990), although this is now likely to be too high (G. Taylor in litt. 2012).
Flesh-footed Shearwater	LC		650000	6500	2009	Brooke (2004) estimated the global population to number c.650,000 individuals. The Lord Howe island population has been estimated at c.20,000-40,000 breeding pairs, although anecdotal reports suggest that this population has declined in recent years. National population sizes have been estimated at c.25,000-50,000 breeding pairs in New Zealand (del Hoyo 1992).
Fluttering Shearwater	LC		100000	1000	2009	Brooke (2004) estimated the global population to number at least 100,000 individuals.
Sooty Shearwater	NT		20000000	200000	2004	The global population is roughly estimated to number c.20,000,000 individuals (Brooke, 2004), while national population estimates include: c.100-10,000 breeding pairs, c.50-1,000 indi

Common name	Cat	Pop. size (breeding pairs)	Pop. size (inds)	1% Glob- al pop	Year	Population justification
Sooty Shearwater	contd.					viduals on migration and c.50-1,000 wintering individuals in China 1,000 individuals on migration in Japan and c.1,000 individuals on migration in Russia (Brazil 2009).
Hutton's Shearwater	EN	106000	300000-350000	3000	2004	Cuthbert and Davis (2002) estimated 106,000 breeding pairs, and Brooke (2004) estimated a total population of 300,000-350,000 individuals.
Wedge-tailed Shearwater	LC	C.1000000	5200000	52000	2009	Brooke (2004) estimated the global population to number 5,200,000 individuals.
Red-tailed Tropicbird	LC		32000	320	2009	The global population is estimated to number c.32,000 individuals (del Hoyo et al).
Australasian Gannet	LC	C.75000	C.2000000	2000	2009	Populations perhaps c. 75,000 in early 21st Century with more than 80% in New Zealand waters.
Masked Booby	LC					The global population size has not been quantified, but this species is described as 'fairly common' (Stotz et al. (1996). Pantropical distribution suggests several thousand individuals.
Campbell Island Shag	VU	C.2000	8000	80	1997	In 1975, the population was estimated at c.2,000 pairs or 8,000 birds (Marchant and Higgins 1990, Heather and Robertson 1997). However, the breeding season may be quite prolonged and staggered between colonies, and therefore the census may have underestimated numbers (P. Moore <i>in litt.</i> 1999), so the number of individuals may be a more reasonable reflection of the breeding population. Nevertheless, a more up-to-date population estimate is required for this species.
Great Cormorant	LC		1400000-2900000	14000	2009	The global population is estimated to number c.1,400,000-2,900,000 individuals (Wetlands International 2006), while national population estimates include c.1,000 wintering individuals in China; c.100-10,000 breeding pairs and c.1,000 wintering individuals in Korea; c.10,000-100,000 breeding pairs and c.10,000 wintering individuals in Japan and possibly c.10,000-100,000 breeding pairs and c.1,000-10,000 individuals on migration in Russia (Brazil 2009).
New Zealand King Shag	VU	102-126	350-1500	7	2002	The population between 1992 and 2002 has been estimated at c.645 birds, including 102-126 breeding pairs, hence a population of 250-999 mature individuals is assigned here. This equates to 375-1,499 individuals in total, rounded here to 350-1,500 individuals.
Stewart Island Shag	VU		5000-8000	33	1994	Population estimates have varied, although the population may be as high as 5,000-8,000 individuals (C. Lalas 1994). This is roughly equivalent to 3,300-5,300 mature individuals.
Auckland Islands Shag	VU		4500	30	2011	Although the population was thought to number fewer than 1,000 individuals, surveys in 1988 and 1989 indicated 475 nests in 11 colonies on Enderby, one colony of 62 nests on Rose, and 306 nests on Ewing. A boat-based survey of Enderby Island carried out in 2011 counted 1,366 active nests in 10 colonies (J. Hiscock 2012). Based on these data, a population of c.3,000 mature individuals is estimated, although a more up-to-date estimate of numbers in other colonies is needed (J. Hiscock 2012). On the basis of the estimated number of mature individuals, there are assumed to be c.4,500 individuals in total.
Pitt Island Shag	EN	547	1400	11	2004	A total of 547 pairs (=1,094 mature individuals; 1,400 estimated total individuals) were counted in the second complete census over the 2003-2004 breeding season.
Little Pied Cormorant	LC		51000-1100000	510	2009	
Little Cormorant	LC		280000-350000	2800	2009	
Chatham Islands Shag	CR	357	1070	10	2011	A census carried out in 2011 counted 357 breeding pairs (M. Bell 2012), presumably equating to 714 mature individuals and c.1,070 individuals in total.
Spotted Shag	LC		60000-150000	600	2009	
Bounty Islands Shag	VU		620	6	2005	The population is estimated to number at least 620 individuals, roughly equating to 410 mature individuals (R. Hitchmough <i>in litt.</i> 2005).
Little Black Cormorant	LC		110000-1000000	1100	2009	
Large Pied Cormorant (Pied Shag)	LC		35000-1000000	350	2009	In New Zealand M. Bell (2012) reviewed census data for <1970, 1980-1990 and >2000 and estimated 1796 breeding pairs (c. 5400 individuals) for North, South and Stewart Islands. The Large Pied Cormorant (Pied Shag) also breeds in Australia.
Brown Skua	LC		10000-19999	100	2009	The population is placed in the band 10,000-19,999 individuals, equating to 6,667-13,333 mature individuals.
Black Noddy	LC		160000-1100000	1600	2009	

Common name	Cat	Pop. size (breeding pairs)	Pop. size (inds)	1% Glob- al pop	Year	Population justification
Brown Noddy	LC		180000-1100000	1800	2009	The global population is estimated to number c.180,000-1,100,000 individuals (Wetlands International 2006), while national population sizes have been estimated at c.100-10,000 breeding pairs and c.50-1,000 individuals on migration in Taiwan and c.100-10,000 breeding pairs and c.50-1,000 individuals on migration in Japan (Brazil 2009).
Common White Tern	LC		150000-1100000	1500	2009	
Black-billed Gull	EN		100000	1000	1998	The most complete nationwide census was carried out in 1996-1997 (G. A. Taylor per R. Coumbe <i>in litt.</i> 2000, and counted 48,000 nests (Powlesland 1998), thus the number of mature individuals is estimated to be 96,000; however, more up-to-date survey data are required.
Caspian Gull	LC					Global population size is unknown owing to recent taxonomic splits.
Southern Black-backed (Kelp) Gull	LC		3300000-4300000	33000	2009	The population is estimated to number 3,300,000-4,300,000 individuals.
Red-billed Gull	LC		100000-1000000	1000	2009	Results of New Zealand-wide survey to be published 2016.
Grey Noddy	LC	< 25000	75000	750	2009	Status is not well known and species is possibly rare (HBW 2015).
Black-fronted Tern	EN		2500-9999	25	2007	In 2004, the New Zealand Department of Conservation estimated 1,000-5,000 mature individuals of this species (R. Hitchmough <i>in litt.</i> 2006), and a winter census in 2007 estimated c.5,000 individuals M. Bell <i>in litt.</i> 2012). Another estimate has put the total population at 7,000-10,000 individuals (R. Keedwell <i>in litt.</i> 2006), roughly equivalent to 4,600-6,700 mature individuals. Based on these estimates, the population is placed in the band for 2,500-9,999 mature individuals.
Caspian Tern	LC		240000-420000	2400	2009	The global population is estimated to number c.240,000-420,000 individuals (Wetlands International 2006), while national population estimates include: c.50-1,000 individuals on migration and c.50-1,000 wintering individuals in China; c.50-1,000 individuals on migration and c.50-1,000 wintering individuals in Taiwan; c.50 individuals on migration and c.50 wintering individuals in Japan and c.100-10,000 breeding pairs and c.50-1,000 individuals on migration in Russia (Brazil 2009).
Sooty Tern	LC		21000000-22000000	210000	2009	The global population is estimated to number c.21,000,000-22,000,000 individuals (Wetlands International 2006), while the population in Japan has been estimated at c.100,000 breeding pairs and c.1,000 individuals on migration (Brazil 2009).
Fairy Tern	VU		2500-9999	25	2007	In Australia, subspecies may number fewer than 5,000 mature individuals at up to 170 sites, with less than 1,600 pairs in Western Australia, a few hundred pairs in each of Tasmania and South Australia and just a few pairs in Victoria. In New Zealand, numbers 35-40 pairs. In New Caledonia, numbers 100-200 pairs. The total population is best placed in the band 2,500-9,999 mature individuals.
White-fronted Tern	LC	12000-15000	20000-49999	240	2012	The global population is very unlikely to exceed 50,000 individuals, and may be considerably less OSNZ survey results from the 1990s suggest a total population of 12,000-15,000 pairs (C. Gaskin and G. Taylor <i>in litt.</i> 2012) therefore estimated 24,000-30,000 mature individuals here. The previous estimate of 1,500,000 is considered to be a vast overestimate (C. Gaskin and G. Taylor 2012).
Antarctic Tern	LC		130000-140000	1300	2009	



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