



**Submission to the New South Wales Department
of Planning**

NCIG Coal Export Terminal – Modification to Project Application MP06_0009 MOD2

By The Australian Wetlands Rivers & Landscapes Centre

Background

Researchers at the Australian, Wetlands, Rivers and Landscapes Centre at the University of NSW have expertise and research data relevant to this development proposed by the Newcastle Infrastructure Group. In particular, we have monitored shorebirds and all waterbird species on Ash Island in the area referred to as additional land on the west of the proposed development. Swan Pond represents a habitat area that is different to many other on Kooragang Island with its shallow shoreline and intermittent mudflats. This area includes part of our survey area, locally known as Swan Pond, where we completed detailed surveys for protected waterbird species were carried out from 1994-1997 and 2004-2007 (Kingsford et al. 1998; Spencer 2010). These surveys clearly identified the area as an important feeding and roosting area for migratory shorebirds for which Australia has international obligations.

Our analysis of long-term survey data collected by the Hunter Bird Observers Club (HBOC) and the Australasian Wader Study Group from 1982-2007) showed long-term declines (>40%) in migratory shorebird numbers in the Hunter River Estuary (Spencer 2010), which coincides with the local destruction of wetland habitat. Further, the area is rich in diversity and abundance of resident waterbirds, including Black swans *Cygnus atratus* from which it derived its name.

The proposed minor alignment of the railway line will have a significant impact on wetlands in Swan Pond, severely degrading or destroying wildlife habitat in this area and we raise objections in key areas, related to Australia's international, national and state obligations for which we have collected rigorous information. This development further contributes to long-term cumulative impacts of development in the Hunter estuary which have reduced shorebird feeding and roosting habitat and directly affect Australia's obligations under the Ramsar Convention and migratory bird agreements.

International and national obligations

- Many shorebird species that spend their non-breeding season in Australia rely heavily on coastal wetlands such as the Hunter River Estuary. Kooragang Island is internationally recognised as a site on the *East Asian-Australasian Flyway Site Network* which identifies important sites for migratory shorebird species from their breeding sites in the Arctic to non-breeding sites in Australia. Australia is listed a committed party of the *Partnership for the Conservation of Migratory Waterbirds and the Sustainable Use of their Habitats in the East Asian-Australasian Flyway*.
- The proposed development also borders the *Hunter Estuary Wetlands Ramsar Site*, which was first listed in 1984 to internationally recognise the importance of wetland habitats in the estuary for waterbird species, and threatened species and ecological communities.
- During surveys we conducted in 1994-97 and 2004-07, 10 migratory shorebird species were observed using habitat in Swan Pond during low and high tide surveys (Kingsford et al. 1998; Spencer 2010; see Table 1). These species are protected under the Commonwealth *Environment Protection and Biodiversity Conservation* (EPBC) Act 1999, which has specific provisions for the protection and conservation of migratory shorebirds as a matter of national environmental significance. We note that a further 12 species have been recorded in Swan Pond by observers of the HBOC (detailed in the annual HBOC bird reports published from 1993-2010).

- We recorded an additional migratory shorebird species, Latham's snipe *Gallinago hardwickii* in neighbouring freshwater wetlands to Swan pond during our surveys (Kingsford et al. 1998; Spencer 2010).
- Migratory shorebird species recorded in Swan pond are also listed under international bilateral agreements that Australia has with Japan (JAMBA, 1981), China (CAMBA, 1988) and the Republic of Korea (ROKAMBA, 2007). Under these agreements signatory countries are obliged to protect migratory shorebirds and their roosting and feeding habitat.
- Records for migratory shorebirds in Swan pond include counts of national and international significance. For example, a count of 1,669 Red knots *Calidris canutus* were recorded in Swan Pond in October 2006 (Stuart 2007) which represents more than 1% of the Australian Red knot population, and internationally significant numbers of sharp-tailed sandpiper *Calidris acuminata* (1,711 birds) were recorded in Swan Pond in March 2005 (Spencer 2010).
- Eastern curlews *Numenius madagascariensis* use Swan pond regularly as day and night roosting habitat (Spencer 2010), and this species is found in internationally significant numbers in the Hunter River estuary. Our studies of Eastern Curlew habitat use in the Hunter River estuary showed that Swan pond is particularly important for curlews when there are high levels of disturbance at roosting habitat in the main channel of the Hunter River, and during high spring tides and adverse weather conditions (Spencer 2010). The potentially impacted area is also an important refuge habitat for the species in bad weather.
- Swan Pond is particularly important as feeding habitat for sharp-tailed sandpipers in the estuary during low tide and high tide periods, when mudflat feeding habitat in Fullerton Cove is inundated (Spencer 2010). The drainage of Big Pond and other estuarine wetlands on Kooragang Island in the last decade have reduced the availability of high tide feeding habitat in the estuary. High tide feeding habitat is particularly important for small-bodied shorebird species such as the Sharp-tailed sandpiper and curlew sandpiper *Calidris ferruginea* that need to continue to feed throughout the tidal cycle.
- Swan pond adjoins habitats identified as green and golden bell frog *Litoria aurea* habitat, a species listed as vulnerable under the Environment Protection and Biodiversity Conservation Act (EPBC) 1999.

State obligations

- The Hunter River estuary is recognised as the most important site for migratory shorebirds in NSW (Wakins 1993), and is protected under the Hunter Wetlands National Park that includes Swan pond.
- At the state level, there are a number of legislative acts that aim to protect wetlands and/or shorebird species, including the NSW Threatened Species Act (TSC Act 1995), National Parks and Wildlife Act 1974, Fisheries Management Act 1994, and State Environment and Planning Protection No.14. _Coastal Wetlands 1985.
- The NSW Government also has similar international obligations to the Australian Government for protection of migratory shorebirds and management of Ramsar sites such as the Hunter River Estuary.
- Curlew sandpipers are now listed as endangered in NSW (TSC Act), with rapid declines observed in this species along the East-Asian Australasian Flyway including the Hunter River estuary. Our

analysis of long term trends in this species showed that numbers had plummeted by >80% in the Hunter estuary from 1982-2007 (Spencer 2010). The reason for severe decline in this species is attributed to habitat loss across its range. The NSW scientific determination: “The dominant threats to Curlew Sandpipers are associated with development pressure and human disturbance in foraging sites in coastal areas both in Australia and especially in their staging grounds”

- Black-tailed godwits *Limosa limosa* are listed as vulnerable in NSW (TSC Act) and mean counts of this species have also declined in the Hunter estuary (56%) from 1982-2007 (Spencer 2010).
- Coastal saltmarsh which will be affected by this development and it is listed as an endangered ecological community in NSW (TSC Act). Coastal saltmarsh provides important habitat for shorebirds in the Hunter estuary as it provides major night roosting habitat, low and high tide feeding habitat for small shorebird species, staging habitat for large flocks of passage migrants and supplementary roosting habitat for large shorebird species (Spencer 2010). Saltmarsh can also mitigate impacts of sea level rise on coastal areas.
- Destruction of habitat for shorebirds resulting from this development conflicts with funding spent by NSW Government over a period of more than ten years (Environmental Trust funded projects and the Kooragang Wetland Rehabilitation Project, Hunter-Central Rivers Catchment Management Authority) on restoration projects on Swan and Wader Ponds to remove mangroves and restore saltmarsh specifically as migratory shorebird habitat. The Australian and NSW Governments have also supported detailed ecological and hydrological studies of Swan pond and neighbouring wetlands on Ash Island, to inform wetland restoration activities (Howe et al. 2010; Spencer and Howe 2008).
- Swan pond adjoins habitats identified as green and golden bell frog *Litoria aurea* habitat, a species listed as endangered under the NSW TSC Act 1995.

Table 1. Migratory shorebird species recorded in Swan Pond (Source: Kingsford et al. 1998; Spencer 2010) and status under relevant legislation.

Common name	Scientific name	Status ^a
Black-tailed godwit	<i>Limosa limosa</i>	V, nt
Common greenshank	<i>Tringa nebularia</i>	N
Curlew sandpiper	<i>Calidris ferruginea</i>	E
Double-banded plover	<i>Charadrius bicinctus</i>	
Eastern curlew	<i>Numenius madagascariensis</i>	I, v
Marsh sandpiper	<i>Tringa stagnatilis</i>	N
Pacific golden plover	<i>Pluvialis fulva</i>	N
Red-necked stint	<i>Calidris ruficollis</i>	
Ruff	<i>Philomachus pugnax</i>	
Sharp-tailed sandpiper	<i>Calidris acuminata</i>	I

^aStatus: V = vulnerable under NSW TSC Act, E = endangered under NSW TSC Act, nt = near threatened and v = vulnerable under International Union for the Conservation of Nature (IUCN) red list, N = nationally significant species (population estimates for Australia were based on DEH (2005)), I = internationally significant (>1% of East-Asian Australasian flyway population) taken from Bamford et al. 2008).

Conclusion

There is good quantitative evidence of the value of the area affected for migratory shorebirds. Impacts to this area affect Australia's international and national obligations for the protection of migratory shorebirds and their habitats. This provides further cumulative impact to an area which is increasingly affected by developments, contributing to long-term declines in shorebird populations.

Cited literature

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