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## Safe use of firearms for bird-scaring

This guide covers the use of firearms to scare and deter birds. Shotguns are one example of a firearm used to scare birds.

Lower-calibre rifles are also often used to manage birds that are a threat to aircraft. Instead of live ammunition, some businesses use pyrotechnic cartridges fired from launchers to scare birds. See WorkSafe's [Safe use of explosive devices: Gas guns, gas cannons and pyrotechnic cartridges](#)

The guide:

- is for businesses where birds gather in open spaces
  - such as farms, vineyards, orchards or similar properties where crops are grown, and airports
- provides advice on how a person conducting a business or undertaking (PCBU) can manage the risks arising from the use of firearms.

**Before you read this guide** you should read *Bird-scaring methods – an introduction to risk management* on our website. It covers your Health and Safety at Work 2015 (HSWA) duties and related information: [worksafe.govt.nz](https://www.worksafe.govt.nz)

Firearms can cause serious injury or death.

Firearm noise can cause temporary or permanent hearing loss.

If you cannot effectively manage the risk of using firearms, then WorkSafe recommends that you consider alternative methods of bird-scaring.

### Licensing and training

Firearm operators:

- must meet applicable [licensing requirements](#) and all legal requirements such as the Arms Act 1983 and the Arms Regulations 1992
- must be provided with [suitable and adequate information, training, instruction and supervision](#)
- should have the relevant knowledge, experience and skill needed to carry out bird-scaring using techniques and procedures appropriate for the type of firearm they are using.

### How you can manage risks

#### Managing risks related to shooting, handling and storage

Table 1 outlines the types of control measures you should consider to manage risks related to the shooting, handling and storage of firearms. Give preference to control measures that protect many workers at the same time. All firearm operators should know and follow the [Seven firearms safety rules](#)

There may be risks and hazards that are not identified in this guide. You should still identify and assess health and safety risks arising from your own work – and you must [engage with workers](#) (and their representatives) when you are doing this. Workers must have opportunities to make suggestions, ask questions or raise concerns.

## Shooting, handling and storage

WHAT COULD GO WRONG	CONTROL MEASURES
<p><b>Stray projectile</b> (lead, plastic or shot) goes beyond target area:</p> <ul style="list-style-type: none"> <li>- injures or kills people or animals (such as livestock)</li> <li>- damages property</li> </ul>	<p><b>Note:</b> Personal protective equipment (PPE) is the least effective control measure. It should not be the first or only control measure you consider.</p> <p>Use blanks rather than projectiles.</p> <p>Use a suitable firearm to minimise the risk of harm to people, to animals other than the target birds, and to property.</p> <p>Check that the firearm is suitable for use on the target bird species.</p> <p>Know and understand the behaviour and effects of the bullet, pellet or other projectile when it hits its target.</p> <p>To avoid overshooting (going beyond the target), know the maximum distance that the bullet, shot or other projectile could travel.</p> <p>Use <b>danger area templates</b> (also called <b>safety templates</b>) to indicate where the projectile will end up:</p> <ul style="list-style-type: none"> <li>- at the maximum range, the projectile should land within the perimeter of your property</li> <li>- templates can be overlaid on maps of the area (such as farm maps or airfield maps).</li> </ul> <p>Identify all people in target area (including residents, workers, visitors and others).</p> <p>Share maps showing where workers are active.</p> <p>Tape off blocks.</p> <p>Put in place a system that indicates that workers are present, such as placing bright cones at the end of crop or vine rows to warn that workers are in the area.</p> <p>Identify the location of all livestock in area.</p> <p>Clearly define your boundaries – and know and respect neighbouring boundaries.</p> <p>Alert neighbours to methods in use.</p> <p>Put fencing or other suitable barriers in place.</p> <p>Set up highly visible signs at key entry points.</p>
<p><b>Fire breaks out</b></p>	<p>Use a spark arrest system.</p> <p>Use firearms only in areas that have no debris or flammable material nearby.</p> <p>Fire away from the direction of flammable materials.</p>
<p><b>Unprepared for emergency</b> (such as accidental shooting)</p>	<p>You must prepare a comprehensive <a href="#">emergency plan</a> for your workplace. It should include information about what to do if someone is shot. All workers should be familiar with the plan including knowing how to call emergency services.</p> <p>You must:</p> <ul style="list-style-type: none"> <li>- provide at least one <a href="#">first aid kit</a> for your workplace and ensure workers know where it is</li> <li>- provide your own first aiders at the workplace, or provide your workers with access to other trained first aiders (for example, from a nearby business).</li> </ul> <p>When deciding how many trained first aiders you need, consider the potential for firearms injuries, and how close your workplace is to ambulance services, a medical centre or hospital.</p>
<p><b>Poor firearm security causes harm</b> (during storage, carriage, breaks)</p>	<p>Store firearms and ammunition safely and securely according to New Zealand Police requirements – see <a href="#">Secure storage guidance for firearms</a> – including requirements relating to firearms carried in vehicles.</p> <p>Children must not have access to firearms and ammunition storage areas.</p>
<p><b>Firearm operated from moving vehicle:</b></p> <ul style="list-style-type: none"> <li>- projectile travels in unexpected direction</li> <li>- injures vehicle operator or passengers</li> <li>- noise startles/distracts vehicle operator (see Noise section in this guide)</li> </ul>	<p>Make sure that any firearms carried in a vehicle are unloaded.</p> <p>Make sure that workers do not operate a vehicle that has a loaded firearm in or on them.</p> <p>Make sure that any vehicle being used as a mobile platform is completely stopped before loading or using a firearm.</p>

WHAT COULD GO WRONG	CONTROL MEASURES
	<b>Note:</b> Personal protective equipment (PPE) is the least effective control measure. It should not be the first or only control measure you consider.
Firearm discharges accidentally	<p>Treat every firearm as loaded.</p> <p>Use a chamber flag to show that the firearm chamber is not loaded.</p> <p>Always point firearms in a safe direction.</p> <p>Load a firearm only when ready to fire.</p> <p>Check the terrain to help minimise the risk of tripping while carrying a firearm – for example, look out for tree roots, rabbit holes, or uneven ground.</p>
Eyes damaged by projectile (worker blinded)	Wear <a href="#">eye protection</a> (goggles or glasses) with appropriate impact protection; check lens markings for impact resistance rating.
Poorly-maintained or damaged firearm malfunctions	<p>Regularly service, clean and maintain firearms according to manufacturer’s instructions.</p> <p>Repairs or other work should only be carried out by a person with appropriate skills and experience – such as a gunsmith, or an authorised service agent for a particular make of firearm.</p> <p>Use recommended parts only.</p>
Untrained operator causes harm/damage	<p>Ensure all firearm operators meet applicable <a href="#">licensing requirements</a></p> <p>Make sure all firearms operators know how to safely operate, store and maintain firearms they are expected to use.</p> <p>Check if your industry requires formal industry training in pest bird management:</p> <ul style="list-style-type: none"> <li>- If you are using firearms for bird-scaring at an airport, then specialised training may be required.</li> <li>- Training in pest bird management is available through businesses that specialise in managing aviation hazards, as well as through some manufacturers and suppliers.</li> </ul>
Neighbours irritated or disturbed	<p>Comply with local rules and regulations:</p> <ul style="list-style-type: none"> <li>- Your district council (or airport) may have rules applying to bird-scaring methods that generate sound waves or other noises.</li> <li>- These rules may include limits on how loud sound can be, and the hours of use.</li> </ul> <p>Communicate clearly with neighbours:</p> <ul style="list-style-type: none"> <li>- discuss and resolve issues together</li> <li>- try to understand their point of view</li> <li>- consider writing down any agreements reached, and sharing a copy with neighbours.</li> </ul>

**TABLE 1:** Shooting, handling and storage – risks and control measures

## Managing risks related to noise

Firearms firing live or blank rounds produce noise that is a significant hazard. The sound from gunshots can cause:

- immediate and permanent noise-induced hearing loss
- temporary hearing loss, which may become permanent after regular exposure to high-intensity noise
- tinnitus (ringing in the ears).

Table 2 outlines the types of control measures you should consider to manage noise risks. Give preference to control measures that protect many workers at the same time.

## Managing noise risks

WHAT COULD GO WRONG	CONTROL MEASURES
<p><b>Noise affects:</b></p> <ul style="list-style-type: none"> <li>- operators</li> <li>- workers and other people nearby</li> <li>- neighbours</li> <li>- livestock</li> </ul>	<p><b>Note:</b> Personal protective equipment (PPE) is the least effective control measure. It should not be the first or only control measure you consider.</p> <p><b>Hearing protection</b></p> <p>Peak noise levels will exceed 140 dB, especially for firearm operators. Class 5 hearing protectors are recommended for:</p> <ul style="list-style-type: none"> <li>- firearm operators</li> <li>- others who may be exposed to firearm noise - for example, pruners, fruit pickers, or people riding in vehicles with firearm operators on board.</li> </ul> <p>Any risks arising from wearing PPE must be identified and managed. For example, hearing protection must not interfere with the fit of any other required PPE, such as sunhats, hard hats, eye protection and so on.</p> <p><b>Noise levels</b></p> <p>You must, so far as is reasonably practicable, make sure that your workers (or people that visit your workplace) are not exposed to noise levels that are:</p> <ul style="list-style-type: none"> <li>- equivalent to 85 dB(A) averaged over 8 hours, or</li> <li>- a peak noise level over 140 dB.</li> </ul> <p>This applies whether or not workers are wearing hearing protection.</p> <p>To confirm whether noise levels are harmful, ask a competent person with noise assessment expertise to visit your workplace and complete an exposure assessment. Search the <a href="#">HASANZ register</a> to find a suitably qualified person.</p> <p><b>Monitor hearing</b></p> <p><u>Monitor workers' hearing</u> to detect early hearing loss, including:</p> <ul style="list-style-type: none"> <li>- workers who operate firearms, and</li> <li>- workers in and around areas where firearms are in use.</li> </ul> <p><b>Limit exposure to firearm noise</b></p> <p>Limit exposure to firearm noise by rotating tasks or shifts.</p> <p>Provide 'quiet areas' for workers, away from firearm noise.</p> <p>Restrict how close firearms operators can be to other workers when using firearms.</p> <p>Avoid firing firearms:</p> <ul style="list-style-type: none"> <li>- in line with neighbouring properties; direct sound away from areas where people live or work</li> <li>- in areas where sound could echo.</li> </ul> <p>Make sure there are warning systems are in place so that workers are not exposed to unexpected frights.</p> <p><b>Legislation</b></p> <p>Comply with Resource Management Act (RMA) duty to avoid unreasonable noise: <a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a></p> <p>Comply with district council rules and regulations. For example, limits relating to:</p> <ul style="list-style-type: none"> <li>- hours of use</li> <li>- frequency of use</li> <li>- noise levels</li> <li>- distance from neighbouring properties.</li> </ul>
<p>Worker <b>wearing hearing protection</b> does not hear approaching vehicle, warning alarm/signal, call for help, or other important sound</p>	<p>Make sure that everyone knows:</p> <ul style="list-style-type: none"> <li>- who is wearing hearing protection</li> <li>- the areas where these people are working.</li> </ul> <p>Tell everyone that people wearing hearing protection may not hear:</p> <ul style="list-style-type: none"> <li>- approaching vehicles</li> <li>- warning signals such as vehicle horns or reversing alarms</li> <li>- other important sounds.</li> </ul> <p>Use a combination of methods to attract attention, especially in an emergency.</p>
<p>Worker with <b>hearing loss</b> does not hear approaching vehicle, warning alarm/signal, call for help, or other important sound</p>	<p>Ask the worker the best way to get their attention, especially in an emergency.</p> <p>See control measures in box above.</p>

**TABLE 2:** Noise – risks and control measures

## More information

### The seven firearms safety rules

- 1 Treat every firearm as loaded
- 2 Always point firearms in a safe direction
- 3 Load a firearm only when ready to fire
- 4 Identify your target beyond all doubt
- 5 Check your firing zone
- 6 Store firearms and ammunition safely
- 7 Avoid both alcohol and drugs when handling firearms

[Information and videos about each of the seven rules](#)

[Firearms and safety: information from the New Zealand Police](#)

### Other bird scaring guidance

Introduction - general risk management

Gas guns, gas cannons and pyrotechnic cartridges

Vehicles

Lasers

Drones

Netting