



Figure 4: One of four Marsh Owls observed in close vicinity to each other, foraging over agricultural lands in the study area.

Open Grasslands

The only vegetation type (Mucina & Rutherford, 2006) present is "Soweto Highveld Grassland", which falls within the greater Grasslands Biome. It was not surprising, therefore, that the most extensive bird microhabitat available on this site is that of grasslands (see Figure 5). Grassland may attract the Blue Crane, Black-winged Pratincole, Southern Bald Ibis, Blue Korhaan, Secretarybird, and White Stork. Pristine patches of grassland, near to water, may provide breeding habitat for the African Grass Owl, although this species has not been recorded in the SABAP data for the study area. The grassland patches are also a favourite foraging area for game birds such as francolins and Helmeted Guineafowl, as well as being hunting habitat for raptors such as African Marsh Harrier, Lanner Falcon, Rock Kestrel (figure 7), Lesser Kestrel, Amur Falcon and Black-shouldered kite. Important to this study is that Botha's Lark (Endangered) has been recorded in the quarter degree squares (SABAP1 data) examined, and is a relatively rare grassland species (figure 12).



Figure 5: Grassland observed in the broader study area.



Figure 6: Burnt grasslands observed in the study area.



Figure 7: A Rock Kestrel perches, while foraging over grassland in the study area.

Dams

Various waterfowl, waders and numerous duck species, may frequent the man-made dams within the study area. More importantly, Blue Cranes use dams to roost in communally, and Flamingos may use these areas as stop over points while moving between larger water bodies. Various Storks may also frequent these water bodies. One particular Dam (New Denmark Dam) is a Co-ordinated Waterbird Count (CWAC) site, and both Lesser and Greater Flamingos were observed here during the site visit.



Figure 8: A typical man-made farm dam, as observed in the study area.

Wetlands and Rivers or drainage lines

In this area species such as Greater Flamingo, Lesser Flamingo, Yellow-billed Stork and Caspian Tern are attracted to water, and therefore may find flowing rivers or streams attractive. Non Red Data species may also occur in these areas for example herons. Rivers in their true form represent important habitat for many species, including Black Stork and a variety of other water birds, while the wooded riparian habitat along a river may provide habitat for various species such as the Hamerkop, African Darter, various cormorants, kingfishers, bee-eaters, robin-chats and numerous smaller species.

According to GIS mapping using data from Mucina & Rutherford (2006), the only river in the study area is the Leeuspruit. 1 in 50 000 maps from the Surveyor General show the presence of the smaller Wolwespruit (which may not always flow) to the east of the existing ash disposal site. Numerous smaller drainage lines, some of which do not always carry water are also present in the broader area. Drainage lines, as well as all of the Rivers/"Spruite" discussed above, may serve as flight paths for several bird species.



Figure 9: This drainage line in the study area contained water, which appeared to be dammed by a tar road.

Stands of Alien vegetation:

Patches of alien trees were observed throughout the study area, often associated with a farm stead, or along farm roads. These areas will mostly be important to physically smaller bird species. These also provide perching, roosting and nesting habitats for various raptor species and larger birds such as francolins, Guineafowl, Herons and Hadedda Ibises.



Figure 10: A stand of alien trees in the study area.

Relevant bird populations

The relevant bird populations that have been reported by the South African Bird Atlas Projects (1 and 2) can be found below in Tables 1 & 2. It is important to note that these species could have been recorded anywhere in the associated pentad or quarter degree square (QDGS), and not necessarily in the exact study area.