Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

Best practice guidelines for bird scaring in orchards – noise considerations

Version 3.1 – July 2023

Purpose

These guidelines are intended to help fruit and nut growers, residents and local government authorities manage fruit and nut damage by black cockatoos. They have been developed in accordance with a commitment to protect threatened bird species, the viability of the fruit growing industry and the welfare and amenity of residents.

This document should be read with the accompanying *Best practice guidelines for bird scaring in orchards.* This is a supplementary document to provide specific information on noise considerations and management.

The guidelines apply specifically to situations where the bird species causing damage is listed as threatened under the *Biodiversity Conservation Act 2016 (BC Act).*

Routine land management activities that temporarily modify a species behaviour by moving them on but not to the detriment will not require lawful authority (e.g. via a section 40 Authorisation to disturb a threatened species under the BC Act). To ensure birds are not disturbed to their detriment, careful consideration must be given when using scaring or repelling techniques for birds. Things to consider include avoiding activities during breeding or nesting seasons, duration and frequency of audible means and possible impacts of the activity such as indirect, both onsite and offsite risks, that may cause the taking or disturbing of fauna.

Noise and its effects

Noise is defined as unwanted sound. A fruit grower may not consider the sound of a gas gun as noise, yet a neighbour could consider it noise if it disturbs their rest or recreational activities. It would be reasonable to expect that a noise disturbance designed for birds would also disturb people.

A number of objective and subjective factors affect a person's response to noise.

Objective factors include:

- level of the noise;
- emergence of the noise above background levels;
- nature of the noise, its duration and how often it occurs;
- characteristics of the noise – tonality ('humming' or 'whining', some electronic bird scarers might contain this characteristic), modulation (regular changes in level or pitch, e.g. a siren, electronic bird scarers can fall into this category) or impulsiveness ('banging' or 'knocking', gas guns have this characteristic depending on how far the receiver is from the source); and
- time of day or week that the noise occurs.

Subjective factors include:

- activity of the person receiving the noise and their state of health or mind;
- attitude of the person receiving the noise to the noise source or noise emitter;
- information content of the source (a noise may be recognised and trigger fear, or alternatively, be familiar and comforting);
- controllability of the source (a noise source may be less annoying if it can be controlled by closing a window for example); and
- expectations of the community.

Managing noise

In some circumstances, and especially under certain weather conditions, bird scaring devices will breach noise regulations and will therefore cause problems for neighbours.

The *Environmental Protection Act 1986* defines 'unreasonable noise' in two main ways; subjectively or by breach of a prescribed standard.

1. The subjective definition looks at whether the noise unreasonably interferes with the health, welfare, convenience, comfort or amenity of any person, having regard to the nature and duration of the noise emissions, the frequency of similar emissions from the same source, and the time of day at which the noise is emitted.
2. Prescribed standards for noise are set out in the *Environmental Protection (Noise) Regulations 1997*.

The noise regulations specify assigned noise levels that are the levels of noise allowed to be received at premises at a particular time of day. There are different assigned levels depending on the type of receiver. These are categorised as:

- noise-sensitive premises (residences);
- commercial premises (shops, offices); and
- industrial premises (factories, mines).

The assigned levels for noise-sensitive premises vary depending on the time of day, being lower at night when people are more sensitive to noise. For noise-sensitive premises, the assigned levels also depend on how close the house is to industrial and commercial areas and to major roads.

The noise regulations also require that the noise source be 'free' from annoying characteristics (specifically tonality, modulation and impulsiveness) and set out objective tests to assess whether the noise contains any of these characteristics. If these characteristics cannot reasonably and practicably be removed, then a series of adjustments are provided to add to the measured levels. The measured levels adjusted for the presence of annoying characteristics must then comply with the assigned levels.

The assigned noise levels are designed to provide a good level of noise amenity for occupiers of noise-sensitive, commercial and industrial premises.

Best practice noise management

In the first instance, consider and adapt bird scaring methods that minimise noise impacts. Depending on the device, its orientation and surrounding topography, gas guns or other acoustic methods could comply with noise regulations if noise-sensitive receivers are at least one kilometre away from the device.

When using acoustic methods, best practice noise management needs to be followed.

1. Communication

Growers are encouraged to develop a simple communication program to ensure affected neighbours are informed of any bird scaring activities. This demonstrates a good neighbour policy by informing neighbours of scaring devices that are planned to be used on properties, and any noise implications. An example of communications to neighbours are provided in Appendix 1 and 2.

The communication program should include the following:

- Discuss the bird scaring alternatives and potential noise with neighbours who may be affected.
- At the beginning of the damage season, provide neighbours and local residents a letter that includes the following:
  - name and contact details of the grower;
  - location of orchard;
  - dates of the damage season; and
  - times when bird scaring devices will be operated.
- Consider signage along the property boundary, with local government approval, that would alert nearby residents to the possibility that they may experience noise during the fruit growing season.

2. Managing early morning noise

People are more sensitive to noise in the early morning, especially noise from unattended equipment like gas guns and electronic devices.

For effective scaring and minimal noise, a grower should be present and use a manual method such as motorbikes (or similar vehicles) or shotguns (shooting to scare). This ensures that noise is only emitted when necessary. If a grower is unable to be present, consideration should be given to hiring people trained in manual scaring.

Other automatic acoustic devices should be used only after manual scaring methods have been exhausted.

3. Best practice management of using gas guns

- Use only after manual scaring has taken place for an extended period of time.
- Use no more than two continuous periods per day, and not before sunrise or after sunset.
- Best results will be achieved by preventing habituation to the device. Turn the device off when birds are not actively feeding during the day.
- Acceptance by neighbours of early morning use could be more forthcoming if the grower is in attendance while the gas guns are in operation.
- Ensure the firing rate is as low as possible to maintain the 'startle' effect. Several blasts in quick succession with 10 to 15 minutes between volleys are effective with no more than six volleys per hour. For the greatest effect, all devices around the crop and on adjacent properties should be synchronised to fire at the same time.
- Regularly move gas guns around the orchard. Ensure the gas guns are orientated in a fixed direction away from the nearest neighbour.
- Devices should be placed on the ground, ideally facing upwind. This uses the benefits of ground absorption and wind direction to reduce the noise received at greater distances. Wind direction has little effect on the noise levels received close to the gas gun.
- Attempts should be made to place barriers (such as hay bales) as close as possible to the gas gun and interrupting line-of-sight to the nearest residence. The gas gun should also be camouflaged so the birds do not associate the sound with the device.

4. Long-term strategy

Commit to reducing the impact of acoustic bird scaring devices on the nearby residents over subsequent years.

A checklist to provide guidance as to whether fruit and nut growers are following best practice methods for scaring birds is provided as Appendix 2.

Local government authority procedure

Local government authorities aim to protect the noise environment while allowing the protection of black cockatoos and fruit crops. The operation of noise-generating devices can create problems for neighbours and exceed maximum levels prescribed under the *Environmental Protection (Noise) Regulations 1997.* Local governments have the delegated responsibility of administering these noise regulations. Where best practice is not followed, the local government should insist that the grower comply with the provisions of the noise regulations. The local government retains the discretion to exercise the relevant powers under the *Environmental Protection Act 1986*.

The recommended procedure for local government when dealing with noise complaints includes:

1. The local government should ensure both complainants and growers have the available information about bird scaring in orchards.
2. Use informal mediation to achieve acceptable bird-scaring regimes based on the best practice guidelines.
3. If damage mitigation methods or compliance with noise regulations are in dispute, the local government should assess the impact of noise emission with regard to:
   - the type of scaring method and duration, time of day; and
   - the noise level, and presence of tonality or impulsiveness.
4. The local government should encourage the fruit grower to explore ways of reducing noise in accordance with the guidelines by:

- reducing use of acoustic methods by using other methods, including both short and long term, such as using visual scarers or netting; and
- reducing the noise emissions from acoustic methods, such as using barriers or placement to reduce the noise level or by reducing the number of blasts from gas guns.

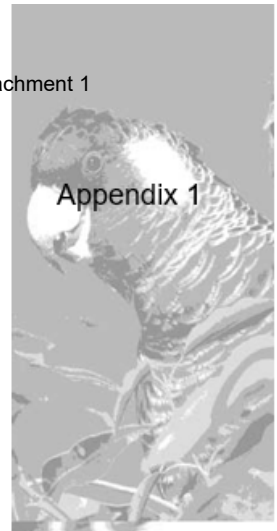
5. The local government or an independent mediator should arrange formal mediation to develop a mutually agreed noise management plan for bird scaring for the orchard.

A Noise Management Plan for acoustic bird scaring devices is a document outlining negotiated conditions designed to minimise the impact of bird scaring devices on neighbours. A plan should be specific to one orchard (or a collection of adjacent orchards) and the surrounding neighbours.

The conditions in the plan will follow the guideline and should include:

- limits on the days and times of operation of the bird scaring devices;
- limits on the operating rate of the bird scaring devices;
- orientation and rotation of the devices;
- timing, amount and method of notification of operating times provided to neighbours;
- complaint response procedure; and
- commitment to a strategy to reduce the impact of the bird scaring devices over time.

The Noise Management Plan is not a legal document and is intended only to record the conditions considered acceptable to all parties involved.



Appendix 1

Dear Neighbour

Now that the fruit/nut season has begun, I will be using a variety of bird scaring techniques to prevent damage to my crop. These scaring techniques are being undertaken in accordance with provisions of the *Biodiversity Conservation Act 2016* and subsidiary legislation.

As you can see from the enclosed pamphlet, I am required to use methods that do not harm black cockatoos, which are threatened species. I will be following the recommended best practices mentioned in this pamphlet and will work to minimise any potential disturbance to you.

Please feel free to contact me to discuss this matter further. Thank you for your understanding.

Grower's name: _____

Contact details: _____

Address of orchard: _____

Dates the bird scaring methods will be used: _____

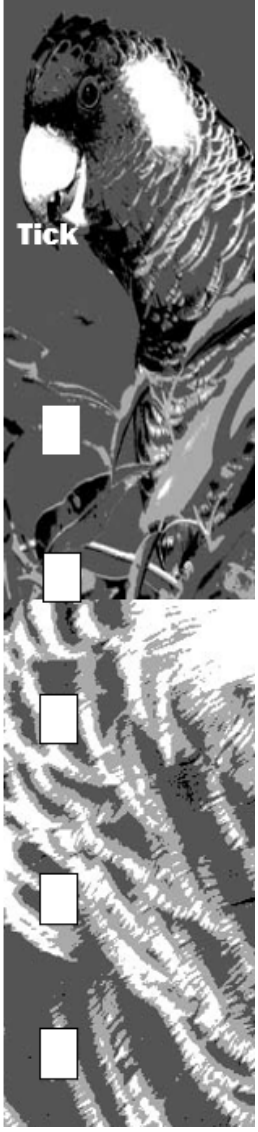
Times of use: _____

Appendix 2

Bird scaring in orchards

Checklist for fruit and nut growers

Are my bird scaring methods following best practice?



My noise management strategy involves a diverse number of methods as outlined in the *Best Practice Guidelines for Bird Scaring in Orchards*.

My noise management strategy is workable, realistic and prevents the birds getting used to the scaring methods I use.

I have a communication plan for informing my neighbours about my noise management strategy.

At the beginning of the damage season I informed all my neighbours about the bird scaring methods I use and provided them with informational materials.

At the beginning of the damage season I provided other residents in the area with informational materials.

For more information contact:

Department of Primary Industries and Regional Development

- 1300 374 731
- enquires@dpird.wa.gov.au

Department of Biodiversity, Conservation and Attractions

- (08) 9219 9000
- enquires@dbca.wa.gov.au

Your local government authority