

Our reference: LIC06/462-02:DOC12/9422:PW
Contact: Paul Wearne (02) 4224 4100

Department of Planning and Infrastructure
(Attention: Belinda Scott)
Acting Team Leader – Water Projects
Major Projects Assessment
GPO Box 39
SYDNEY NSW 2001

Dear Madam

LAKE ILLAWARRA ENTRANCE WORKS MODIFICATION MOD 1 (12 – DEC-05-MOD1)

I am writing in reply to your request for comments regarding the above modification. Lake Illawarra Authority (LIA) has requested changes to the management methods and maintenance of a sand island compensatory habitat which was a consent requirement for the Lake Illawarra Entrance Works.

The Environment Protection Authority (EPA) and Office of Environment and Heritage (OEH) has undertaken a review of the submitted information and has provided the attached comments (**Attachment A**) for your consideration. In developing these comments, we have also taken into account the outcomes of the meeting on 14 March 2012 with representatives from LIA, Department of Planning and Infrastructure (DoPI), the EPA and OEH. These comments relate to:

- general advice on the bird islands values
- review of monitoring results
- assessment of the bird island; and
- proposed options.

EPA and OEH consider that the entrance to Lake Illawarra presents the best available breeding habitat for threatened shorebirds in the lake, with other areas either not suitable or marginal. The continuous nesting record of threatened shorebirds at Windang since 2003/04 highlights the value of this habitat. In this regard we support the LIA's preferred option for an annual assessment of the available habitat linked to an adaptive management system. However, the EPA and OEH consider that the reinstatement of the bird island is a crucial management option in mitigating the threats at the site.

As discussed at the meeting on 14 March 2012, a Coastal Zone Management Plan is currently being developed for Lake Illawarra. A key component of this plan will be the management of biodiversity around the lake, including the shorebird habitat at the entrance. It is anticipated that this process will also assist in further developing effective management options at the site.

Should you require any further information, please contact the above designated officer on (02) 4224 4100.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'PB', followed by the date '5/4/12' written in the same ink.

PETER BLOEM
Manager Illawarra
Environment Protection Authority

Att:

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Attachment A

1. General Advice on the Bird Islands Values

The Little Tern is a migratory species that establishes a range of nesting colonies along the NSW coast each summer. The Pied Oystercatcher is a resident species that occurs in pairs at estuaries along the NSW coast. There is an inherent high level of natural variability in the presence and success of nesting of Little Terns and Pied Oystercatchers. Threats are from natural factors (wind, waves, king tides, storms, losses to native predators) human-induced factors (disturbance from people, dogs, water craft) and losses to introduced predators (foxes). In the context of the NSW population, Windang is a relatively small Little Tern nesting colony. However, recovery of the NSW population over the last 15 years or so means the site has potential to grow into a larger breeding site.

2. Review of Monitoring Results

The Environment Protection Authority (EPA) considers that the shorebird monitoring data documented in the submitted information is incomplete. Data from the National Parks and Wildlife Service South Coast Shorebird Recovery Program shows that Little Terns have nested (that is, laid eggs) at Windang every year from 2003/04 to 2009/10. See Table 1 below for complete shorebird breeding data for this site. This information shows a far more consistent use of the site by Little Terns than that suggested by the data presented by the Lake Illawarra Authority (LIA) in its submission. Nesting by Pied Oystercatchers in the last two years means there is a continuous nesting record at the site by threatened shorebirds since 2003/04.

The "bird Island" was constructed in 2007/08 and has only been in functional operation (that is, with an excavated channel) for three years since then (Table 1). Successful breeding has been recorded in two out of those three years (Little Terns in 2007/08, Pied Oystercatchers in 2010/11). Successful breeding has been recorded in two of the six years (Little Terns in 2003/04 and 2005/06) in which the island was not constructed or reinstated.

Year	Breeding pairs	Number eggs	Fledglings	"Bird Island"
2003/04	22 LT	63	5 LT	No
2004/05	12 LT	31	0	No
2005/06	10 LT	39	4 LT	No
2006/07	2 LT	5	0	No
2007/08	14 LT	40	14 LT	Yes
2008/09	8 LT	9	0	Yes
2009/10	6 LT	2	0	No
2010/11	1 POC	2	2 POC	Yes
2011/12	1 POC	4	0	No

Table 1: Shorebird nesting data for Windang Sandspit, Lake Illawarra, from 2003 to 2012. LT = Little Tern, POC = Pied Oystercatcher

No data is presented by the LIA or available from other sources on the use of the site as roosting habitat for shorebirds. Therefore no conclusions can be made regarding the use of the habitat at the entrance for roosting before or after the training wall construction.

3. Assessment of the Bird Island

The identification of "positives" and "negatives" of reinstating the bird island presented by the LIA is highly subjective and is poorly informed by the incomplete monitoring data. Without an island there are no physical deterrents to fox predation of eggs or chicks for birds that choose to nest at the entrance spit. Similarly, management of human disturbance relies solely on and fencing, signage or patrols of staff or volunteers without a channel between the main access points and the bird nesting areas. The fact that the island is not 100 per cent effective in eliminating threats is not a negative. The objective is to reduce the potential impact of threats to increase the likelihood of the birds having successful outcomes.

Despite the small data sample of both years and numbers of birds against which to assess effectiveness, the conclusion that *"reinstatement of the sand island provides little benefit to bird roosting and bird breeding at the locality"* is a very poor representation of the data. When the complete nesting record is viewed (Table 1), the site is clearly more significant for shorebirds than suggested by the LIA. The full data set suggests that the island is providing benefit to bird breeding at the locality. Successful breeding has occurred on two

out of three years that the island was constructed or reinstated, while successful breeding has only occurred in two out of six years that the island was not present or reinstated.

The LIA also suggests that little interest has been shown by the community in the habitat and ecological value of the area. However, the EPA and OEH consider that the construction of the island has provided a focal point for community awareness of the value of the site as a shorebird habitat in the Illawarra. The years that the work has been done have provided a great opportunity to use the media, letter box drops and staff and warden presence to promote the values. Continued efforts will ensure that community awareness of the site will only increase over time.

4. Proposed Options

The EPA and OEH consider that the recent nesting record of threatened shorebirds at Windang highlights that the value of the habitat is greater than that presented by the LIA. The entrance to Lake Illawarra presents the best available breeding habitat for shorebirds in the lake, with other areas either not suitable or marginal. In this regard, we support the LIA's preferred option for an annual assessment of the available habitat at the entrance, linked to an adaptive management process. However, we consider the reinstatement of the island is a crucial management option that needs to be considered yearly to mitigate the threats at the site.

To manage this approach we support the concept of a committee comprising OEH, LIA, Wollongong City Council, Illawarra Bird Observers Club and a community representative to meet to discuss options and inform the management of the site in September each year, prior to each breeding season. We also support the proposed milestones presented in the supporting information to manage threats at the site, however these options should also include the reinstatement of the bird island. We consider that the Sand Movement Study currently being undertaken by the LIA may also assist in guiding the viability and suitable location of a sand habitat island at the entrance.

We also recommend that the LIA address issues with the collection and storage of shorebird monitoring data, so that a complete picture can be used for future assessments. This program should also be linked to a five year review to determine effectiveness and benefits of the actions being undertaken at the site.