National guidelines for interventions that relate to colonial breeding waterbirds causing human-wildlife conflict in South Africa

Version 1
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Acknowledgements

The content and format of this first edition of this management booklet/document originally stemmed from ideas and discussions from several nuisance heronries that were reported in parts of South Africa during 2016 and 2017.

Parts of the text was substantially improved by suggestions from a variety of professionals and provincial ornithologists who have been involved with nuisance heronries and who are familiar with provincial conservation acts regarding human-wildlife conflicts. Special thanks are extended to the following for critically reviewing the manuscript:

Dr Craig Whittington-Jones, Ornithologist, Gauteng Department of Agriculture and Rural Development
Mr Kevin Shaw, Ornithologist, CapeNature, Western Cape Province
Mr Brian Colahan, ex Ornithologist, Free State Department of Economic Development, Tourism and Environmental Affairs
Ms Anel Slabbert, Senior Inspector, Port Alfred SPCA

Endorsement

The BirdLife South Africa Ethics Committee has reviewed and endorsed these National Guidelines for interventions that relate to colonial breeding waterbirds causing human-wildlife conflict in South Africa.

Recommended citation

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*Black-headed Herons at a nest site.* Photo credit: Lappies Labuschagne
**Background**

Colonially breeding waterbirds make use of either reed-beds or medium-large trees in which to build their nests. When they breed in trees, these are usually located on islands in dams or lakes, or along the shoreline of a waterbody but they can also be located away from water. Both alien and indigenous trees are used but they regularly make use of alien species which include *Eucalyptus* (Blue Gums), *Pinus* (Pine trees) or *Auricaria* (Monkey Puzzle Trees). They usually provide more suitable nesting opportunities based on their structure and size of branches. These ‘breeding trees’ are often located in urban environments close to human habitation or close to ‘sensitive’ sites such as airports or hospitals which can result in conflicts with residents, land owners, and managing authorities with often inappropriate interventions being undertaken.

In an attempt to be proactive, rather than reactive to conflict situations, this document outlines processes that address interventions in order to provide the necessary channels and guidance for all roleplayers in order to resolve situations timeously, appropriately and in the most ethical manner.

**Conflict scenarios**

A range of different conflicts are known to occur and these are summarised in Table 1, together with their relative importance and priority for intervention.

**Table 1.** Summary of conflict scenarios for colonial breeding waterbirds in South Africa.

<table>
<thead>
<tr>
<th>Breeding scenario</th>
<th>Conflict/Issue</th>
<th>Importance</th>
<th>Priority for intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site located within or close to (&lt; 1 km) airport/airfield</td>
<td>Bird strikes with aircraft</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Site located within or close to (&lt; 250 m) hospital or clinic</td>
<td>Noise nuisance; Potential health hazard (smell and guano deposition)</td>
<td>Medium-High</td>
<td>Medium-High</td>
</tr>
<tr>
<td>Site located in an urban/suburban environment (&lt;250 m from nearest house/building) including either in a business or residential area</td>
<td>Noise nuisance; Potential health hazard (smell and guano deposition)</td>
<td>Medium</td>
<td>Medium-High</td>
</tr>
<tr>
<td>Site located in an open public space (e.g. park, picnic area)</td>
<td>Noise nuisance; Potential health hazard (smell and guano deposition)</td>
<td>Low</td>
<td>Medium</td>
</tr>
</tbody>
</table>
**List of species**

A list of the species dealt with in this document is given in Table 2. All species are known to breed communally, either in reed-beds or trees and either discretely or in mixed colonies (Hockey et al. 2005, Hancock and Kushlan 1984).

**Table 2.** List of colonial-breeding waterbirds in South Africa that may present human-wildlife conflict issues.

<table>
<thead>
<tr>
<th>Family</th>
<th>Common name</th>
<th>Scientific name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phalacrocoracidae</td>
<td>Reed Cormorant</td>
<td><em>Microcarbo africanus</em></td>
</tr>
<tr>
<td>Phalacrocoracidae</td>
<td>White-breasted Cormorant</td>
<td><em>Phalacrocorax lucidus</em></td>
</tr>
<tr>
<td>Threskiornithidae</td>
<td>African Sacred Ibis</td>
<td><em>Threskiornis aethiopicus</em></td>
</tr>
<tr>
<td>Threskiornithidae</td>
<td>African Spoonbill</td>
<td><em>Platalea alba</em></td>
</tr>
<tr>
<td>Ardeidae</td>
<td>Western Cattle Egret</td>
<td><em>Bubulcus ibis</em></td>
</tr>
<tr>
<td>Ardeidae</td>
<td>Little Egret</td>
<td><em>Egretta garzetta</em></td>
</tr>
<tr>
<td>Ardeidae</td>
<td>Yellow-billed Egret</td>
<td><em>Egretta intermedia</em></td>
</tr>
<tr>
<td>Ardeidae</td>
<td>Grey Heron</td>
<td><em>Ardea cinerea</em></td>
</tr>
<tr>
<td>Ardeidae</td>
<td>Black-headed Heron</td>
<td><em>Ardea melanocephala</em></td>
</tr>
<tr>
<td>Ardeidae</td>
<td>Purple Heron</td>
<td><em>Ardea purpurea</em></td>
</tr>
<tr>
<td>Ardeidae</td>
<td>Black-crowned Night Heron</td>
<td><em>Nycticorax nycticorax</em></td>
</tr>
</tbody>
</table>

**Environmental laws and acts governing wild bird species**

Wildlife conflicts may require direct intervention to be made in order to reduce (sometimes perceived) negative impacts. These interventions usually result in wildlife being killed, maimed or disturbed in situ and usually done without the necessary permits being issued.

In South Africa, wildlife are protected by national acts and provincial nature conservation ordinances or acts. The National Environmental Management: Biodiversity Act (NEMBA, Act 10 of 2004) makes provision for the conservation of protected species at a national level while the provincial ordinances oversee legislation for the protection of species at regional (provincial) levels. In terms of the communal species dealt with in these guidelines (see Table 2) none are of national importance but they are afforded protection under the provincial nature conservation ordinances/acts. These ordinances/acts which outline the protection status of each species include which species are protected and any activities that may require a permit in terms of a legal intervention (such as hunting, culling, wilfully disturbing).

Across all provinces, for all species listed in Table 2, it is an unlawful activity to disturb any species that are breeding (i.e. have eggs and/or chicks) and should intervention be required it should be done under a permit issued by the provincial conservation authority and under any explicit conditions laid down in the permit. Any unlawful activities are subject to a fine and/or prosecution.

**Procedural steps to follow in response to a nuisance heronry**

Although provincial ordinances and permit regulations exist, these are often neglected or landowners and/or authorities are not aware of procedures to follow. Usually, intervention is required almost immediately and therefore action is often taken illegally.

In the event that a possible conflict scenario exists or is likely to become an issue, and in order to streamline processes and assist in averting conflict situations (as much as possible), the following workflow should be followed (as closely as possible) once a complainant/landowner/observer has notified the relevant conservation authorities of a problem site or a potential problem site (refer to Appendices 1 & 2 for a list of provincial authorities or welfare organisations):

1. Based on Table 1 above, conservation authorities to conduct an initial assessment as soon as possible. Response times should be kept to a minimum, wherever possible, as delays to a complaint may limit management options (e.g. if roosting changes to nest building; nest building to egg-laying; egg-laying to hatched chicks). Different stages will require different management scenarios.

   It is important at this stage that a coordinator for this conflict situation be established so that there is a single, focal point for managing the response and other logistics that may be necessary. Ideally a coordinator should come from the relevant provincial conservation authority, but should this not be possible then a senior SPCA (Society for the Prevention of Cruelty to Animals) or AAACL (Animal Anti-Cruelty League) officer should be considered. Contact telephone numbers should be exchanged between relevant parties involved or social media (e.g. Whatsapp) groups be created to ensure communication channels are available at all times.

   The initial assessment should include an initial site survey with the following being recorded on a predetermined data sheet:

   - Site coordinates (using a GPS or Google Earth)
   - Land ownership (municipal, local government, private, etc.)
   - List of species breeding, estimate of number of birds per species, estimate number of age classes of birds (adult, juvenile, nestling) and estimate number of nests per species. A qualified ornithologist or knowledgeable birder may need to be consulted should the conservation authority not have the relevant expertise to carry this out.
• Correctly identify the tree species in which the birds are breeding and whether the trees are alien or indigenous and protected under provincial and national ordinances. A qualified botanist or horticulturist may need to be consulted should the conservation authority not have the relevant expertise to carry this out.
• Indicate whether the birds are nest building, or if eggs and/or chicks are present.
• Provide an indication of flights/movement in and out of the heronry (this will be particularly relevant where the site is located close to an airport). This should preferably be done during the first two hours or last two hours of the day when parent birds will be most active.
• Provide an indication of the location of the nests in relation to human habitation (i.e. distance to nearest houses/business/hospital/school).
• Indicate whether there is a conflict scenario present at the site or if there is a potential scenario that may develop.

2. Conservation authorities to review the information from the site visit within a reasonable time period and, based on the survey data and provincial ordinances, provide appropriate guidance to the complainant/landowner. Where deemed necessary other relevant parties and stakeholders (e.g. the SPCA) should be notified.

3. For scientific purposes, the site assessment data should be captured in the online BirdLasser app (https://www.birdlasser.com) – it is envisaged to have an online HeronryMAP system in the future to act as a central data repository not only for the data specific from this site, but all heronry related data. This will allow the data to be centrally curated and allow follow up visits to be tracked and the conflict managed. The data would be available to download at any time by a registered user with login access.

Intervention guidelines for conservation authorities

Following on from the site assessment information, the following guidance should be followed to aid in an appropriate intervention-decision being taken:

• If adult birds are only nest building then nests can be destroyed and alien trees cut down and/or removed to encourage birds to select another site. Pruning or thinning out the foliage of tree could also act as an additional deterrent but it is likely to only offer a temporary solution (regular or seasonal pruning of the trees have in some instances proven to be effective in deterring the birds from returning to a site). If the landowner would like to keep the trees then noise-making devices or bird scaring projectiles can be deployed at the expense of the landowner and with permission from
relevant wildlife conservation authorities to deter birds from returning to the site. A wide variety of devices are commercially available.

- A number of tree species are protected by law under provincial and national ordinances and permits might be required to cut down such trees. It will therefore be important to determine whether the trees are alien or indigenous. A qualified botanist should be consulted where identification and conservation status of the trees are required as some indigenous trees may require special permission to be cut down.

- If there are eggs and/or chicks in the nests, the site is deemed (under provincial nature conservation ordinances and acts, see above) to be a protected site and cannot be interfered with at any level. However, a consultation process with complainant/landowner can be entered into to discuss alternative options, based on severity of the conflict (e.g. collision risk to aircraft). If it is deemed that the birds are causing harm or have the potential to cause harm to human life or aircraft then a permit needs to be issued and appropriate methods employed to remove the eggs and/or chicks. In the event that a priority permit cannot be issued then the relevant conservation authority needs to recommend an alternative course of action, especially when removal of chicks may not be an option.

- Where removal of chicks is necessary extreme care should be taken to remove birds and should be done under the supervision of a staff member of the relevant provincial conservation authority, local SPCA wildlife officer, Animal Anti-Cruelty League or local veterinarian; these people will need to be familiar or suitably trained in such cases. The following guidelines are recommended to be followed when removing chicks from nests:
  - A selection of medium-large boxes should be on-hand so that chicks can be placed in these boxes. The boxes should be lined with newspaper or old carpets and have air-holes placed on top and on both sides to allow sufficient airflow through the box for the birds to breathe.
  - Chicks should not be squashed in the boxes and preferably birds should not be placed on top of each other. Birds should be spaced at least 10 cm apart. The golden rule, however, is once enough birds fill a box a new box should be used. It is thus important to ensure that enough boxes are sourced or are available for the removal operation.
  - Climbing of trees should be done carefully and cautiously so as not to cause nests with chicks collapsing thereby subjecting the birds to injury or death.
  - Similarly, the individual or company responsible for the removal of chicks should insure that those individuals climbing the trees adhere to Health and Safety Regulations and that risks are carried either by the company (where an employee is involved in an official capacity) or the individual in his/her private capacity.
Where ladders are required to get to nests, these should be placed securely on branches and in a way that would not endanger the climber and any of the birds.

Birds should be handled, as far as possible, with sterile surgical gloves or other gloves (such as garden gloves), and with helpers wearing long sleeves. This may not always be possible in which case care should be taken when handling birds with hands and arms exposed. Chicks can cause injuries through pecking and with their sharp claws and ‘protective clothing’ will prevent any scratches or other flesh wounds on the hands and arms. They are also likely to carry a host of ecto-parasites (e.g. mites) and these can easily be transferred to humans. Although these are generally not harmful to humans once the removal operation has been completed people should immediately wash their hands or body thoroughly with an anti-bacterial soap or detergent.

Chicks should be taken to the nearest rehabilitation centre or SPCA. It is recommended, wherever possible, to make prior contact with the relevant centre or SPCA office before transporting chicks, especially when large numbers of birds will require attention (refer to Appendix 2 for contact details and other links). Where centres or SPCA offices cannot accommodate birds, the centre/office should provide a referral to an alternative facility or provide other suitable recommendations.

Once chicks are near fledging stage and ready to be released it is strongly recommended that, where resources allow, final health checks are carried out to screen for any diseases, parasites or other pathogens. This is important so that wild bird populations are not subject to any health risks from the rehabilitated, captive birds. This should be done by a qualified veterinary professional.

Once birds are declared healthy, and prior to final release, it is recommended that they are ringed to contribute to collection of scientific data regarding longevity and movements of rehabilitated birds. If birds can be ringed, standard SAFRING metal rings should be fitted as the minimum requirement and should be placed on the tibia (i.e. above the ‘knee’); where colour rings are available and can be fitted this is encouraged so that individuals can be easily re-sighted in the field; they should be placed on the tibia on the leg opposite the leg with the metal rings. The South African Bird Ringing Unit (SAFRING, safring@adu.org.za, Tel. +27 21 6502421) should also be notified that birds are being colour ringed.

Ringing should only be carried out by suitably qualified and experienced bird ringers. Contact SAFRING at the University of Cape Town for the names of registered bird ringers in your province. Alternatively contact your nearest bird club. Bird club contact details can be accessed via BirdLife South Africa (www.birdlife.org.za, Tel. +27 11 789 1122). Rehabilitation centres may have
their own qualified bird ringer or may have contacts for other bird ringers in which case they can contact the person(s) directly.

- Where dead chicks are encountered these need to be placed in boxes. Carcasses should ideally be incinerated or buried at local landfill sites. The local SPCA branch and/or the local municipality’s Health or Refuse department should be consulted for assistance in this respect.

- Where eggs are present these need to be carefully removed and placed in smaller boxes, preferably lined with foam or blankets or some soft material.
  - Piping eggs (eggs showing signs of hatching) should be stored separately and taken to the nearest rehabilitation centre and placed in incubators. However, there may be limited resources to carry out this operation and a decision needs to be made as to the priority of this intervention. This should be done in consultation with the local conservation authority and/or the local SPCA.
  - Addled (rotten) eggs should be disposed of in a nearby wetland. These can be left as food for scavengers (e.g. raptors, crows, mongoose, etc.).

**Media and public relations**

It is recommended that where sites are of public interest or concern that prior to the execution of any intervention (cutting trees, removal of eggs and chicks, etc.) that residents, local journalists, and local bird clubs be properly engaged to ensure that all parties are well-informed of the decision, the reasons thereof and that a legally approved and supervised procedure is followed. It is further preferable to consult with relevant stakeholders and skilled individuals including local bird clubs and the BirdLife South Africa Ethics Committee for further advice.
Contacts and additional information

Should none of the above assist complainants/landowners or designated authorities, please contact Dr Doug Harebottle (HeronryMAP coordinator) or Dr Hanneline Smit-Robinson (BirdLife South Africa) who will be able to provide additional guidance and/or advice:

Dr Doug Harebottle
HeronryMAP Coordinator
Sol Plaatje University (Kimberley)
Tel. +27 53 491 0188 (O), +27 82 736 3087 (C)
Email: doug.harebottle@spu.ac.za or heronry.africa@gmail.com

Dr Hanneline Smit-Robinson
Manager: Terrestrial Bird Conservation Programme/Oppenheimer Fellow of Conservation
BirdLife South Africa (Johannesburg)
Tel. +27 11 789 1122 (O), +27 82 453 4714 (C)
Email: conservation@birdlife.org.za

Nuisance heronry in a suburban setting in Port Alfred, Eastern Cape
Photo credit: Anel Slabbert
References and further reading

Adapted media release. 2014. Birds and their droppings can carry over 60 diseases.  
http://www.medicalnewstoday.com/releases/61646.php


Bird Book Fund, Johannesburg


for colonial waterbirds. Conservation of Mediterranean Wetlands – Number 4. Tour du  
Valat, Arles (France).

Characteristics and management. PWD Booklet 7100-134. Texas Parks and Wildlife  
Department, Austin, TX, USA. https://tpwd.texas.gov/huntwild/wild/nuisance/


Other useful links

Egg euthanasia

http://aviansag.org/Husbandry/Locked/Workshops/Workshop_Proceedings/ASAG_Workshop  
s/Memphis_2014/Avian%20Welfare%20WS/Egg_Euthanasia.pdf
Appendix 1: Links to relevant provincial conservation authorities dealing with wildlife permits and conservation ordinances/acts and regulations

Eastern Cape
Department of Economic Development and Environmental Affairs (DEDEA)
http://www.dedea.gov.za/

Free State
Department of Economic Development, Tourism, Environmental Affairs (EDTEA)

Gauteng
Department of Agriculture and Rural Development (GDARD)

Kwazulu-Natal
Ezemvelo KZN Wildlife
http://www.kznwildlife.com

Limpopo
Department of Economic Development, Environment and Tourism
http://www.ledet.gov.za/

North West Province
Department of Rural, Environment and Agriculture Development

Mpumalanga
Mpumalanga Tourism and Parks Agency – http://www.mtpa.co.za

Northern Cape
Department of Environment and Nature Conservation
http://denc.ncpg.gov.za/

Western Cape
CapeNature - http://www.capenature.co.za/
- Report an environmental crime - law.enforcement@pgwc.gov.za
Appendix 2. Contacts for animal welfare organisations and registered rehabilitation centres

National Council of SPCAs (NSPCA)
Johannesburg Head Office: 011 907 3590
https://nspca.co.za/ (National website)
https://nspca.co.za/spcas-in-sa/ (Contact details of all SPCAs in South Africa)

Animal Anti-Cruelty League
Johannesburg Head Office: 011 435 0672 (report animal cruelty)
http://www.aacl.co.za (National website)
http://www.aacl.co.za/report-animal-cruelty/ (online reporting)

Rehabilitation centres

Gauteng
- The Onderstepoort Academic Veterinary Hospital – Pretoria. Tel: 086 100 8387
- The Bird and Exotic Animal Hospital – Pretoria. Tel: 021 529 8105
- National Zoological Gardens – Pretoria. Tel: 012 339 2700
- Friends of Free Wildlife – Kyalami, Johannesburg. Tel: 082 327 8531 www.friendsoffreewildlife.co.za

Limpopo
- The Centre for Animal Rehabilitation and Education (C.A.R.E) – Phalaborwa. Tel: 082 585 1759
- Riverside Wildlife Rehab and Education Centre – Letsitele. Tel: 015 345 1050

Mpumalanga
- Second Chance Wildlife Rehab Centre – Nelspruit/White River. Tel: 013 750 1791

Kwazulu-Natal
- uShaka Sea World – Durban Tel: 031 328 8152
- C.R.O.W – Durban. Tel: 031 462 1127
Western Cape
- SANCCOB – Tableview, Cape Town. Tel: 021 557 6155
- Two Oceans Aquarium – Waterfront, Cape Town. Tel: 021 418 3823
- World of Birds – Hout Bay, Cape Town. Tel: 021 790 2730
- Eagle Encounters – Spier Estate, Stellenbosch. Tel: 021 858 01826
- Tenikwa Wildlife Rehabilitation Centre – Plettenberg Bay. Tel: 044 534 8170/082 485 1515
- SAPREC – Mossel Bay. Tel: 082 364 3328

Eastern Cape
- SANCCOB – Cape St Francis. Tel: 042 298 0160
- SAMREC – Port Elizabeth. Tel: 041 583 1830
- African Dawn – Jeffery’s Bay area. Tel: 042 286 0710
Appendix 3. Images of chicks/juveniles of colonial breeding species most likely to be encountered at heronries in South Africa.

All images © Doug Harebottle

Ibis

- Glossy Ibis chick ± 2-3 weeks old
- African Sacred Ibis chick ± 3 weeks old

Egrets

- Cattle Egret chick ± 4-5 days old
  Note yellow tip to the bill
- Cattle Egret chick ± 3 weeks old
  Note yellow tip to bill
Yellow-billed Egret chick
± 3 weeks old

Little Egret chick
± 2-3 weeks old
Note pale lower mandible

Grey Heron - juvenile
Note yellow lower mandible and white cheeks (behind eye)

Black-headed Heron - juvenile
Note pale-pink lower mandible and dark cheeks (behind eye)

Night-Herons

Black-crowned Night Heron chick
± 2-3 weeks old
Cormorants

Reed Cormorant chick
± 3 weeks old

Spoonbills

African Spoonbill chick
± 2 weeks old