

THE CONSTRUCTED HERONRY AT BLOUVLEI, CENTURY CITY, CAPE TOWN

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Century City is a major new development on the Cape Flats, approximately 7 km from Cape Town city centre. Prior to development, one of the seasonal pans in the area had become a fairly large perennial body of water as a result of its receiving stormwater from surrounding residential areas. This became known as Blouvllei B to distinguish it from the seasonal pans of Blouvllei A. The surrounding terrestrial habitat had been extensively and densely invaded by alien plants, especially the Australian Port Jackson Willow *Acacia saligna*. The raised water levels had resulted in the flooding of the thickets which fringed Blouvllei B. Most of these flooded trees and saplings had died, producing a band of skeletal wood protruding from the water, backed by dense, living *Acacia saligna* thicket.

This configuration of deep water, dead and living trees, together with the relatively undisturbed and inaccessible location of Blouvllei, was apparently ideal for the establishment of a heronry. During the environmental impact assessment, prior to development, Blouvllei B was found to be hosting the largest heronry in the greater Cape Town area, and probably one of the largest in the country. In winter 1995 it was comprised of 1845 nests of 12 species, including Grey and Blackheaded Herons, Little, Cattle and Yellowbilled Egrets, Blackcrowned Night Herons, Sacred and Glossy Ibises, Whitebreasted and Reed Cormorants, Darters and African Spoonbills. By far the most common breeding species was the Cattle Egret with 1345 nests. The nest were distributed in an arc encompassing about three quarters of the circumference of Blouvllei B, and the great majority of the nests were situated in flooded trees (Allan & Barnes 1995).

Unfortunately, the development of Century City involved the complete destruction of Blouvllei B and its heronry. Eight hectares of seasonal pans and associate terrestrial habitat were set aside for conservation, and an adjoining area of eight hectares, including a portion of the area formerly covered by Blouvllei B, was developed into four constructed ponds which are separated by berms but connected at points by weirs. The purpose of the ponds is to polish incoming treated sewage effluent for use in the urban waterways of Century City, and to provide additional wetland habitat for waterbirds. The combined 16 ha are managed as a unit with restricted access and an emphasis on the restoration and creation of habitats for nature conservation.

The largest of the four constructed ponds, Pond 3, is relatively deep and comprises mainly open water. It was decided by the Blouvllei Environmental Committee to attempt to reestablish a heronry on the southern bank of Pond 3. Ms Lynda Muller, the Environmental Manager for Monex, the development company, managed the process of creating and improving the heronry over a period of three years. The initial creation of Pond 3 and the planting of the dead trees took place in mid-1997. In 1998 and 1999, the thicket of alien vegetation was allowed to grow up behind the heronry, and additional dead material was added to the constructed heronry itself. The principles followed in creating the heronry were: (a) plant dead trees and wood on the bank, and in the adjacent water, to provide nesting habitat; (b) allow a thicket of dense *Acacia saligna* to grow up behind the heronry to provide a screen from the prevailing southerly winds and from visual disturbance from nearby human activity; (c) minimize disturbance in the vicinity of the heronry. In addition, various platforms and boxes were placed in the heronry to encourage nesting and, in 1998, decoy egrets and cormorants, specially constructed for the purpose, were placed in the heronry in an attempt to attract birds. It is our impression, however, that neither of these measures was successful because the boxes and platforms have never been used, and neither nesting nor roosting is prevalent in the part of the heronry where the decoys were placed.

The heronry extends c. 150 m along the bank, and is approximately 5 m wide for most of its length, with at least half of that width standing in the water. If the adjoining thicket is included, the width is roughly 10 m. Halfway along its length, the heronry extends further out into the water and joins onto a small island which is approximately 20 m from the shore. The island itself is less than 100 m² and is virtually covered with thicket and dead trees. The extension of the heronry between the shore and the island is roughly 5 m wide.

Roosting of various species, including herons, ibises, Darters and Reed Cormorants, became normal once the thicket of *A. saligna* was established, although numbers of



Pond 3 and the heronry in August 1999. The small island, covered with thicket, is on the left. The whitish dead wood of the constructed heronry is visible, as is the thicket of living *Acacia saligna* behind it.



The nests. Cormorant and darter nests in the part of the heronry which connects the south bank and the island. The dense array of dead woody material, in which the nests are situated, is surrounded by water.





roosting birds were low with total numbers probably never exceeding 100. No breeding took place in the heronry during the 1997 and 1998 seasons. What follows is an account of the first breeding events to take place in the constructed heronry. These occurred in the spring and summer of 1999. Observations were made by both authors and by various other members of the Blouville Environmental Committee. The observations of the initial breeding event involving the Hadeda Ibises were made by MM.

On 24 August 1999, at 7 a.m., 30 Reed Cormorants were roosting in the heronry together with three Sacred Ibis. During subsequent visits between 24 August and 6 September, in the early evening, before sunset, 10-15 Cattle Egrets were seen flying into the heronry to roost.

In the week of 6-10 September, Hadeda Ibises were first seen. One very vocal bird was flying back and forth carrying longish sticks to the heronry. Another bird stood next to what appeared to be the beginnings of a nest. A few days later, the process was still ongoing. On the first occasion, there were no other birds present in the heronry, but on the second occasion the nest was being closely observed by three Cattle Egrets and about eight Reed Cormorants. They were standing close to the nest, so that the nestbuilding hadeda had to fly in between them. Both their proximity and apparent attentiveness gave the impression that the egrets and cormorants were actually watching the nest-building activity. The part of the heronry where these events took place was, in the extension, approximately equidistant between shore and island.

On the morning of 16 September, it was observed that Reed Cormorants had started nesting in numbers; approximately 10 active nests were situated in the immediate vicinity of the hadeda nest. The hadedas were not seen on this occasion. On 24 September, at 6 a.m., an active hadeda nest – presumably the same one – was observed; a hadeda was on the nest and the other bird visited twice. On the same occasion, the number of cormorant nests was seen to have increased to at least 12. Four Cattle Egrets were roosting amongst the cormorant nests, but no nesting by egrets was observed and they left by 6.45 a.m. Also roosting nearby were two Sacred Ibis, and one Grey Heron.

Later in the season, the number of Reed Cormorant nests increased to over 20. At least four Darter nests were also built. Both Reed Cormorants and Darters did have some degree of breeding success because young fledged birds of both species were observed in the heronry later in the season. The hadeda breeding attempt was not successful as the nest appeared to be abandoned shortly after 24 September.

We have described the features of the constructed heronry, and of the first breeding events there, in some detail because this is, to the best of our knowledge, the first time in South Africa that a heronry has been constructed for wild birds, and has successfully attracted not only roosting birds but also breeding pairs. Other heronries have been 'constructed' in the sense that they have developed on man-made islands and dams, but the heronry in question was specifically designed for the purpose, and with the particular hope that a breeding colony could be re-established. In relation to the original heronry on Blouville B, the success to date is very modest, but nevertheless significant. We believe it should serve as an encouragement to other developments where habitats for waterbirds are being created.

The other point of interest lies in the manner in which breeding appears to have been initiated at the heronry. The presence of roosting birds in the heronry was no doubt a prerequisite for the initiation of breeding in as much as it allowed individuals to become familiar with the site and assess its potential for breeding. Nevertheless, it appears to have been the nesting of a pair of Hadeda Ibis, a species which does not breed in colonies (Maclean 1993), but which more or less resembles some species which do, which provided a trigger or catalyst for nesting by Reed Cormorants, and their breeding which, in turn, encouraged the nesting of Darters. Logic dictates that there always has to be one pair of birds which is the first to take the plunge, but it would be interesting to know whether that pair is more usually drawn from some species than others, and whether some species usually follow the lead of others. It remains to be seen whether the successes of 1999 will be followed by greater numbers of pairs and a wider diversity of species in 2000. We will keep you informed.

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Lynda Muller, Environmental Manager at Century City, supervising the construction of the heronry in July 1997. Note the small island in the background.



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