



Miranda Naturalists' Trust

(Incorporated under the Charitable Trusts Act 1957)

owners and operators of the
Miranda Shorebird Centre
Firth of Thames New Zealand

STATEMENT OF EVIDENCE CENTRAL INTERCEPTOR – MANGERE

1. Introduction:

1.1 My name is David Alexander Lawrie and I am presenting this evidence on behalf of the Miranda Naturalists' Trust in support of the submission of the Manukau Harbour Restoration Society (Submission 95).

1.2 The Trust is a Charitable organisation that owns and operates the Miranda Shorebird Centre on the Firth of Thames. The Trust was established to undertake among other things research into the bird life that utilises the Firth of Thames and to undertake advocacy work on behalf of those birds and their habitats.

1.3 I have been on the Trust Council since its formation in 1975 and spent 11 years as Chairman but now fulfil the International Liaison role. I am currently the President of the Ornithological Society of NZ, a position I have held for 4 years.

2. General:

2.1 From research undertaken by the Trust involving banding and monitoring of migratory birds we have developed a better understanding of the migratory patterns of these birds. A clearer picture has also emerged of the movement of birds within New Zealand and within the international context.

2.2 Current population monitoring that takes place in New Zealand twice annually by the Ornithological Society is showing that the numbers of migratory shorebirds returning to New Zealand is declining.

2.3 Members of the Miranda Trust have been involved in undertaking counts in China and Korea where the birds stopover for refuelling during northward migration to breeding grounds in the high Arctic. The Trust now has a sister site agreement with the managers of the Yalu Jiang National Nature Reserve in China. That reserve hosts at least 70% of the Godwit from New Zealand on their northward migration.

2.4 The Trust is a member of the East Asian-Australasian Flyway Partnership to which the NZ Government has recently also agreed to join. The Trust also holds agreements with officials in both North and South Korea relating to advocacy for shorebirds.

3. Shorebirds

3.1 The shorebird research that has been undertaken has identified that not only do shorebirds require healthy mudflats where they feed they also require secure high tide roosting areas. During roosting, birds perform several key functions including daily maintenance (preening) and sleep. Good roost sites must be within reasonable commuting distance from foraging areas and if birds have to fly too far to reach a suitable roost site the energy costs become too great.

3.2 Regular or prolonged disturbance while birds are roosting can have serious negative implications. There is clear evidence that prolonged disturbance at an important roost site can ultimately reduce the carrying capacity of the entire harbour.

3.3 This current proposal will have an effect on two important roosts, namely the Kiwi Esplanade Reserve and also the roost sites adjacent to the old oxidation ponds. We note that Boffa Miskells evidence reports that the Kiwi Esplanade Roost site holds shorebirds “in the few hundreds” and “many hundreds”. OSNZ census data has shown that this site regularly records 1500+ South Island Pied Oystercatchers, with one record of 6,602 on 10/2/2008.

3.4 We do not disagree with Boffa Miskells conclusion that long term the construction phase will have little impact on roosting for shorebirds, however the increasing use of known bird roost sites for other uses is of concern on a larger scale, and we would encourage mitigation of these individual and cumulative effects by securing safe roost sites elsewhere in the Harbour.

4. Emergency Pressure Relief

4.1 We note from the evidence presented by Watercare that the last emergency discharge facility from the new pipe line is in the vicinity of the Mangere Waste Treatment Plant. Any large discharge that would occur in that area would have the potential to contaminate the mudflats and that is acknowledged in the environment impact reports attached to that evidence.

4.2 That area is of prime importance to the feeding of an endemic shorebird called the Wrybill Plover which occurs at this area in substantial numbers. There are regular flocks in this vicinity of approximately 1,000 birds which is 20% of the world population.

4.3 If this emergency discharge occurs during a low tide period then there is a distinct possibility of direct contamination of the mudflats and hence having direct impact on this bird species which is listed under the New Zealand threat category (Miskelly et.al. 2008) as threatened (vulnerable).

4.4 While we accept that the threat of this emergency discharge is very low the consequences of a discharge at that point could be very serious for a substantial portion of this threatened birds population.

5. Manukau Harbour

5.1 The Manukau Harbour is the most significant shorebird habitat in New Zealand. In the harbour the birds feed on the extensive mudflats at low tide which contain high quality food. It is essential therefore that the health of the harbour and the mudflats themselves are maintained and that the natural balance is not destroyed.

2011 summer census figures of shorebirds by Ornithological Society

Manukau Harbour	26,171
Kaipara Harbour	20,488
Farewell Spit	17,323
Tauranga – Maketu	10,536
Firth of Thames	9,803

5.2 It would appear from the documentation relating to this proposal that is intended that a higher discharge of treated fresh water will occur into the harbour. Because of the slow flushing of water within the harbour there is the distinct possibility that this could affect the salinity of the harbour water which will ultimately have detrimental impacts on the biota in the mudflats. The environmental impact assessment completed does not appear to have looked at the effects

beyond the constructions stage and we would encourage a further assessment before any decision is made.

5.3 In our opinion a precautionary approach should be taken to ensure that detrimental effects do not occur. If there are unexpected effects then it could take many years to reverse and by that time the bird population is likely to have been severely affected.

6. International flyway

6.1 The mayor's vision for Auckland City is to create the world's most liveable city. That is an admirable goal but in our opinion it should also include living in harmony with nature and the natural assets that already exist.

6.2 Auckland has the distinction of being one of the few cities in the world where the major habitat for migratory shorebirds is contained within the city boundaries. That is something for which we should be proud but only if we can maintain that into the future.

6.3 At the recent meeting of the East Asian-Australasian Flyway Partnership, which I attended, a report was presented titled "*New tools for development of the flyway site network: an integrated and updated list of candidate sites and guidance on prioritisation*". This report was prepared by Roger Jaensch dated April 2013.

6.4 This report considered potential sites for migratory shorebirds throughout the flyway and used different methods of prioritising criteria to determine lists of candidate sites for each of the countries in the flyway.

6.5 One of the criteria was the same as a Ramsar listing and under two of the prioritisation criteria the Manukau Harbour was the top of the list for New Zealand. This indicates the importance of the Manukau Harbour in not only a New Zealand context but also internationally. Several of the species of birds that utilise the Manukau Harbour are at their wintering grounds, which is the terminal point of the flyway, and are present as a sizeable percentage of the total population of that species. It is therefore critical that nothing is done in New Zealand that could affect those populations.

7. Ramsar

7.1 The Manukau Harbour is the highest scoring candidate in New Zealand for a new Ramsar listing and preliminary talks have already been held about how to achieve that outcome. As mentioned above the report presented to the meeting of the East Asian-Australasian Flyway Partnership showed that the Manukau Harbour scored very highly under two prioritisation criteria. The first was measuring the proportion of the total size of population which was recorded at the site whereas the second was in relation to the 1% population level for an individual species.

7.2 These criteria are internationally recognised with the Ramsar Convention applying the 1% population level for new listings.

7.3 The Manukau Harbour qualifies for at least 4 species which have more than 1% of their population in the harbour: Wrybill, Bartailed Godwit, Red Knot, and NZ Dotterel. As mentioned previously the Wrybill population in the harbour is about 20% of the total population.

7.4 The Ramsar Convention was signed in 1971 and is a means of recognising wetlands of international significance. At the present time New Zealand has only six sites listed under the Convention but the Manukau Harbour is currently not one of those.

7.5 We believe therefore that every effort should be made to ensure that the high quality of the habitat within the harbour is protected and if possible enhanced into the future. That is something that should be strived for as part of the mayor's vision for the city.

8. Current Proposal:

8.1 The current proposal will have potential effects on birds in two ways. The first relates to the disturbance of existing roost sites, mainly during construction. As stated above birds need safe and secure high tide roosts and the design of the project should be undertaken in such a way that direct construction is directed away from the known roost sites as far as possible.

8.2 However the main effect that we wish to draw to the attention of this committee is the potential effect on the ecology of the harbour. We note from the evidence prepared by Watercare that the additional flows into the harbour is approximately 2% of the volumes treated at the Mangere WWTP on an annual basis. While that is a relatively small percentage we are concerned that the ecology of the harbour is very delicate and even small changes in salinity could have major impacts. This is even more relevant where the discharge is taking place in one corner of the harbour and there is a relatively long period within which the treated waste water takes to disperse to the open ocean.

8.3 The receiving environment is so important for the feeding of these migratory shorebirds that we believe that risks cannot be taken even for these minor changes.

8.4 We believe that the time has come where investigations should be undertaken into extending the discharge point further towards the open ocean to reduce the impacts that increased fresh water will have on the benthic fauna within the harbour.

8.5 The other option that needs to have serious consideration is for the treated water to be recycled to reduce the actual discharge. I understand that technology is now available to enable the quality of the discharge to achieve a level where recycling can occur.

8.6 It does not appear that this option for reducing the discharge into the harbour has been incorporated into the design outcomes of this project.

9. Conclusion:

9.1 The Manukau Harbour is the most important habitat in New Zealand for shorebirds and we believe that this is a record that the city should take some pride in and incorporate into the mayor's vision for the world's most liveable city. While the construction of the interceptor itself will have minimum impacts on bird life we believe that greater consideration needs to be given to the subsequent discharge that will occur into the harbour. While the change in volumes is relatively low the environment is really delicate and we believe that a precautionary approach should be taken.

9.2 We therefore believe that the discharge from the Mangere WWTP should now be moved further from the present discharge point to minimise impacts on the harbour itself, or else the amount of the discharge reduced by incorporating recycling.

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