APPENDIX B

Letter from Avifauna Research Services

16 January 2009

Avifauna
Research & Services Pty. Ltd.

16 January 2009

Marika Calfas
Sydney Ports Corporation
PO Box 25
Millers Point NSW 2000

Dear Marika,

Port Botany Container Terminal Expansion – Noise Implications of Alternative Rail Siding Location

In response to you communication regarding the implications of Alternative Rail Siding Location:

From the information in your email and noise report by Wilkinson Murray it would seem likely that noise from the Alternative Rail Siding Location expanded port would not present any significant impacts beyond those described in the Port Expansion EIS.

However, as outlined in Appendix G of Appendix O of the EIS:

"Shorebirds feed in a variety of wetlands in size from a few hectares to estuaries of many square kilometres in size. Generally speaking, the larger the wetland area the more shorebirds there are likely to be there. In the case of constructed wetlands it is often necessary to consider the minimum size required to make a site functional, then work upwards from this to consider how many shorebirds, and which species need to be catered for. Minimum size depends on the amount of feeding area available and the need for buffer zones to compensate for disturbances and the psychological 'openness' of a site required by shorebirds."

"Areas that are 'boxed in' by tall trees and/or buildings tend to be avoided by shorebirds (Straw 2002). It is therefore important to provide a large enough area to provide sufficient habitat and food resources for the shorebirds plus a clear line of view around this habitat. In part, the minimum size of habitat will depend on the number of shorebirds, and the species involved, that must be sustained by the habitat area and, in part the need for an open line-of-site around the feeding habitat and roost sites."

"The expansion of Port Botany will result in partially enclosing Penrhyn Estuary. The enclosing of a small area such as the existing intertidal flats at Penrhyn Estuary would result in a closely boxed-in area where shorebirds would be reluctant to enter. Shorebirds prefer an open aspect to allow a clear view of potential predators."

"The minimum size of habitat to maintain existing species at Penrhyn Estuary will depend on the nature of the development proposed for the site and the number of shorebirds that need to be accommodated at the site. The proposed expansion will provide an open estuary area of about 27 ha. Research carried out at shorebird sites in Japan, in highly developed areas, have shown that large numbers of shorebirds and other waterbirds us sites of over 30 ha of intertidal mudflats (Yatsu-higata) and smaller areas if not boxed in by tall structures (Tokyo Port Wild Bird Park)."

Phone **02 9597 7765** • Mobile **0411 249 075**
Email: mail@avifaunaresearch.com • PO Box 2006 Rockdale Delivery Centre NSW 2216 Australia

"To mitigate the boxed-in effect, structures on the terminal should be set back from the edge of the estuary as far as possible."

Impact of physical structures

"The expansion of Port Botany will result in partially enclosing Penrhyn Estuary with wharf structures, a rail line, stacked shipping containers and large cranes." The Approved 4m Barrier forms a wall in a northerly and north-westerly direction. The proposed additional sound barrier will effectively form a 'second wall to the room' increasing the boxed in effect of the Estuary. This will potentially impact on shorebird usage, especially in the areas immediately adjacent to the noise wall.

Possible mitigation

If the Alternate Rail Siding is constructed in place of the rail loop originally planned around the northern edge of the Estuary, with its associated tall vegetation screening, an additional 33m would be available to be planted with ground cover (less than 15cm in height). This will increase the open aspect of the Estuary on the northern side and to a large degree mitigate the effects of the additional noise wall.

The construction of an opaque wall prevents shorebirds from seeing potential predators causing them to stay away from the vicinity of the barrier. To a large extent a transparent wall would reduce this visual effect and would therefore be less threatening. It is therefore recommended that only the bottom 2 metre of the barrier be opaque and that the upper 1 metres be transparent (with sufficient patterning to reduce the chance of birds flying into the barrier thinking it was open).

Yours faithfully

Phil Straw
Avian and Wetlands Ecologist