



Department of
Primary Industries

Firearms and Hunting Safety (Long-arms) Course



Hunter **LEAP**

LEARNING, EDUCATION AND
ACCREDITATION PROGRAM

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Published by the NSW Department of Primary Industries

Hunter LEAP Firearms Qualification Course – Firearms and Hunting Safety (Long-arms) Course

First published June 2017

More information

Game Licensing Unit

Education and Training Team

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www.dpi.nsw.gov.au/hunting

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (June 2017). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the Department of Primary Industries or the user's independent adviser.

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Be GunSmart

How GunSmart are you?

GunSmart is a NSW DPI Game Licensing Unit initiative in partnership with the NSW Police Force to remind both new and experienced hunters to stay safe when using and storing firearms.

By providing tools – such as keyrings for gun zipper bags, fridge magnets and gun safe stickers – GunSmart reminds you to always be smart around firearms and stay safe regardless of whether you are a frequent or occasional hunter.

Firearm safety is everyone's business.

Use a firearm safety flag

Sliding the soft, plastic firearm safety flag into the breech of your firearm shows that your firearm is safe for both the user and others close by. It's simple, effective and won't damage the internal surfaces of your rifle.

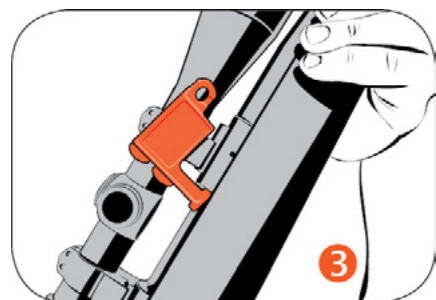
1. Grasp your rifle firmly in one hand and have the safety flag ready.



2. With the bolt open, slide the firearm safety flag up into the breech.



3. Check the flag is securely in place.



BE SAFE BE GunSmart

The 8 fundamentals of firearms safety

1. Treat every firearm as though it is loaded.
2. Always point a firearm in a safe direction.
3. Load a firearm only when ready to fire.
4. Identify your target beyond all doubt and what is beyond it.
5. Keep your finger off the trigger until you are ready to fire.
6. Never rely on the firearms safety mechanism.
7. Store and transport firearms and ammunition separately and safely.
8. Never handle or use firearms when under the influence of alcohol or drugs.

How GunSmart are you?

A NSW POLICE FORCE AND DPI PARTNERSHIP

For more information on **GunSmart**, go to
www.police.nsw.gov.au or www.dpi.nsw.gov.au



Department of
Primary Industries



NSW Police Force

1.1 About the Firearms and Hunting Safety (Long-arms) Course

The NSW Department of Primary Industries (DPI) Game Licensing Unit (GLU) provides comprehensive training through the Hunter Learning, Education, Accreditation Program (LEAP) to educate hunters and users of firearms how to hunt safely and ethically.

If you are a new firearms user, the Hunter LEAP training will teach you how to handle firearms safely and proficiently as well as inform you about licensing requirements. Training will help you achieve the necessary competency. Formal training, however, is just the first step in understanding the obligations of owning and using a firearm. Consistent learning and practice will help you achieve the necessary competency.

It is a legislative requirement that all new firearms licence applicants in NSW complete and pass a NSW Firearms Qualification Course or any other approved course. The NSW DPI Hunter LEAP and Hunting Safety (Long-arms) course has been approved by the Commissioner of Police in accordance with the *Firearms Act 1996* (Clause 122, Firearms Regulation 2006).

The NSW DPI Hunter LEAP Firearms and Hunting Safety (Long-arms) Course is a face-to-face course delivered by accredited Hunter LEAP Trainers throughout NSW. The course takes approximately 3 hours.

This course can only be conducted by a NSW Firearms Safety Training Instructor that has been approved by the Commissioner of Police. Hunter LEAP Trainers who deliver this course have received instructor accreditation from the NSW Police Force Firearms Registry. Approved instructors hold an appropriate firearms licence, have a minimum of three years' experience in the safe use of long-arms, and hold an instructors approval authorising them to deliver this training.

The NSW DPI Hunter LEAP Firearms and Hunting Safety (Long-arms) Course is just one of several education and training initiatives focusing on firearms safety and field hunting techniques. Hunter LEAP training is delivered via short courses, workshops and the application process for a NSW Restricted Game Hunting Licence (R-licence).

Note: If you are applying for a Category H (handgun) licence you will be required to complete an approved pistol training course administered by a pistol club.

1.2 Understanding your legal obligations relating to licence applications and firearms safety training courses

If you wish to obtain a NSW firearms licence and possess and use a firearm, it's vital you understand your legal obligations. The following excerpts from the *Firearms Act 1996* (licence applications) and Firearms Regulation 2006 (training courses) will give you some background to licensing and firearms safety training requirements. You will find further information in Section 4 of this training guide.

Part 2, Division 2, Section 10 – Applications for licences

1. An application for a licence must be made in the manner, and be accompanied by the fee, prescribed by the regulations.
2. An applicant for a licence must:
 - a. if the applicant is a natural person, be of or above the age of 18, and
 - b. provide proof of the applicant's identity in accordance with the requirements under the *Financial Transaction Reports Act 1988* of the Commonwealth that apply in respect of the opening of a bank account, and
 - c. provide such other particulars or documents as may be prescribed by the regulations.
3. An applicant, at the time of applying for a licence, is to be provided with the following:
 - a. information concerning any firearms safety training course that is required by the regulations to be completed by the applicant,
 - b. information concerning the firearm storage and safety requirements under this Act.

Note: Only persons of or above the age of 18 can apply for (and be issued with) a licence. However, under Section 32, minor's firearms permits are available for certain minors (persons under 18 but who are of or above the age prescribed by the regulations). These permits authorise minors to possess and use firearms, under the supervision of a licence holder, for the purpose of receiving safe instruction in the use of firearms, and for competing in shooting events in the case of a minor's target pistol permit.

Part 13 Miscellaneous provisions

Clause 122 Firearms Safety Training Courses

1. Except as provided by subclause (2), the firearms safety training courses that are prescribed for the purposes of the Act are as follows:
 - a. for firearms other than pistols—the course known as the Firearms Licence Qualification Course or any other approved course conducted by or on behalf of an approved person or body,
 - b. for pistols—an approved course conducted by or on behalf of an approved pistol club.
2. In the case of firearms to be used by security guards or employees of a government agency, an approved firearms safety accreditation course is prescribed for the purposes of the Act.

3. The relevant course to be completed by applicants in respect of particular categories of licences or types of permits is to be determined by the Commissioner.
4. The Commissioner may approve:
 - a. persons to be instructors for such courses on such terms as the Commissioner may determine, and
 - b. instructors to use registered firearms, that the instructor is authorised to use under a licence, for the purposes of conducting such courses.
5. A person approved as an instructor for any such course ceases to be so approved if the person ceases to be the holder of a licence or permit that authorises the person to possess firearms to which the course relates.
6. A person who:
 - a. dishonestly attempts to obtain a certificate or any other document that purports to be evidence of the person having passed a firearms safety training course, or
 - b. knowingly is in possession of any such certificate or other document that has been dishonestly obtained and attempts to use it, or uses it, for a dishonest purpose, or
 - c. dishonestly issues any such certificate or other document, is guilty of an offence.

1.3 The requirements to obtain a firearms licence

If you wish to possess a firearm in NSW, under law you must hold a valid firearms licence:

To obtain a licence you must:

- be at least 18 years old
- be a resident of this state or about to become a resident of this state
- be of good character
- have a genuine reason
- request an application form for a licence from the NSW Police Force Firearms Registry.
- successfully complete an approved firearms safety training course
- return the completed application form with any necessary information to substantiate your genuine reason/s and include your firearms safety training certificate
- wait the statutory 28 days
- if your firearms licence application is approved you will be sent a photographic advice. Take this advice to a Roads & Maritime Services (RMS) office or Service NSW office with 100 points of identity and the relevant fee (if applicable) to have your firearms licence card produced.

1.4 Minors Permit

A person aged between 12 and 18 years may be eligible to apply for a minors permit under Section 32 of the *Firearms Act 1996* with the consent of a parent or legal guardian.

A minors permit allows the possession and use of firearms under the supervision of a licence holder who is authorised under the same categories.

A minor must also satisfy the legitimate reason criterion which allows the possession and use of firearms:

- when receiving instruction in the safe use of firearms
- to compete in approved target shooting events.

1.5 Completing your firearms training

To apply for the NSW DPI Hunter LEAP Firearms and Hunting Safety (Long-arms) Course, you will need to follow three simple steps.

Step 1. Complete an expression of interest form

Go to the DPI website at www.dpi.nsw.gov.au/hunting and download the NSW DPI Firearms and Hunting Safety (Long-arms) Course expression of interest form.

Fill in the form and return it to:

NSW Game Licensing Unit Education and Training Team
Level 11, Macquarie Tower, 10 Valentine Ave.
Parramatta, NSW, 2150

Alternatively you can email a scanned copy of the form to: hunter.leap@dpi.nsw.gov.au

On receipt of your application, the Game Licensing Unit will contact you with the details of your nearest Hunter LEAP accredited Firearms Safety Trainer. Please contact a trainer to arrange a mutually convenient time and location to sit the course.

Step 2. Register for the course

Aim to arrive at the course at least 15 minutes before your allocated start time.

You will be required to fill out a course registration form and pay your course fee (refer to the table below). The course fee is a one-off administration fee.

You will also need to provide photo identification. Minors (12 to 18 years) must have a parent or legal guardian present to provide consent as well as either photo identification or a copy of the minor's birth certificate.

Recommended training course fees:

Full licence holder \$75
Minor/concession \$50

Note: The above fees are the recommended cost recovery fees for administering the course and may vary for your particular course. The above fees have been calculated on a 3-hour course held in your local area for one participant. The actual fee you pay for your training course will be determined by your particular Hunter LEAP trainer. For example, if your trainer has had to travel longer distances, pay venue hire costs or there are only a small number of participants booked in for the course, this fee may vary.

Step 3. Complete and pass the training and assessment

The NSW DPI Hunter LEAP Firearms and Hunting Safety (Long-arms) Course has a theory and a practical component. The theory you will need to learn for the course (essential criteria) is contained in this guide. You will be assessed on these essential criteria. It's important that you read this guide thoroughly before you attend the theory assessment with your NSW Firearms Safety Training Instructor. Please contact your Firearms Safety Instructor to obtain a copy of this guide.

At the theory session with your instructor you will be required to:

1. Review those theory sections that will be covered in the assessment. Before you do the test, you will have the opportunity to clarify areas of the guide you don't understand.
2. Complete a closed-book, multiple-choice test of 30 questions (adults) or 10 questions (minors). These questions are designed to assess your theoretical knowledge of essential material in the guide.

The pass mark for the multiple choice test is 83% (25 out of 30) for adults and 70% (7 out of 10) for minors.

Before you can move on to the practical instruction and assessment, you must pass the theory assessment.

3. Demonstrate your ability to safely handle a firearm.

Adults and minors complete all 18 practical tasks (see Section 6 of this guide for more information).

The pass mark for the practical component of the test is 100% (18 out of 18) for adults and minors.

How long it takes you to complete the theory and practical parts of the course will depend on your previous experience and knowledge. If you're a complete beginner, it could take up to four or five hours to cover all material and assessments. If you already have some knowledge of firearms safety, it might only take you one hour to complete the course.

After successful completion of your training you will be awarded a Certificate of Firearms Safety Awareness.

You must lodge your Certificate of Firearms Safety Awareness with your NSW firearms licence application to the NSW Police Force Firearms Registry.

1.6 Applying for a NSW firearms licence

Under the *Firearms Act 1996* it is an offence for any person to possess or use a firearm unless the person is authorised to do so by a licence or permit.

A licence must not be issued authorising the possession and use of a firearm unless you have a genuine reason for the possession and/or use.

To apply for your licence you will need to follow three steps.

Step 1. Determine your genuine reason to apply for a NSW firearms licence

Allowable genuine reasons for possessing and using a firearm in NSW are:

- sport or target shooting
- recreational hunting or vermin control
- primary production
- vertebrate pest animal control
- business or employment (Owner of business or Employee of business)
- rural occupation
- animal welfare
- firearms collection (the collection must have genuine commemorative, historical or financial value)

If you are applying for a firearms licence for the genuine reason of recreational hunting or vermin control, you must supply proof to substantiate this genuine reason (eg. Game Hunting Licence or hunting club membership). It is also a requirement that the licence holder not use the firearm for any purpose other than that or those stated on the licence. For example, a person who possesses a firearm for use in club competitions may not use the firearm for hunting, unless he or she also has hunting endorsed on the licence.

A person under the age of 18 but of the age of 12 or above can apply for a minors permit. After completing the relevant training and passing the character requirements they will be authorised to use a firearm under the supervision of an adult who holds a firearms licence.

Step 2. Work out the category of licence you need

When you apply for your licence you will also need to know what category licence to apply for.

	Type of firearm
Category A	Air rifles, Rimfire rifle (other than self-loading) , Shotgun/rimfire combinations, Shotgun (other than pump action or self- loading).
Category B	Muzzle loading firearms (other than pistols), Centre-fire rifles (other than self- loading), Shotgun/centre-fire combinations.
Category C	Prohibited except for limited purposes Self-loading rimfire rifles with a magazine capacity of no more than 10 rounds, Self-loading shotguns with a magazine capacity of no more than 5 rounds, Pump action shotguns with a magazine capacity of no more than 5 rounds.
Category D	Prohibited except for official purposes Self-loading centre-fire rifles, Self-loading rimfire rifles with a magazine capacity of more than 10 rounds, Self-loading shotguns with a magazine capacity of more than 5 rounds, Pump action shotguns with a magazine capacity of more than 5 rounds, any firearm to which a category C licence applies.
Category H	Handguns (including blank firing handguns).
Firearms dealer	Licence specifies which firearms may be possessed by the individual dealer.
Firearms collector	Licence specifies which types of firearms may be possessed by the individual collector.

Step 3. To obtain application forms online (preferred)

Go to [www.police.nsw.gov.au/services/firearms/on-line services](http://www.police.nsw.gov.au/services/firearms/on-line%20services) and follow the prompts.

To obtain application forms by phone

Phone the NSW Firearm Registry customer service line on 1300 362 562. You will need to tell the customer service operator why you are applying for a firearm licence (“genuine reasons”) and the category of licence you wish to apply for.

1.7 What is it about hunting?

Hunting is the oldest outdoor pursuit. Cooperative hunting among early groups of humans most likely predated the emergence of language. Some academics have even suggested that it was hunting itself that led to the need for verbal communication. Many modern sports are derived from the timeless activities of competing to find and catch food.

Hunting requires keen eyesight and hearing, often extreme patience and endurance and a comprehensive understanding of the behaviour of the species being pursued.

Hunters must also be prepared to endure challenging environments as well as physically demanding situations in order to obtain their prey. Yet despite these challenges, many thousands of Australians each year take out their hunting or game licences, load up their boats or pack their vehicles with camping gear, decoys, waders, swags and countless other specialised items, and head for their favourite locations to seek the species of their choice.

Many will pursue rabbits or other small game, while some will seek game birds. Some will use shotguns to take moving prey at close quarters, while others will use heavy-barrelled scoped rifles from rests to take animals at long distances. Some will stalk tirelessly through the bush, perhaps for days at a time in the hope that they will finally take that elusive stag.

Then, having fired perhaps just one shot for the whole trip, they will laboriously dress out the carcass and trudge back home again, possibly going via the taxidermist’s workshop, where they will perhaps spend hundreds of dollars to have their trophy preserved for future memories of their hunt.

1.8 Using this guide

To avoid accidents and mishaps, all firearms users must fully understand the information contained in this guide. The sections marked “essential” include the essential criteria on which you will be assessed at the conclusion of the NSW DPI Hunter LEAP Firearms and Hunting Safety (Long-arms) Course.

Use of firearms for hunting differs from techniques used in the rigidly controlled target club environment as game hunters are generally self-regulating and are not usually supervised. This guide is designed for those who wish to hunt game or use firearms for the control of pests or exotic species.

Before you can fully understand the safety rules, it’s essential you understand how firearms work.

Section 2 of the guide explains the types of firearms available, the fundamentals of how firearms operate and details of the inner workings of firearms.

Section 3 sets out the basic rules of safe handling of firearms, including an explanation of what “safely” actually means. You will learn from real-life scenarios what can go wrong and discover common misconceptions encountered by inexperienced firearms users.

Section 4 will help you become more aware of your legal obligations. This is a complex area where you must be able to understand the legislative requirements of being a NSW firearms licence holder. You will also gain knowledge relating to the different Acts and Regulations that affect licensing, the possession and acquisition of firearms and ammunition and how to store your firearms in accordance to the law.

At the end of each chapter you will be required to test yourself. This self-test will help you identify and better understand these key areas of importance. The self-test questions closely resemble the questions you will be required to answer in your firearms licence assessment. To check whether you have answered the questions correctly, you will find the answers to the self-tests in **Section 7**.

Section 5 contains additional information about hunting and the use of firearms in the field, including information about ballistics and proper shot placement for a safe and humane kill.

Section 6 gives you some practical tips to help you prepare for the practical component of your assessment.

As well as studying the information in this guide, you will benefit from further reading and research not formally covered by the Hunter LEAP course. Further reading and other resources are listed in **Section 7**.

2.1 Parts of the firearm

Firearm means a gun, or other weapon, that is (or at any time was) capable of propelling a projectile by means of an explosive, and includes a blank fire firearm, or an air gun, but does not include anything declared by the regulations not to be a firearm.

The typical firearm consists of the barrel, which is fitted into the receiver. The barrel and receiver are mounted into a stock.

The receiver contains:

- the firing mechanism
- the bolt or breech block that locks the chamber end of the barrel shut during firing
- the magazine that holds extra cartridges or bullets
- the feeding system.

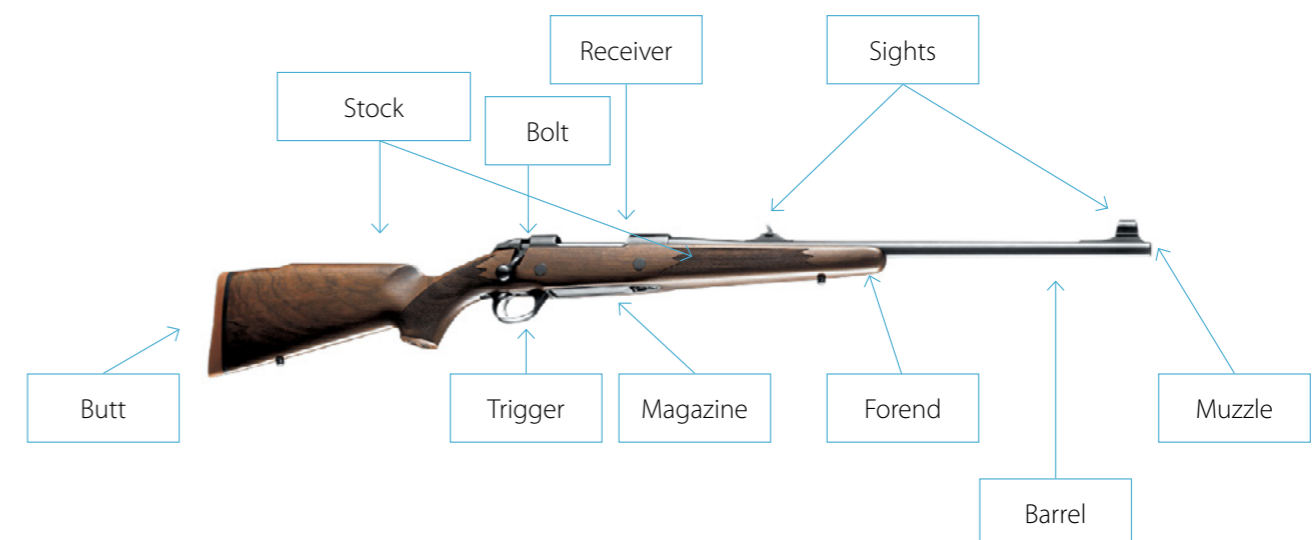
The feeding system enables cartridges or bullets to be conveyed from magazine to chamber before firing. It also extracts and ejects empty cases after firing.

The receiver is the central component that usually bears the serial number and is the part into which the other components are fitted. The receiver is therefore the component which must be registered. This is the case even if the other parts of the firearm are absent.

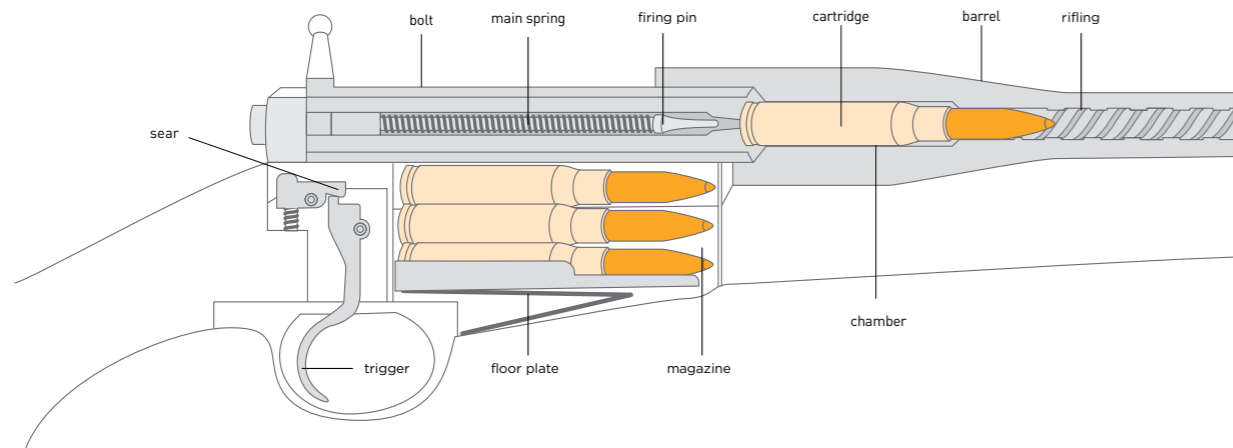
The stock enables the firearm to be held, aimed and fired comfortably and consistently. Aiming also involves some form of rear sight which is usually mounted on top of or just in front of the receiver.

The front sight is mounted on top of the barrel at the muzzle end. Rifles frequently have telescopic sights mounted directly onto the receiver with no front sight needed.

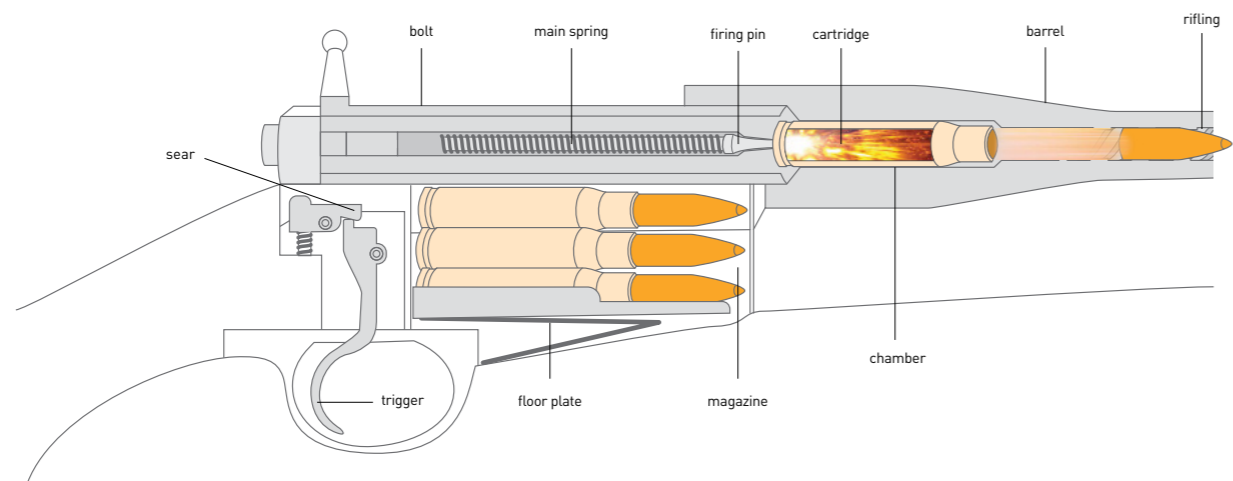
Main components of a rifle



How the action works



The firing sequence



When the trigger is depressed, the sear pushes down and the firing pin travels forward under the pressure from the main spring.

2.2 Firearm designation

Long-arm firearms primarily used for hunting include air or gas-powered rifles, rifles, shotguns and various muzzle loading long-arms. The *Firearms Act 1996* also covers handguns; however, handguns are not permitted for hunting or general field use.

Each type of long-arm may be further classified according to the type of action by which it operates. Long-arms come as self-loading, break-action, bolt-action, pump action and lever-action firearms.

Hunting firearms generally fall into these two categories: (Category A & B)

	Type of firearm
Category A	Air rifles, Rimfire rifle (other than self-loading) , Shotgun/rimfire combinations, Shotgun (other than pump action or self- loading).
Category B	Muzzle loading firearms (other than pistols), Centre-fire rifles (other than self- loading), Shotgun/centre-fire combinations.
Category C	Prohibited except for limited purposes Self-loading rimfire rifles with a magazine capacity of no more than 10 rounds , Self-loading shotguns with a magazine capacity of no more than 5 rounds, Pump action shotguns with a magazine capacity of no more than 5 rounds.
Category D	Prohibited except for official purposes Self-loading centre-fire rifles, Self-loading rimfire rifles with a magazine capacity of more than 10 rounds, Self-loading shotguns with a magazine capacity of more than 5 rounds, Pump action shotguns with a magazine capacity of more than 5 rounds, any firearm to which a Category C licence applies.

In addition to establishing a genuine reason, an applicant for a Category B, C or D firearms licence must produce evidence that there is a special need for the person to possess or use a firearm to which the licence category applies.

2.3 Firearm description (types of firearms)

Bolt-action firearm

Bolt-action firearms operate by the opening and closing of a bolt, similar to a door bolt. The bolt can be lifted and pulled back to see whether the chamber is loaded. Upon closing the bolt, a cartridge from the magazine is guided into the chamber, thereby loading the firearm. Generally, if the chamber is loaded, a cartridge is ejected when the bolt is opened and pulled rearward.



Lever-action firearm

Lever-action firearms have a lever located under the action or as part of the trigger guard. The firearm is opened by operating the lever, which is attached to the enclosed bolt. Working the lever up will move the bolt forward, guiding a cartridge into the chamber. Working the lever down will push the bolt backwards, opening the chamber and extracting the cartridge.



2.3 Firearm description (types of firearms)

Break-action firearms

Opening the action of a break-action firearm reveals whether it is loaded. When the firearm is open, it cannot be fired. Break-action firearms do not have a mechanical reloading mechanism, such as a magazine, and must be loaded by hand after each shot. These are generally designed as a single-shot or a double-barrel.



Slide or pump action firearm

These firearms have a mechanism that can be slid or pumped to open the action during the loading sequence. Another tube is attached under the barrel, which acts as the magazine. Operating the slide will open or close the action.



2.3 Firearm description (types of firearms)

Self-loading firearms

Self-loading firearms are those that automatically re-cock to load the next round from the magazine. Every time the trigger is pulled and a round is fired, the gases force the bolt rearwards opening the action. A mainspring is housed behind the bolt, forcing the bolt forward again and closing the action. As the bolt moves forward it picks up a cartridge from the magazine and then reloads the firearm. You need to depress the trigger each time to fire a round. These types of firearms are also known as semi-automatic.



Air rifle

The projectile of an air rifle or air gun is propelled by means of compressed air or gas. Air rifles are the type of firearm young people most commonly learn on. These firearms are relatively inexpensive to buy and operate. It's important to remember, however, that an air gun or rifle is still capable of causing serious injury. Modern high powered air rifles are now being manufactured in calibres up to .50 calibre which are capable of taking game animals with ease.

(Check state regulations when using air rifles for hunting game animals.)



2.3 Firearm description (types of firearms)

Muzzle loading firearms

Muzzle loading firearms are designed to be used with black powder. Most muzzle loading firearms have proof marks or other signage stamped on the barrel or receiver to indicate that the firearm must only be used with black powder.

As the name implies, these firearms are manually loaded with components via the muzzle. Before loading a muzzle loading firearm you must ensure that it is not already loaded – do not double up on the powder charge or insert more than one projectile. Once you have loaded the firearm you must either fire it or remove the charge or projectile so that the firearm isn't double-loaded in future.



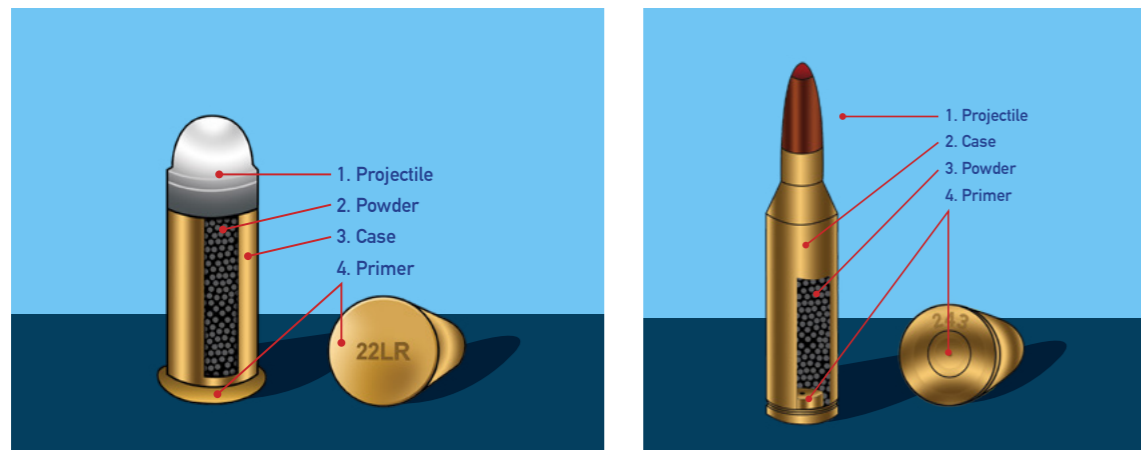
2.4 Types of ammunition

It is important to select the correct ammunition for each calibre and firearm. Matching the rifle calibre to optimum cartridge grain weight will ensure safer operation. It will also give your firearm a longer lifespan. Although there are many different types and sizes of cartridges in production, the basic operation of all cartridges is similar. Each cartridge consists of a case, which houses a primer at the rear end, powder in the case and a projectile (or shot charge in the shotgun cartridge) at the front.

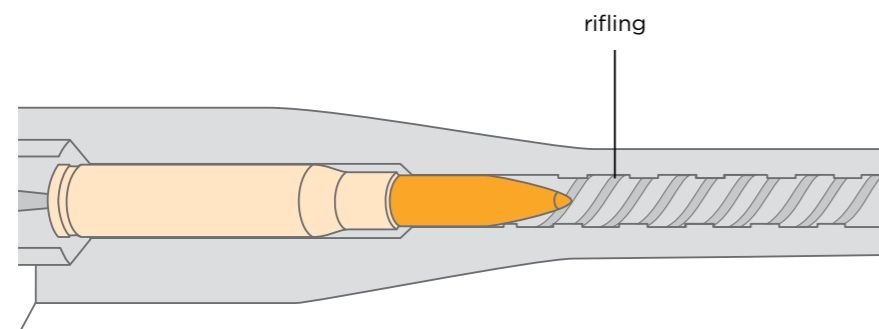
Rimfire and centre-fire ammunition

This type of ammunition is designed for use in rifles and handguns. The projectile is usually constructed of layers of gilding metals such as lead within the core and a copper jacket.

The projectile sits at the top of the brass case. As the cartridge is fired, the projectile leaves the metallic case and is propelled down the barrel by the gases produced from the burning powder. Rifling or grooves in the barrel stabilise the projectile by spinning it as it travels through the air.



Rimfire and centre-fire ammunition.



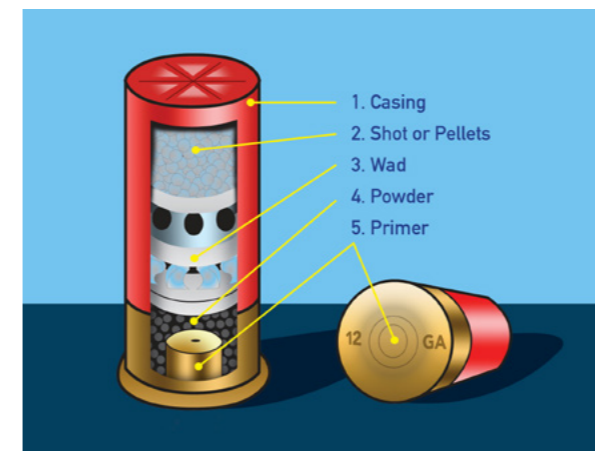
Rifling within a barrel.

2.4 Types of ammunition

Shotgun ammunition

Shotgun shells are typically made of a plastic case with a brass base. Before the manufacture of plastic hulls, paper shells were common. These, as well as solid brass shells, are still made.

The brass base is heavy so that it can hold the large, powerful shotgun primer. A charge of powder sits above the brass base, which is ignited by the primer. The powder is enclosed in a plastic wad designed to separate the shot and powder and provide a gas seal that propels the encased shot down the barrel. All this is held together within the shotgun shell, which is then crimped, or rolled closed. When the pellets leave the muzzle the shot is spread as it travels through the air, discarding the wad a short distance from the barrel.



Shotgun ammunition.

2.5 The firing sequence

Firearms employing a magazine go through a sequence of operation that usually begins with the feeding of a new cartridge into the breech. Once the bolt is closed, the firearm is ready to be fired.

The full firing sequence is:

1. Feed (the cartridge goes into the breech)
2. Lock (the locking lugs ensure the action is closed)
3. Cock (the striker, also known as the firing pin, is held back by the sear)
4. Fire (the trigger releases the sear and striker to fire the cartridge)
5. Unlock (the action is unlocked)
6. Extract (as the bolt retracts the fired case is pulled back)
7. Eject (the fired case is thrown clear in readiness for the next cartridge to be fed into the breech).

2.6 The magazine

Firearm magazines are designed to hold a supply of extra cartridges. They may be fixed to the firearm or be removable. Each has its own advantages and disadvantages; however, the removable box type is considered the safest and therefore the preferred choice.

While it might seem that there are many different sorts of magazines, there are only two basic types: box and tube magazines. In a box magazine the cartridges are stacked, one cartridge on top of the other. In a tube magazine, cartridges lay horizontally, behind each other.

Some fixed box magazines have hinged or removable floor plates which allow for simple unloading. Firearms with magazines that can only be emptied by going through the full sequence have the obvious disadvantage of having the firearm ready to fire each time a cartridge is fed into the breech and the action closed.

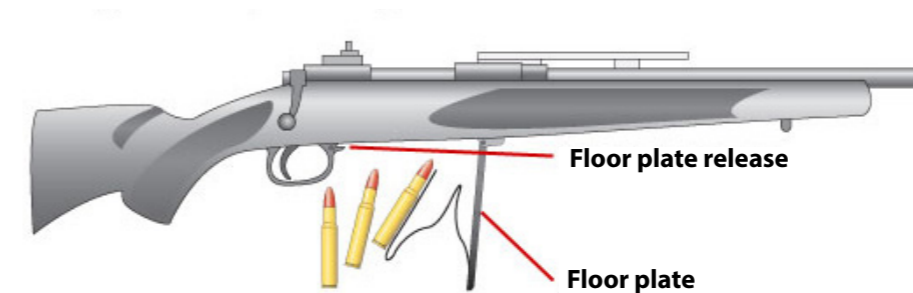
Most tube magazines on shotguns have a cartridge stop which, when depressed, releases the cartridges without having to cycle the action. This is not the case with fixed tube magazines on rifles because the cartridge stop is usually located out of reach within the action.

2.6 The magazine

Removable box magazine



Hinged floor plate magazine



Tube magazine



2.7 How rifles work

Rifled bores use solid projectiles, whether pure lead or jacketed. Pure lead is normally found in the .22 rimfire and low velocity centre-fire rifles and handguns.

Jacketed projectiles have a lead core, which is enclosed in a harder (usually copper alloy) metal jacket. Its length normally exceeds its diameter (or calibre) and the centre of mass is typically located towards the rear.

If a jacketed projectile were driven straight out of the barrel (without any rifling), it would very quickly flip over. Its flight would become inefficient, typically punching holes sideways into the target with inconsistent points of impact.

To stabilise the projectile and give it the appropriate amount of spin, twisted grooves are cut or swaged into the bore during manufacture (known as rifling). The projectile is 'squeezed' into these grooves during firing. This forces the projectile to spin as it travels along the barrel.

The rate of spin acquired by projectiles is very high. A .22 rimfire cartridge for example, with a muzzle velocity of 400 metres per second and a rifling twist of one turn in 400 mm, will turn 2.5 times per metre travelled, or 1,000 times per second.

This equates to 60,000 r.p.m. (revolutions per minute), or about 8 times faster than the speed at which a typical car engine could normally function. Some of the centre-fires typically spin at up to 300,000 r.p.m.

The spin of the bullet is what ensures it travels through the air with its point forward. Having the correct spin rate is essential for accurate rifle shooting. Manufacturers take this into account and optimise the rifling pitch for the particular cartridge.



Rifling marks left on a projectile.



Projectiles that have not stabilised will flip over during flight.

2.8 How shotguns work

Shotguns, unlike rifles, do not have rifling in their bores. They are designed to shoot a charge of pellets (collectively called shot) usually at a moving target at ranges that are relatively close to the shooter (typically less than 50 metres).

The shotgun cartridge operates on a similar principle to the centre-fire rifle or pistol cartridge. The difference is the shotgun cartridge case is usually made of plastic, and the projectiles are usually contained within a plastic wad to hold them together and seal the propellant gases behind them. Because shotguns operate at relatively lower pressures than rifles, cartridge cases and wads for shot guns can safely be made using plastic.

(Note: Some shotguns specifically designed to fire solid slugs may have a rifled barrel)



Smooth bore of a shotgun (above left). Components of a shotgun cartridge including case, powder, primer, propellant, wad and shot (above centre). Factory shotgun ammunition (above right).

The criteria by which shotgun ammunition is categorised includes:

- the calibre (usually expressed as a gauge)
- the case length (the current standard being 70 mm)
- the shot charge weight
- the shot size.

2.9 Shotgun gauge

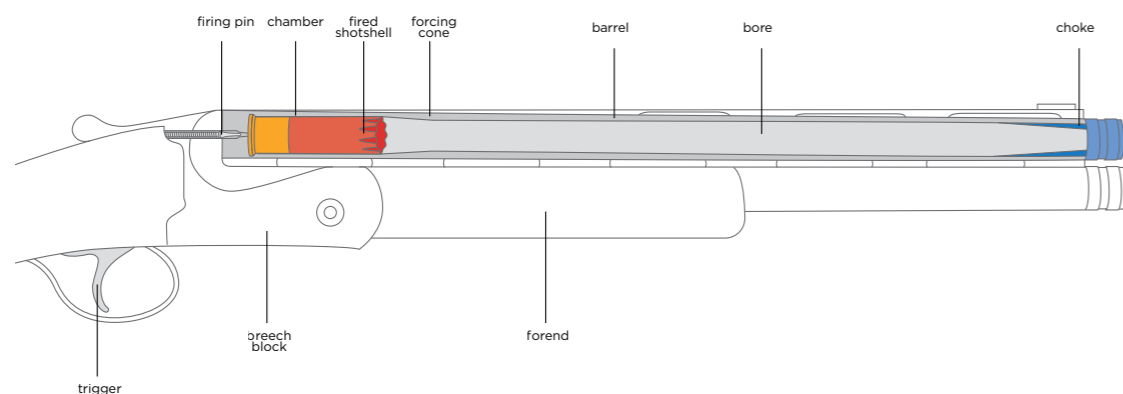
The most popular shotgun gauges in Australia are 12, 20 and .410. It is important that cartridges are matched to the chamber of the firearm; for example, 12 gauge cartridges should be matched to a 12 gauge shotgun and 70 mm long cartridge matched to 70 mm chambers. The gauge of a shotgun is stamped on the barrel or mechanism, along with the correct shot type (lead or steel).



Examples of differing gauge cartridges (left to right); 12 gauge, 16 gauge, 20 gauge, 28 gauge, 410 gauge.

2.10 Barrel length

Shotgun barrels can be of any length greater than the legal minimum (of 450 mm). Coach gun lengths of around 500 mm are popular for western action-style shooting matches, and for specialised field use. Common barrel lengths found on most modern sporting and hunting shotguns are defined in inches: 28 inch, 30 inch and 32 inch.



2.11 The choke

At the muzzle end of most shotgun barrels is a constriction in its diameter. This is known as the choke. This can be either built into the barrel during manufacture, or supplied as an interchangeable item that is screwed in.

The purpose of the choke is to control the pattern of shot as it leaves from the barrel. The safest maximum constriction is termed "full choke". On a 12-gauge gun firing lead shot, this usually amounts to around 0.9 mm reduction in barrel diameter (from 18.5 mm down to 17.6 mm).

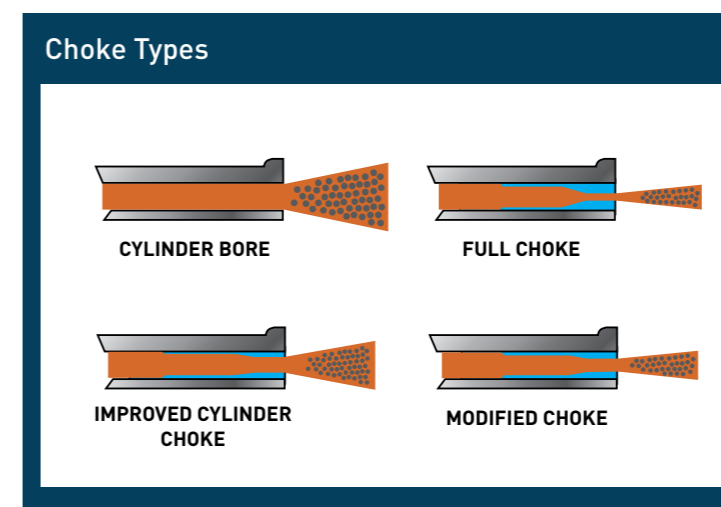
It is important to use the appropriate level of choke as this gives the greatest likelihood of success. The full choke gives the tightest shot pattern. Full choke is used for taking game at the furthest distances. Cylinder choke provides the most open patterns and is the most open chocking of all with no constriction. Cylinder choke is used at the closest ranges.

A modified choke lies somewhere in between a full choke and a cylinder choke, making it a good choice for all round hunting and shooting.

It is also very important never to fire the shotgun without the choke tube in place. If you do, the threads will become badly damaged. If your shotgun has a removable choke, remove, clean and lightly oil the threads before cleaning the bore and putting the gun away after the days' shooting. If you don't clean the choke, propellant gases (including various corrosive compounds) may condense in this region. As a result of corrosion, it may be almost impossible to unscrew the choke the next time you use the firearm.



Different styles of removable choke tubes (left), Choke tool (right).



How chokes control the pattern of the shot.

2.12 Pellet composition

The pellets used with shotguns are traditionally made of lead. Because lead is toxic under some circumstances, the use of lead shot is no longer permitted near wetlands in many parts of Australia.

This is a particular problem associated with duck hunting. Typically, hundreds of pellets miss the target and fall into the water where they sink to the bottom. When feeding, ducks and other water birds will sometimes swallow these pellets.

If you are hunting in wetlands, you can use steel or bismuth pellets as an alternative to lead. Steel pellets are less dense but much harder than lead, so the pressures generated during firing are different. Consequently, you can only fire steel shot cartridges in firearms that have been designed to do so.

The chokes for steel shot are also different. Typically, the modified choke tube for lead shot would be equivalent to full choke for steel, while the full choke for lead would be too tight for steel and potentially unsafe.



Choke for steel and lead shot (left) and a steel shot in a 12-gauge cartridge (right).



The underside of this over/under (o/u) shotgun breech shows it is suitable for steel shot cartridges.

2.13 Shot sizes

Shotgun pellets are available in a variety of different diameters. There are several numbering systems in use, from the USA, the UK as well as several variations from other parts of Europe.

The most popular system in Australia is the one used in the USA. As a general guide, use small pellets for small game and large pellets for larger species. The smallest size available is number 12. This size would be suitable for orchard pests such as very small birds.

While there are theoretically many different sizes of pellets available, the reality is that firearms retailer's usually only stock the most popular pellets. The table below shows the most frequently encountered pellet sizes.

Table 1: Shot Sizes

Lead shot sizes	12	9	8 1/2	8	7 1/2	6	5	4	2	BB
Pellet diameter (inches)	.05	.080	.085	.090	.095	.110	.120	.130	.150	.180
(mm)	1.27	2.30	2.16	2.29	2.41	2.79	3.05	3.30	3.81	4.57

Buckshot sizes	No. 4	No. 3	No. 2	No. 1	No. 0	No. 00	No. 000
Pellet diameter (inches)	.24	.25	.27	.30	.32	.33	.36
(mm)	6.10	6.35	6.86	7.62	8.13	8.38	9.14

Steel shot sizes:	6	5	4	3	2	1	Air Rifle	BB	BBB	T	F
Pellet diameter (inches)	.11	.12	.13	.14	.15	.16	.177	.18	.19	.20	.22
(mm)	2.79	3.05	3.30	3.56	3.81	4.06	4.49	4.57	4.83	5.08	5.59

Note: the size of shot, whether lead or steel, is based on American Standard shot sizes. Thus: a steel No. 4 pellet and a lead No. 4 pellet are both .13 inches (3.3 mm) in diameter.

2.14 Shot charge weight

The weight of the shot charge varies according to the gauge of the firearm and the required application. In 12-gauge cartridges, shot charges range from 24 grams through to 36 grams (in roughly 4-gram increments). You can also obtain 76 mm magnum 12-gauge cartridges with heavier charges into the 42 grams range.

The most popular shotgun cartridge in field use around Australia would be in 12 gauges, using 32 grams of number 4 lead pellets. This would be suitable for hunting rabbits.

2.15 Leading moving targets

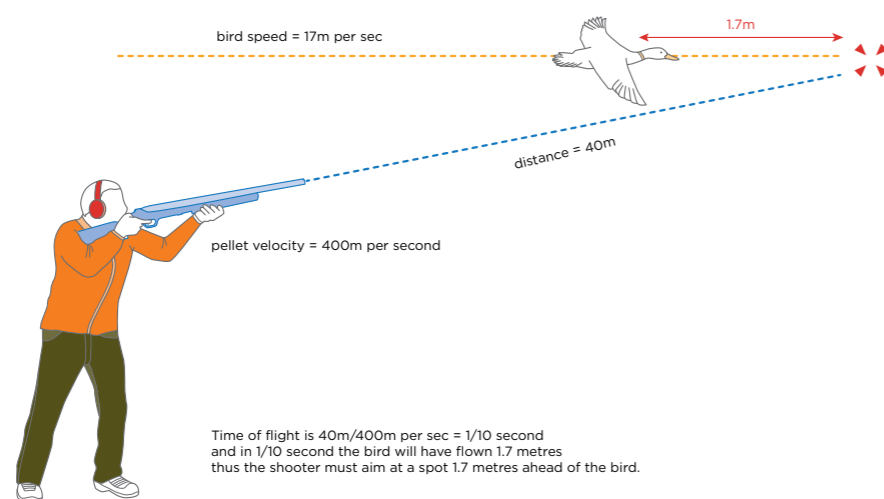
Leading of moving targets is the main skill you will need to develop when shooting with shotguns. Once you have mentally predicted where the target will be when the shot arrives, you then need to fire the shot successfully.

For example, assume a duck is flying in a straight line, along a path 40 metres from the shooter:

1. The pellet velocity over this distance averages to 400 metres per second.
2. The time of flight for the pellets will therefore be $40/400$ seconds or $1/10$ of a second.
3. If the speed of the duck is 60 km/hour, this equates to just less than 17 metres per second.
4. In $1/10$ of a second, a duck flying at this speed will travel $1/10$ of the distance in a full second, or 1.7 metres.

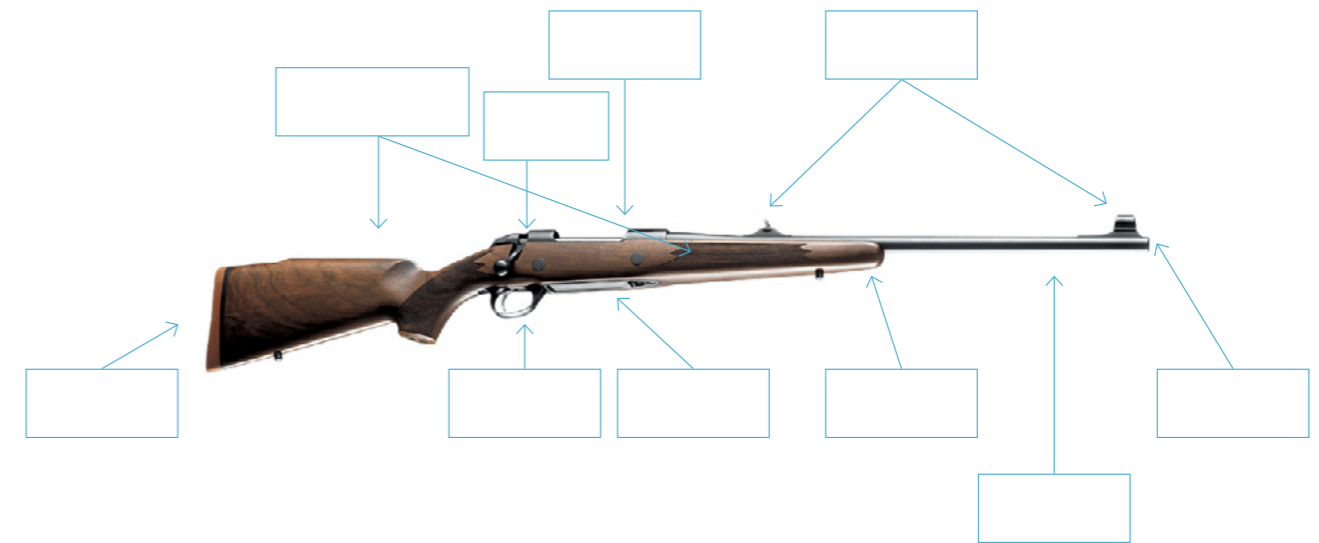
This means you will need to fire at a point 1.7 metres ahead of the duck for the pellets to connect with the duck.

Although this is a perfectly good assumption, by far the best way to develop proper shooting skills such as this is to gain a lot of practice through shooting at clay targets, preferably on a shotgun range.

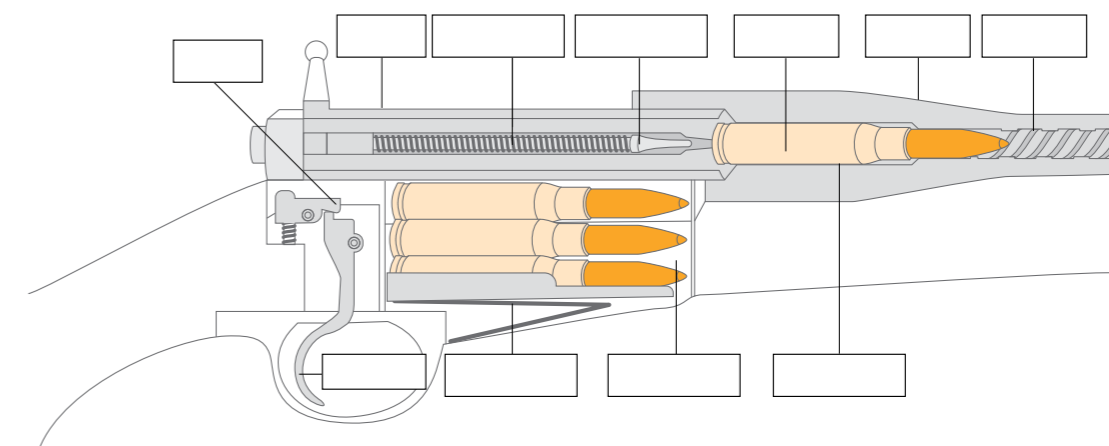


Section 2 self-test

1. On the following sketch of a firearm action, label the relevant part in the box on the sketch:



2. On the following sketch of a firearm action, label the relevant part in the box on the sketch:



3. Circle your answer to the following multiple choice questions:

(i) The projectile's flight is stabilised so that it travels point forwards because of:

- a. velocity b. spin c. inertia d. energy

(ii) The effective range of a shotgun for field use would typically be:

- a. 50 metres b. 80 metres c. 100 metres d. 250 metres

(iii) The type of firearm action shown below is:

- a. Bolt-action b. Break-action c. Lever-action d. Semi-automatic



(iv) The shotgun choke usually employed to give adequate patterns for general field shooting at moderate ranges is usually termed:

- a. full choke b. cylinder bore c. modified choke d. improved

4. Complete the following sentence:

The choking for steel shot is also different. Typically the modified choke tube for

_____ shot would be equivalent to full choke for _____, while the full choke for _____

would be too tight for _____ and potentially unsafe.

3.1 Basic safety and the states of readiness

Firearms safety rules have evolved in response to the many accidents that have occurred. Shooting incidents do still occur and may be a result of unsafe behaviour or illegal activities (such as someone shooting by the side of the road suddenly hiding the firearm in ready-to-fire mode back into the car out of sight of an approaching vehicle). Unsafe and irresponsible behaviour is a recipe for disaster.

The risk of harm is increased by drinking or engaging in other risky activities while handling firearms. As a result, the police now consider any incident involving a firearm worthy of much closer investigation. If someone seeks medical treatment as a result of a gunshot wound it is now mandatory to report it to the police.

This section of the guide sets out firearm safety rules recommended by the NSW Police Force Firearms Registry. Strictly observing these basic safety rules as well as understanding the states of firearm readiness will help ensure nothing goes wrong and no one gets hurt.

The states of readiness

Unloaded. No rounds are in either magazine or chamber.

Firearm is totally safe for transport or storage. Store ammunition in a separate locked container.

Loaded. Rounds are in the magazine but the chamber is empty. The bolt, lever or slide is closed on an empty chamber, the safety catch may be applied and the trigger finger outside the trigger guard. Still safe until a round is chambered. You may carry the firearm in this state until you're almost ready to fire.

Action. A round is chambered by operating the bolt, lever or pump. This also cocks the firearm. The safety catch is still applied with the finger still outside the trigger guard.

You have identified your target.

Fire. Safety catch is moved to "fire", finger is off the trigger.

Confirm target in the scope, place your finger on the trigger and fire at your discretion (in a range practice the order to fire will be given by a Range Officer)

If you don't take a shot, return to "action" state by taking your finger off the trigger and applying the safety catch. You can apply an intermediate stage of safety by breaking the bolt. Lift the bolt handle to the vertical position while leaving the round in the chamber. Until the bolt is lowered and locked the firearm cannot fire.

If you are going to carry the gun over a long distance you must first return the firearm to action state, then unload it.

3.2 Muzzle awareness (point your firearm safely)

The “safe” direction in which to point the muzzle depends on your circumstances. Generally, a safe direction is one where, in the event of an unintended discharge, no harm or damage would result.

In rocky terrain in the field, downwards may sometimes be unsafe. If there is an unintended discharge, ricocheting fragments of bullets or rock can cause injury to the shooter or bystanders.

In unpopulated areas, pointing a firearm upwards is generally fairly safe, although falling projectiles do have the potential to cause harm.

3.3 Handle and carry your firearm safely

When carrying, accepting from or passing a firearm to another person:

1. Keep the muzzle pointed in a safe direction.
2. Keep your hands clear of the trigger. This minimises the risk of unintended discharge.
3. Open the action and check the chamber.
4. Remove any cartridges from the breech (if present).
5. Remove the magazine (if possible).
6. Leave the action open or broken and insert a firearms safety flag (see page 6).

When you hand a firearm to somebody else, it’s polite to show them the opened action. This allows them to see for themselves that the firearm is unloaded. Never rely on the assurances of others. Always check the firearm yourself, each and every time.



From left to right: Cradle carry, sling carry and shoulder carry.



Left: Trail carry with shotgun. Right: Trail carry with rifle.



Visually inspecting a bolt-action rifle (above left). Visually inspecting a shotgun, looking at the action and using fingers to feel for cartridges in the chamber (above right).



Left: Ready carry. Right: Side carry.

Without fail, always unload your firearm when returning to the car, the camp or home. It is crucial for your safety and the safety of others that you get in the habit of doing this.

When your firearm leaves your hands, even when only to cross a fence in the hunting area, make sure you revert the state of readiness from loaded to unloaded.

It is an offence for any person to possess a loaded firearm in a public place or other place, where that loaded firearm endangers the life of any other person.

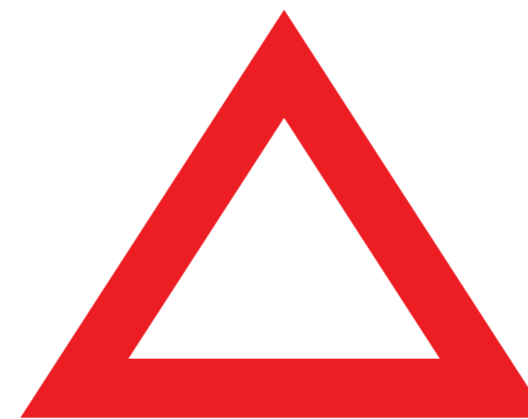
Note: A firearm is regarded as being loaded if there is ammunition within its chamber or barrel, or in any magazine or other device which is in such a position that the ammunition can be fitted into its chamber or barrel by operation of some other part of the firearm.

Note: When spotlight shooting for vermin control you will need to have loaded firearms in your vehicle. Under these conditions, very strict rules must be enforced to ensure that all firearms are unloaded and made safe before you or your companions leave the vehicle.

3.4 Avoid alcohol and other drugs

A firearm is a type of machine that requires serious concentration and skill to use. Anyone who has consumed alcohol, medication featuring an “in case of drowsiness do not operate machinery” warning label, or any substance that impairs rational thinking or judgment, must not handle firearms until they have fully recovered.

The effects of alcohol can sometimes be greatly magnified by inadvertently using medications without knowledge of their effects. For example, hunters are sometimes affected by exposure to pollens and other airborne irritants when out in the bush. Many allergy or hay fever medications feature this familiar triangle warning:



THIS MEDICINE MAY CAUSE DROWSINESS AND MAY INCREASE THE EFFECTS OF ALCOHOL. IF AFFECTED DO NOT DRIVE A MOTOR VEHICLE OR OPERATE MACHINERY

Avoid drinking alcohol until you have finished shooting for the day, the guns have been cleaned and put away, and the ammunition has been secured in a separate lockable container.

As well as the safety considerations, it is an offence to handle or use a firearm while the person is under the influence of alcohol or any other drug. Additionally, it is an offence to give someone else possession of a firearm if you believe the other person is under the influence of alcohol or drugs or is incapable of exercising responsible control over the firearm.

3.5 Positively identify your target beyond all doubt

In the excitement of a hunting trip, it can be tempting to shoot at any movement. Tragedy can result if you fail to properly identify the target, what may lie behind it or what might happen if the shot misses. Knowing the danger zones of the firearm you are using will help you to understand where the bullet may land if you miss the target, or if your bullet passes through the animal.

Always be 100 per cent sure of your target and what's behind it before you shoot.

If you see movement, colour, shape or hear sound, assume it is human until you prove otherwise. Most hunters expect to see game when they see movement in the bush as this is what they are looking for. Assuming the movement, colour, shape or sound is human sets your mind the other way around – your first thought when sensing movement, colour, shape or sound will be that it is another hunter rather than game.

Don't fire until you can positively identify whether the game animal is male or female. This eliminates the temptation to snap shoot. By the time you establish the sex of the game animal, you will be certain it is in fact a game animal. Alternatively, make sure you can view all of the head, neck and shoulder of the game animal all at the same time. This not only establishes positive identification, it also identifies the target areas that will result in a quick, humane kill shot.

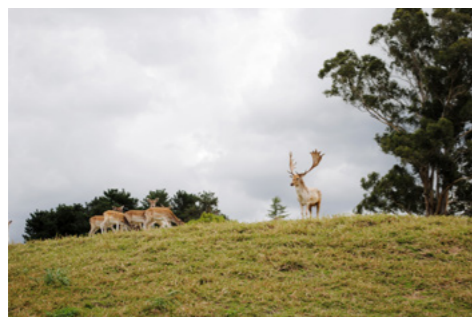
This will also eliminate any risk of shooting at another hunter who may be carrying out an animal they have just harvested.

3.6 Your field of view

Do not lose visual contact with your hunting companion. If you do lose visual contact, stop hunting until you have regained sight and contact has been confirmed. Wearing high visibility clothing can help you stay in visual contact with your companion.

Telescopic rifle sights can restrict the field of view of the shooter. Scopes are mounted above the bore, so make sure the muzzle is pointing at the target rather than something that the scope is looking over (such as a car bonnet or roof). Failing to do this could cause you to shoot a hole in the car – a costly, hazardous and embarrassing mistake to make, not to mention the danger it poses if there are occupants in the vehicle.

Because scopes are out of focus at very close ranges, car radio aerials are often invisible through the scope as well. Using motor vehicles as rests for sighting in or taking long shots is not recommended as muzzle blast will damage automotive paint finishes.



Never shoot at a sky-lined animal (left) and always ensure there is a safe backdrop (right).

3.7 Never fire at hard surfaces and water

Bullets can ricochet unpredictably, sometimes back towards the shooter, if they strike hard surfaces or water. Bullets striking the surface of water can sometimes ricochet repeatedly and travel for extreme distances, retaining enough energy to injure or kill long after they are out of sight. Shooting at rocks, metal or glass also poses hazards of rebounding bullets and fragments.

When euthanising an injured or sick animal, be careful of bullets that might pass right through the animal and strike rocks beneath them. At very close range, even bone and horn from the animal may be blown back towards the shooter when using higher powered cartridges. In all such situations the shooter remains liable for any injuries or damage caused.

3.8 Calculate the danger zone

Always consider the danger zone for the firearm you're using. The danger zone is the distance over which the projectile or projectiles remain dangerous.

Without a safe backstop, bullets can travel further than the human eye can see. At night the bullet can travel considerably further than the range of a spotlight, so only shoot at night if you know the terrain well. Even then, only shoot when there is a safe backstop for each shot.

Despite their much reduced danger zone, shotgun pellets can spread over a large area within the danger zones, sometimes hundreds of metres depending on shot sizes.

Typically, any object travelling at velocities exceeding 92 metres (or 300 feet) per second is potentially lethal. Projectiles lose velocity over their flight time because of air resistance. The efficiency of a projectile to retain velocity is a function of its mass, length and shape.

Initial velocity is a factor when considering danger zones. While most packets of .22 rimfire ammunition assert that these rounds may be dangerous to ranges up to 1.5 kilometres (or sometimes more), larger projectile manufacturers usually do not specify a danger zone.

If projectiles are fired at inappropriate angles (including upwards), they may return to earth with lethal consequences for anybody they might strike. Some approximate danger zone values are given in Table 2 (on the next page).

Table 2: Danger zones (extreme ranges) for common projectiles shown in commonly used units.

Projectile	Weight/grain	Muzzle velocity (ft/sec)	Danger zones (m)
No 9 pellet (shotgun)	0.75	1350	204
No 4 pellet (shotgun)	3.22	1350	277
BB pellet (shotgun)	8.75	1350	364
00 buckshot (shotgun)	53.8	1350	558
1 oz solid slug (shotgun)	437	1560	747
.22 long rifle (rifle)	40	1255	1485
.223 Rem (Rifle)	55	3240	3537
.243 Win (Rifle)	100	2960	3658
.308 Win (Rifle)	150	2990	4050
.30/06 S'field (Rifle)	180	2700	5138

Note: If you carelessly or foolishly elevate a firearm muzzle and allow it to go off, the above danger zones are increased. (Adapted from NRA Firearms Fact Book, (1989) National Rifle Association, Rhode Island, New York).

3.9 Store and transport firearms and ammunition safely

Any person who possesses a firearm in NSW is subject to the general requirement for safe storage of firearms under Part 4 of the *Firearms Act 1996*.

Any person in possession of a firearm must take all reasonable precautions to ensure the firearm is kept safely, is not lost or stolen and does not come into the possession of an unauthorised person.

Storing firearms and ammunition separately under lock and key is a legal requirement in all states and territories in Australia. Rigorous firearms security and the requirement to also lock ammunition away separately from firearms have been introduced to prevent unauthorised persons, whether they are children or housebreakers, from accessing the means to easily discharge firearms without the consent of the licenced owner.

Note: Please refer to section 4.14 of this guide for more information on the safe storage requirements.

Transporting Category A and B firearms

The general rule in Section 39 of the *Firearms Act 1996* applies to the transportation of Category A & B firearms.

A person who possesses a firearm must take all reasonable precautions to ensure:

- its safe keeping, and
- that it is not stolen or lost, and
- that it does not come into the possession of a person who is not authorised to possess the firearm.

Transporting Category C, D and H firearms.

The transport of Category C, D and H firearms is covered by clause 126 of the Firearms Regulation 2006.

- the firearm must not be loaded with any ammunition while it is being conveyed, and it must be kept separate from any ammunition,
- while the firearm is being conveyed:
 - (i) it must be rendered temporarily incapable of being fired (eg by removing the bolt or the firing mechanism or by using a restraining device such as a trigger lock), or
 - (ii) it must be kept in a locked container that is properly secured to, or is within, the vehicle being used for transporting the firearm.

The Commissioner has determined that “all reasonable precautions” have been taken if Category A and B firearms are conveyed in the same manner as Category C, D and H firearms. Never leave a firearm unattended in a motor vehicle unless it is stored in accordance with the requirements of Category C, D and H firearms and no alternative safe storage is available.

3.10 Cross obstacles safely

There have been many unintended discharges when hunters have crossed fences. In many instances, the hunter has overbalanced or stumbled when crossing the fence and their firearm has discharged injuring themselves or a bystander. The engagement of trigger and sear is so small (typically a fraction of a millimetre) that even the smallest bump can result in an unintended discharge. This is especially the case with firearms that have become worn through use.

As the firearm is leaving your possession when crossing a fence it must be in the unloaded state and pointed in a safe direction.

When coming to a fence, either place the firearm on the ground and pass it under the fence or hand it to a companion while you cross over.



When passing a firearm across a fence, make sure the muzzle is pointed in a safe direction, the action is open and your hands are clear of the trigger.



When passing a firearm under a fence, ensure that the muzzle is pointed in a safe direction and the action is open. Always cross the fence behind the firearm so that the muzzle is facing away from you. When you pick up the rifle, keep your hands clear of the trigger.

3.11 Clear the firearm

In practice, determining whether a firearm is loaded or not is not always as simple as it might sound. Remember that “loaded” means having a cartridge anywhere in the firearm, including the magazine, feeding system or chamber.

Where the magazine is not removable, and where the feeding system is enclosed, the process of clearing the firearm may be less straightforward than the 6-step process listed in Section 3.3.

Normally you would check the chamber last because unless the magazine is cleared first, cycling the action will place a round into the previously cleared chamber.

Opening the action, especially in self-loading firearms where the bolt or breech-block cannot be locked open, does not ensure “unloaded” on its own.

To clear lever-action and similar rifles with fixed-tube magazines:

1. Point the firearm in a safe direction with your fingers away from the trigger guard.
2. Open the action and check the magazine follower is visible.
3. Check that the cartridge lifter does not have a cartridge in place.
4. Check that the chamber is clear.

Many firearms have long and flimsy compression coil springs in the magazine tube, which can become damaged if left loaded for extended periods. The follower may stick if the tube is dirty or even slightly dented from being knocked or dropped. This means that a cartridge may still be in the magazine but not visible when the action is opened, giving the false impression that the firearm is unloaded. Before you decide whether the magazine is unloaded it’s essential you are able to see the magazine follower.

Leaving a firearm loaded, failing to clean it properly and failing to keep it pointed in a safe direction can lead to injury and tragedy.

3.12 Check the firearm is in working order

Firearms are tools. As with any tool, faults can develop simply through not maintaining your firearm properly. They can get dirty through use and break down. Sometimes parts that should be regularly lubricated aren’t given enough oil; other times enthusiastic owners use too much or perhaps the wrong type of oil or other substance.

As well as following the basic rules of safety, you must always ensure your firearm is in sound working condition.

Worn or broken parts

Parts may become worn or broken; for example, the firing pin of a break-action firearm could become stuck in the forwards position as a result of accumulated dirt or corrosion.

Always have your firearms serviced or repaired by a licensed gunsmith.



The firing pin (above) is stuck in the forwards position which means the gun may fire when closed. The force of the gun closing may cause the primer to detonate, resulting in an accidental discharge.



The 12 gauge side-by-side shotgun above was destroyed by firing into a barrel that had been blocked by a wad from a previous faulty cartridge.

Excessive pressure

Any kind of barrel obstructions including oil, dirt, foreign objects and metal fouling through lack of cleaning can cause dangerously excessive pressure during firing. The first symptom of this is usually when the action is hard to open after firing.

If you own a centre-fire rifle, get into the habit of checking the primers of the fired cartridge cases. These give a good indication of operating pressure. If pressures become excessive there is a possibility that the action or barrel may fail with disastrous consequences for both firearm and shooter, and possibly bystanders as well. Even a flannel cleaning patch left in a .22 rimfire will almost invariably cause a bulged barrel if the gun is fired before it's removed.

3.13 Cock the action

Contrary to popular belief, it is very unsafe to have a cartridge in the chamber of the firearm with the action uncocked (say by squeezing the trigger with the rifle's bolt open, then lowering the bolt to the closed position). This action permits the trigger to be pressed with no response, creating the impression that the firearm is "safe".

The firing pin of an uncocked rifle or shotgun often protrudes and rests on the primer – a bump or knock can be enough for the firearm to discharge.



The firing pin of an uncocked rimfire rifle (above). Note the protruding firing pin.

3.14 Use the right ammunition

It is essential to use the exact cartridge for which the firearm has been manufactured. While the calibre of a firearm is based upon the internal diameter of the barrel, the designation of the cartridge is the important factor.

It's sometimes possible to chamber other cartridges, but simply testing to see if a cartridge will fit into a chamber is not enough as there are some extremely dangerous chamber-cartridge combinations.

Many cartridges have similar sounding names, but are quite different. The metric calibre of 7.62 mm for example, which is numerically the exact equivalent of .30 inch imperial calibre, includes several different cartridges. Variations include the 7.62 x 51 NATO round (also called the .308 Winchester), 7.62 x 39 Russian cartridges (used in the AK47 assault rifle), the 7.62 x 53 Russian rimmed cartridge and the 7.62 x 45 Czech cartridge (now obsolete).

In Europe, the US service cartridge that is normally designated the .30-06 (meaning .30 calibre adopted for use in 1906) is called the 7.62 x 63. In each of these cartridges, the second number after the "x" refers to the length of the cartridge case. Clearly, the chambers will be very different.

The far right case in the picture below shows what can happen from accidentally firing a .308 Winchester cartridge in a 7.62 x 39 rifle. Both cartridges are very similar, but not the same. In this case, the cartridge merely split open, although this has the potential to cause serious injury.



Cartridges from left to right: .300 win mag, 30/06 Springfield, .308 Winchester, 30-30 Winchester, 7.62 x 39 Russian, .300 Blackout. Far right: Effects of a 7.62 x 39 being fired from a .308 Winchester.

3.15 Misfires and hang-fires

Misfires

Sometimes when you operate the trigger, nothing happens. This is usually termed a misfire. Misfires are potential hazards.

If there was no “click” when you operated the trigger, the safety catch could have been engaged, causing the misfire.

A misfire can also occur if the cartridge has not chambered fully and the action is not fully closed thereby preventing the striker from falling. Another possibility is the action failed to cock. If these two scenarios occur, you may need expert advice from a gunsmith.

If there was a “click” signifying the fall of the striker, the most likely possibility is that either the firearm wasn’t loaded at all, or the cartridge misfired and the chamber is empty. Although in this case there is no hazard, game often take fright from the metallic noise and the hunter misses their opportunity.

If the firearm was loaded but the cartridge misfired, check the magazine carefully. It could be dirty, worn or perhaps damaged from being dropped. If the feed ramps aren’t exactly as they should be, magazines can be temperamental.

Hang-fire

The most serious possibility is when the cartridge fails to fire initially, but then goes off a very short time later. This is called a “hang-fire”. Hang-fires are very rare events, but must be taken into account by all who use firearms. They often result from the primer having been exposed to poor environmental conditions. Moisture, oils, extremes of temperature and possibly extreme mechanical vibration may cause such events.

The hazard is that the firearm appears to have misfired and then a short time later it goes off. In most instances the delay is less than a second, but even in a short space of time the shooter’s point of aim can alter. More importantly, if the shooter quickly opens the action, and the cartridge then fires, the shooter (and possibly bystanders) may be injured or killed, and the firearm will be damaged or destroyed.

An example of a hang-fire is a packet of shotgun ammunition was stored in a cupboard alongside a container of swimming pool chlorine, which is a powerful oxidising agent. The shooter cleaned some of the corrosion off and fired several cartridges from the packet. One misfired and then the next two went off after about a half second delay. A gunsmith advised that the remaining cartridges be destroyed.



Storing ammunition in a damp environment may cause corrosion.

If your firearm fails to fire:

1. Keep the firearm pointed in a safe direction.
2. Count steadily to thirty.
3. Carefully open the chamber to check.
4. Remove misfired cartridge if present.
5. Dispose of faulty ammunition properly.
6. Seek expert advice if necessary.

Stuck cartridges

Sometimes a live cartridge becomes stuck in the chamber when trying to load. If the action can be carefully closed and then fired, this will usually solve the problem. If the bolt will not close, however, the cartridge will need to be removed and discarded properly. If the cartridge is so firmly stuck that the extractor claw rides over the rim and leaves the cartridge almost in the chamber and so tight that it will not come out you will need to seek expert advice.

Never under any circumstances attempt to push the cartridge out from the muzzle end with a cleaning rod. People have been killed when cartridges have fired by being forced from the projectile end using a cleaning rod.

If a live cartridge becomes stuck in the chamber, remove the bolt if possible and completely unload the firearm, except for the stuck round. Contact a gunsmith in advance to let them know you will be bringing your firearm in for repair. This is important as if you are apprehended by the police you will have a "lawful excuse" in your defence.

The gunsmith or armourer may use a special "stuck case remover" tool. In some cases the gunsmith may need to unscrew the barrel from the receiver in order to get the cartridge out.

Always load firearms carefully (especially if using hand-loaded cartridges). Never use cartridges that need to be forced into the chamber.

Section 3 self-test

1. Answer the following multiple choice questions relating to general firearms safety:

i) How should firearms be carried about in public?

- a. Loaded, but with the safety applied.
- b. In the boot of the car.
- c. Slung over the shoulder, muzzle upwards.
- d. In accordance with the legislative requirements.

ii) When not in use, firearms must be stored by

- a. Locking them in a vehicle
- b. Packing them in grease
- c. Placing them out of reach of children
- d. Storing them in accordance with the legislative requirements.

iii) What is the very first thing to do when picking up a firearm?

- a. Ensure it is pointed in a safe direction.
- b. Remove the magazine.
- c. Pull the trigger to see if it is loaded.
- d. Check the sights.

iv) The likely outcomes of leaving a flannel patch in a .22 rimfire rifle barrel and discharging it would be:

- a. A bulged barrel.
- b. Poor accuracy with that shot.
- c. Bullet velocity would be lowered.
- d. No effect at all.

Section 3 self-test

2. The three states of readiness are (1) unloaded (2) loaded and (3) action.

Using these numbers, indicate which state should be applicable to the following situations:

- a) Putting your firearms away after a hunting trip _____
- b) Crossing a fence while hunting _____
- c) Walking around in the hunting area when you expect to see the species you are after _____
- d) Standing still in readiness to take a shot _____
- e) Crossing a public road while hunting _____
- f) Stalking a deer that is almost within range _____

3. Answer the following multiple-choice question.

The magazine type deemed to be safest is the:

- a. Removable tube.
- b. Integral box.
- c. Removable box.
- d. Fixed tube.

4.1 The role of legislation

The *Firearms Act 1996* and the *Firearms Regulation 2006* control the licensing of firearm owners and users and the acquisition, possession and use of firearms by those persons. Section 3 of the Act clearly states the principles and objectives.

Principles of the Act

- (a) to confirm firearm possession and use as being a privilege that is conditional on the overriding need to ensure public safety, and
- (b) to improve public safety
 - (i) by imposing strict controls on the possession and use of firearms, and
 - (ii) by promoting the safe and responsible storage and use of firearms, and
- (c) to facilitate a national approach to the control of firearms.

Objects of the Act

- (a) to prohibit the possession and use of all automatic and self-loading rifles and shotguns except in special circumstances,
- (b) to establish an integrated licensing and registration scheme for all firearms,
- (c) to require each person who possesses or uses a firearm under the authority of a licence to prove a genuine reason for possessing or using the firearm,
- (d) to provide strict requirements that must be satisfied in relation to licensing of firearms and the acquisition and supply of firearms,
- (e) to ensure that firearms are stored and conveyed in a safe and secure manner,
- (f) to provide for compensation in respect of, and an amnesty period to enable the surrender of, certain prohibited firearms.

Any person seeking to own and use firearms in NSW is required to understand what is legally required of them.

Firearms owners must also be aware of the *Crimes Act 1900*, which details a variety of firearms-related offences.

You can read or download the current legislation at www.legislation.nsw.gov.au

4.2 What is a firearm under the law?

In NSW, the *Firearms Act 1996* defines a firearm as "...a gun, or other weapon, that is (or at any time was) capable of propelling a projectile by means of an explosive, and includes a blank-fire firearm, or an air gun, but does not include anything declared by the regulations not to be a firearm."

Clause 4 of the Firearms Regulation 2006 declares a number of devices, mostly in the form of explosive powered tools or warning devices, not to be firearms. While the law talks of firearms as "weapons" it is important to understand that firearms for recreational use are not permitted to be used as weapons. A weapon is typically defined as an instrument for attack or defence used in combat.

It is also important to note that most of the devices declared not to be firearms (particularly those employed in the work place) are controlled by other legislation, such as workplace health and safety laws.

If you use a firearm for your employment (such as pest controllers, primary producers, and park rangers) you must comply with workplace legislation in addition to the *Firearms Act 1996* and Firearms Regulations 2006.

You can download useful reference booklets and guides from the NSW Police Force Firearms Registry website at www.police.nsw.gov.au/firearms.

4.3 Breaches of the law

Any person who holds a firearms licence and/or permit must comply with the specific conditions of their licence, category of licence and their genuine reason. All licence and permit holders must also comply with the general legislative requirements of the *Firearms Act 1996* and its Regulation.

Any breach of the provisions within legislation constitutes a breach of law which may result in administrative action being taken against the licence holder.

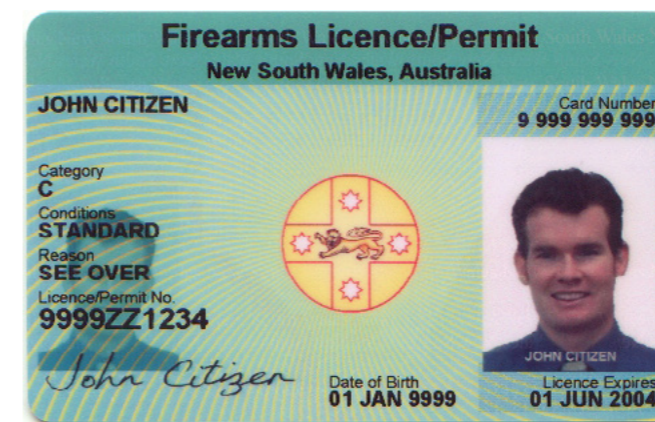
4.4 What constitutes a "genuine reason"?

Following nationally agreed changes to legislation in 1996, it is now a mandatory requirement for anyone seeking to possess and use a firearm to have an acceptable "genuine reason" for doing so. The allowable genuine reasons for possessing and using firearms in NSW are:

- sport or target shooting
- recreational hunting or vermin control
- primary production
- vertebrate pest animal control
- business or employment (owner of business or employee of business)
- rural occupation
- animal welfare
- firearms collection (the collection must have genuine commemorative, historical or financial value)

Note: Personal protection and the protection of property is not accepted as a genuine reason.

Note: A firearms licence that has been granted for the genuine reason of Recreational Hunting/Vermin Control can only be issued for Category A & B. You must also prove you have a special need for a firearms licence over and above Category A.



4.5 Categories of firearm licence

The law recognises seven categories of firearm licence, applicable to the various firearm types:

	Type of firearm
Category A	Air rifles, Rimfire rifle (other than self-loading) , Shotgun/rimfire combinations, Shotgun (other than pump action or self- loading).
Category B	Muzzle loading firearms (other than pistols), Centre-fire rifles (other than self- loading), Shotgun/centre-fire combinations.
Category C	Prohibited except for limited purposes Self-loading rimfire rifles with a magazine capacity of no more than 10 rounds , Self-loading shotguns with a magazine capacity of no more than 5 rounds, Pump action shotguns with a magazine capacity of no more than 5 rounds.
Category D	Prohibited except for official purposes Self-loading centre-fire rifles, Self-loading rimfire rifles with a magazine capacity of more than 10 rounds, Self-loading shotguns with a magazine capacity of more than 5 rounds, Pump action shotguns with a magazine capacity of more than 5 rounds, any firearm to which a category C licence applies.
Category H	Handguns (including blank firing handguns).
Firearms dealer	Licence specifies which firearms may be possessed by the individual dealer.
Firearms collector	Licence specifies which types of firearms may be possessed by the individual collector.

There are strict limitations on who can apply for all categories of licence beyond Category A. Evidence must be supplied to satisfy the Commissioner of Police that there is a special need for the individual to possess and use these firearms. For Category C, the only acceptable genuine reason for private ownership is primary production (or under limited circumstances involving a medical disability, for clay target shooting). Category D licences are only permitted for official purposes relating to vertebrate pest animal control. Category H licences are only permitted for recognised target-shooting club members and certain, strictly limited business or employment purposes.

4.6 Prohibited firearms

The following list (adapted from Schedule 1 of the *Firearms Act 1996*) summarises firearms that are legally classified as “prohibited”. This means that they are not generally permitted, although there may be grounds for an applicant with legitimate reasons to be granted a prohibited firearms permit.

1. Any machine gun, sub-machine gun or other firearm capable of propelling projectiles in rapid succession during one pressure of the trigger.
2. Any self-loading rimfire rifle (including any such firearm described elsewhere in this Schedule).
3. Any self-loading centre-fire rifle (including any such firearm described elsewhere in this Schedule).
4. Any self-loading or pump action shotgun (including any such firearm described elsewhere in this Schedule).
5. Any self-loading centre-fire rifle of a kind that is designed or adapted for military purposes.
6. Any self-loading shotgun of a kind that is designed or adapted for military purposes.
7. Any firearm that substantially duplicates in appearance (regardless of calibre or manner of operation) a firearm referred to in item 1, 5 or 6.
8. A firearm, not being a pistol, of the Uberti or Armi-Jager brands, or any similar firearm fitted with a revolving ammunition cylinder (other than a firearm manufactured before 1920).
9. A shotgun fitted with or designed to be fitted with a drum magazine of the “Striker 12” assault shotgun type or any similar weapon.
10. Any firearm to which there is attached any article or device capable of muffling, reducing or stopping the noise created by firing the firearm.
11. A firearm, not being a pistol, fitted with a stock that is specially designed so as to be readily detachable, or to operate on a swivel, folding or telescopic basis.
12. A firearm made up in the form of a stylographic or propelling pen or pencil, capable of being used for the discharge of gas, bullets, shot, dye or pyrotechnic flares.

- 13.** A firearm capable of discharging by any means:
- (a) any irritant matter in liquid, powder, gas or chemical form, or
 - (b) any pyrotechnic flare or dye, or
 - (c) any article known as a “paint-ball”.
- 14.** A firearm that:
- (a) substantially duplicates in appearance some other article (such as a walking stick, walking cane or key ring), and
 - (b) disguises or conceals the fact that it is a firearm.
- 15.** A cannon or other weapon by whatever name known of a type which will expel a projectile by the action of an explosive or other propellant, and which has a barrel with a bore in excess of 10 gauge, not being a firearm of the Very or rocket type designed and intended for use for life saving or distress signalling purposes, an antique muzzle loading firearm, or a rifle or shotgun manufactured before 1920.
- 16.** Any firearm which, or part of which, has a dimension less than the minimum dimension prescribed for the firearm or part by the regulations.
- 18.** Any device known as a “powerhead” that can be attached to the end of a spear gun and that is designed to propel a projectile by means of an explosive.

4.7 Ineligibility for a firearms licence

Where a person has, within the previous 10 years, been convicted of any of a range of criminal offences, or has become subject to apprehended violence orders, they may not be eligible to possess a firearms licence.

A firearms licence must not be issued to a person who:

Has been convicted of a ‘prescribed offence’ within the period of 10 years, whether the offence has occurred in NSW or elsewhere. Prescribed offences are offences:

- relating to firearms or weapons
- relating to prohibited drugs
- involving violence
- of a sexual nature
- involving fraud, dishonesty or stealing
- involving robbery
- relating to terrorism
- involving organised criminal groups and recruitment.

(Note: Some offences require a certain monetary penalty or sentence of imprisonment. Please refer to clause 5 of the Firearms Regulation 2006).

- is subject to a good behaviour bond in relation to a ‘prescribed offence’ (see above).
- is subject to a firearms prohibition order.
- is subject to an apprehended violence order (AVO) or has been subject to an AVO within the last 10 years (other than an order that has been revoked).

The legislation provides a number of other discretionary grounds for refusal of a firearms licence, for example, a licence will not be issued if the Commissioner is of the view it would be contrary to the public interest or the applicant is not considered a fit and proper person.

A firearms licence can be (and in some cases, must be) suspended and/or revoked for a number of reasons prescribed in the legislation, including those listed above.

4.8 What does “possession” mean in law?

The legislation provides that possession of a firearm includes any case where a person knowingly:

- has custody of the firearm, or
- has the firearm in the custody of another person, or
- has the firearm in or on any premises, place, vehicle, vessel or aircraft, whether or not this belongs or is occupied by the person, unless they can offer proof that they did not know it was there, or that it had been put there by somebody else who was legally entitled to do so.

Possession includes having a firearm stored legally in its nominated place when the licence holder is not present. In other words, a firearm is deemed to be in the licence holder’s possession if it is locked properly in his or her approved gun safe, even when they are not at home and perhaps other relatives are at home. The important point is that access is exclusive to those people who are legally entitled.

4.9 Legally acquiring firearms and ammunition

Firearms may only be bought and sold through a club armourer or a licensed dealer. In remote locations where dealers are not available, sales may be witnessed by a police officer. “Remote” means both parties must live more than 100 kilometres from a licensed dealer.

Before buying a firearm you must apply to the NSW Police Force Firearms Registry for a permit to acquire a firearm. The paperwork associated with this process is handled by the licensed firearms dealer.

When buying your first firearm in any category there is a mandatory 28-day waiting period before the permit to acquire is approved. The waiting period is waived for the purchase of second and subsequent firearms in that category.

Buyers of ammunition must hold the relevant licence or permit for a firearm for which the ammunition is suited. Legislation requires all purchases of ammunition from a licensed dealer to be recorded at the time of sale.

The purchaser must show:

1. Identification showing the name and address of the purchaser, and
2. A current firearms licence or permit for a firearm that is suitable for the type of ammunition being purchased, or
3. A permit authorising the person to purchase the ammunition.

Ammunition can only be purchased from either a licensed firearms dealer, a club armourer or a person authorised by a permit to sell ammunition.

Note: The purchaser of handgun ammunition must also provide the registration certificate of the firearm or an issued Permit to Acquire.

Firearms licence holders cannot sell ammunition direct to one another.

4.10 Disposing of firearms and ammunition

When disposing of firearms or ammunition the licence holder is bound to do so in an approved manner. That is, they may only dispose of the firearm or ammunition through a licensed dealer or by surrendering the firearms to the police.

The sale of firearms and ammunition can only be completed through a licensed dealer with the seller and purchaser both present:

- The purchaser must hold a valid firearms licence of the correct category as well as a valid Permit to Acquire.
- The seller must have a current firearms licence and the Firearms Registration Certificate.

4.11 Modifying a firearm

Generally it is illegal to modify a firearm unless you are authorised to do so by a permit. A person must not shorten a firearm or possess any firearm that has been shortened.

Converting or altering a firearm must only be done by a firearms dealer or club armourer who holds the appropriate licence or permit and the modifications must comply with the *Firearms Act 1996* and its Regulation.

A person must not provide any information that may be used for the purpose of modifying a firearm, if that person is not authorised to do so by a licence or permit.

Unless authorised by a permit, firearms must not:

- have the barrel shortened to less than the legal length
- have the stock shortened to less than the legal length
- have the action or stock altered into a prohibited weapon
- have a prohibited weapon altered into a legal firearm.

4.12 Registration of firearms

It is an offence under the *Firearms Act 1996* for a person to supply, acquire, possess or use firearms that are not registered with the police. If a person is in possession or comes into possession of an unregistered firearm, this must be immediately surrendered to police.

The Firearms Registry maintains a central register of all firearms registered in NSW. As such, when a firearm is registered or ownership is transferred, a registration certificate will be issued to the owner of the firearm and it will contain a full description of the firearm.

It is an offence to have a firearm or receiver that does not bear a serial number.

4.13 Fitting a new or additional barrel

New or additional barrels must only be fitted by a licenced gun dealer or gunsmith.

Where a replacement barrel or an additional barrel is fitted to a firearm, the firearms dealer or gunsmith is required to notify the NSW Police Force Firearms Registry. This additional barrel will be given a serial number (if it did not already have one) and this will be noted on the firearm's registration.

Also, when the calibre of a firearm is changed as a result of fitting a new or additional barrel, the firearms dealer or gunsmith must notify the NSW Police Force Firearms Registry of this change.

4.14 Storage and security

A person who possesses a firearm must take all reasonable precautions to ensure the firearms safekeeping. The firearm must not be lost or stolen and must not come into the possession of an unauthorised person. (*Firearms Act 1996*, Part 4, Section 39).

There are 9 levels of security required for firearms storage. However firearms licence holders of Category A & B require Level 1 security, while Level 2 is needed for Categories C, D and H firearms.

Other levels of security are required for firearms collectors, firearms dealers, theatrical and club armourers.



Large safe showing the correct installation method, fixed to the floor and the wall.

Level 1:

- When any firearm is not actually being used or carried, it must be stored in a locked receptacle of a type approved by the Commissioner of Police and that is constructed of hard wood or steel and not easily penetrable.
- If the receptacle weighs less than 150 kilograms when empty, it must be fixed in order to prevent its easy removal.
- The locks of such a receptacle must be of solid metal and be of a type approved by the Commissioner.
- Any ammunition for the firearm must be stored in a locked container of a type approved by the Commissioner. Ammunition may be kept in the receptacle with the firearms, but must be kept in a separate locked container within the receptacle.

Level 2:

- When a firearm is not actually being used or carried, it must be stored in a locked steel safe of a type approved by the Commissioner that cannot be easily penetrated. The safe must be bolted to the structure of the premises where the firearm is authorised to be kept.
- Any ammunition for the firearm must be stored in a locked container of a type approved by the Commissioner. Ammunition may be kept in the receptacle with the firearms, but must be kept in a separate locked container within the receptacle.

Note: A police officer is required to seize any firearm that is believed, on reasonable grounds, to not be stored in accordance with the regulations.

Note: These safe storage requirements are the minimum that must be provided and safe storage that exceeds these requirements may be approved.

Please visit http://www.police.nsw.gov.au/services/firearms/safe_storage for more detailed information on safe storage requirements.

4.15 Public safety (legal and social responsibilities)

The firearms legislation (*Firearms Act 1996* and *Firearms Regulation 2006*) provides numerous legislative requirements/offences regarding firearms (ie: firearm possession/use and storage requirements). In addition, there is other legislation that also provide requirements/offences regarding firearms (ie: *Crimes Act 1900*).

Anyone who discharges or attempts to discharge a firearm with intent to harm another person or to avoid apprehension by the authorities is obviously committing a serious offence.

Even if you legally possess a firearm, you must take special note of the following, even when hunting in the field:

- Licence/permit holders must be vigilant in ensuring they abide by the legislative requirements and they act in a safe and responsible manner whilst possessing and/or using a firearm and ensuring other shooters do the same.
- Illegal activities involving firearms are reported to Crime Stoppers on 1800 333 000.
- Firearms are not handled or used whilst under the influence of alcohol or any other drug.
- Ensuring that licence/permit holders have permission to shoot (such as from the land owner, NSW DPI, Range/Club in relation to target shooting),
- Ensuring that when shooting interstate that interstate licence recognition provisions exist, however do not assume that you are permitted to do the same activities interstate that you are authorised to do in NSW (check with the relevant jurisdiction to identify what you are permitted to do before setting off in transit).

- Any person who possesses a loaded firearm or loaded spear gun in a public place or any other place so as to endanger the life of any other person or fires a firearm or spear gun in or near a public place is liable to imprisonment.
- Any person who carries or fires a firearm or spear gun in a manner likely to injure, or endanger the safety of, himself or herself or any other person or any property, or with disregard for the safety of himself or herself or any other person, is liable to imprisonment.

Note: Section 93G of the *Crimes Act 1900* states that a firearm is to be regarded as being loaded if there is ammunition in its chamber or barrel or in any magazine or device which can be fitted into its chamber or barrel by operating another part of the firearm.

- Firing at or near buildings with reckless disregard for the safety of any persons who may be present is similarly an offence.
- Trespassing without the permission of the land owner or occupier, in any building or onto any land, without reasonable excuse or lawful purpose while possessing a firearm is an offence. (The onus of proving the above matters lies with the defendant.)
- Storage of firearms and ammunition must be in accordance with the law.
- The licence holder must ensure that firearms or ammunition must not come into the possession of an unauthorised person.

Other firearm offences included in the *Crimes Act 1900* include possession of an unregistered firearm in a public place, stealing firearms, taking firearms onto aircraft or boats without the approval of the carrier and using firearms to attempt to hijack aircraft or other forms of transport.



Shooting at either of these rabbits could breach the *Crimes Act 1900*; the one on the left has a house behind it and the other has vehicles behind it, so the backdrop is not safe for shooting.

The consequences of firearms misuse

The misuse of firearms can pose significant risk to personal and public safety. Personal, social and environmental circumstances can be the cause of firearms misuse and licence holders should be aware of their responsibilities.

Firearms use can present potential risks if:

- the user has a history of mental health or illness
- the firearms user suffers from depression
- the firearms owner exhibits unusual or anti-social behaviour
- the firearms user engages in illegal activities.

Incidents involving the misuse of firearms may be avoided if these factors have been observed, monitored and reported to the NSW Police Force.

Ethics and assistance

All firearms licence and permit holders have a duty of care and render assistance obligations under the *Firearms Act 1996*:

- Organisations and government agencies that require the use firearms have a duty of care to ensure that the firearms users have the appropriate knowledge and training relevant to their role.
- Firearms users, hunters and shooters are encouraged to have a basic level of first aid training that may be applied in the unlikely event of an emergency.
- First aids kits should be made available when using firearms in the field and at all approved firing ranges.
- In the unlikely event of an incident involving the use of firearms, it is important to call 000 immediately and follow the advice of the telephone operator until the emergency services arrives.
- Under the *Game and Feral Animal Control Act 2002*, its Regulation and the *Prevention of Cruelty to Animals Act 2012*, hunters must always aim for a humane kill and ensure the animal is not subject to any unnecessary pain or suffering.

4.16 Reporting changes of circumstances

Everyone licensed to possess firearms must notify the NSW Police Force Firearms Registry of any changes to their name. This must be done within 14 days of the change occurring.

If the safe storage address has changed, the Firearms Registry must be notified in writing within 14 days.

A licence holder must notify the Firearms Registry of a change to their residential address with 7 days.

If a firearm is lost, stolen or destroyed, it's your responsibility to notify the NSW Police Force Firearms Registry promptly. In the event of firearms being stolen in a house break, don't presume that the attending police officers will notify the NSW Police Force Firearms Registry.

If your licence expires without being renewed, your firearm will still be registered to your former licence. You can expect a visit from a police officer and you will have to forfeit your firearms. You could also be prosecuted for possession of firearms without a licence.

Licence holders can notify the NSW Police Force Firearms Registry of any changes of circumstances online via the Firearms Registry website.

Note: Changing an address on a Driver's Licence does not change the residential or storage address recorded with the Firearms Registry.

Note: Not notifying changes within the legislative timeframes is a breach of legislation and you may be subject to prosecution.

4.17 Cruelty to animals under the law

Hunters must comply with the requirements of the *Prevention of Cruelty to Animals Act 1979*, and the *Game and Feral Animal Control Act 2002*.

Cruelty includes mistreating or killing animals in a manner that results in suffering or distress. Hunters must take particular care to kill animals in a manner that does not prolong their death, and take all steps within their power to ensure wounded animals are dispatched promptly. (See Section 5 of this guide for further details.)

4.18 Hunting licences in NSW

The *Game and Feral Animal Control Act 2002* regulates the hunting of game and some feral animals in NSW. The objects of the Act are to provide for the effective management of introduced species of game animals, and to promote responsible and orderly hunting of game animals on public and private land and of certain pest animals on public land.

G-Licence

In the General NSW Game Hunting Licence (G-Licence) class, the following licence types are available: Standard, Visitors (overseas), Hunting Guide, Professional Hunter and Commercial Hunter.

The G-Licence is required to hunt the following species of introduced game and feral animals on private property in NSW, with permission of the land manager:

- wild deer (seasons apply to some species)
- California quail, pheasant, peafowl, partridge
- ducks (under the Native Game Bird Management Program).



A G-Licence and Waterfowl Identification Test certification are required to participate in duck hunting under the Native Game Bird Management Program.

R-Licence

By law, you must have a licence from the Restricted NSW Game Hunting Licence (R-Licence) class, as well as written permission, to hunt game and feral animals on declared state forests and Crown land in NSW (this does not include national parks).

The R-Licence incorporates the General NSW Game Hunting Licence (G-Licence), required by law to hunt wild deer, ducks and game birds on private land in NSW.

R-Licence types available include: Standard, Visitors (overseas), Hunting Guide and Commercial Hunter.

You must meet the following requirements before you can apply for an R-Licence:

- a) Be a member of a NSW DPI Game Licensing Unit Approved Hunting Organisation (AHO), and
- b) Become accredited for one or more of the R-Licence categories (Bows, Firearms, Dogs or Blackpowder).

R-Licence accreditation

To become accredited for your R-Licence category/s you need to complete an open-book test based on the NSW DPI Game Licensing Unit's "Hunter Education Handbook".

Hunter LEAP Providers are authorised by NSW DPI to offer members of an Approved Hunting Organisation applications and accreditation for the R-Licence. Providers must be accredited with the Game Licensing Unit for this purpose.

Game animals

The species that may be legally taken as game are listed below. You must obtain the necessary NSW Game Hunting Licence and have permission before setting out in pursuit of your chosen species.

A game hunting licence is not required for hunting the animals listed in Section 2 above on private land, and accordingly is only required if the animals are living in the wild on public land.

Under the *Game and Feral Animal Control Act 2002* a "game animal" is

1. Any of the following that is living in the wild:

- a. deer (family Cervidae)
- b. Native Game Birds – Ducks, Quails and Pigeons



2. Any of the following animals that are living in the wild are classed as "Non Indigenous Animal" for the purposes of the Act:

- a. Cat
- b. Dog (other than dingo)
- c. Goat
- d. Fox
- e. Hare
- f. Rabbit
- g. Pig
- h. Common Starling
- i. Common or Indian Myna
- j. Feral Pigeon

Please refer to Schedule 3 of the *Game and Feral Animal Control Act 2012* for the full list of game animals and non indigenous animals.

Exemptions from licensing

A NSW Game Hunting Licence is not required under Division 2, Part 3 of the *Game and Feral Animal Act 2002*, in respect of the following:

- a. A person who is hunting an animal, on private land, listed in Section 5 (2) of the Act: pigs, goats, wild dogs (other than dingoes), cats, hares, rabbits, foxes.
- b. A person who is hunting on any land owned or occupied by the person, or a member of the person's household or by a corporation of which the person is an officer or employee.
- c. An Aboriginal person:
 - i. who is hunting a game animal pursuant to a native title right or interest that is the subject of an approved determination of native title or of a registered native title claim; or
 - ii. who is a member, or in the company of a member, of a Local Aboriginal Land Council and who is undertaking traditional cultural hunting within the area of the Council.
- d. A person who is hunting animals listed in Section 5 (2) in accordance with a duty imposed on the person (or on any corporation of which the person is an officer or employee) under the *Local Land Services Act 2013* or the *Wild Dog Destruction Act 1921* to suppress or destroy the animals (other than a person assisting any such person in the performance of that duty).
- e. A person who is hunting deer in accordance with a duty imposed on the person or the person's employer (or on any corporation of which the person is an officer) because of a deer control order or compliance direction under the *Deer Act 2006*.
- f. A person employed by any public or local authority (including an employee of a Local Land Services) who is acting in the execution of his or her duties as such an employee.
- g. A veterinary surgeon or other person who is acting for the purposes of killing or treating an animal in distress due to injury or illness.
- h. A person of a class, or hunting in the circumstances, prescribed by the Regulation.

Section 19 of the Game and Feral Animal Control Regulation 2012 also exempts the following persons from holding a game hunting licence:

19. For the purposes of section 17 (1) (h) of the Act, a game hunting licence is not required in respect of:
- a. the hunting of any animal in accordance with a power or duty imposed under the *Animal Diseases (Emergency Outbreaks) Act 1991*, or
 - b. the hunting of any animal pursuant to an obligation imposed by or under an Act to manage, control or eradicate the animal concerned (but only on land, and for the period, in respect of which the obligation applies).

A person who is not required to hold a game hunting licence is not prevented from applying for and being granted a licence in accordance with the *Game and Feral Animal Control Act 2002*.

For more information about hunting licences or accreditation, contact customer service at the Game Licensing Unit of the Department of Primary Industries on 02 6363 7650 or go to www.dpi.nsw.gov.au/hunting. Alternatively, contact your local approved hunting organisation (AHO).

Section 4 self-test

Answer the following multiple choice questions by circling your choice of answer (a, b, c, or d):

1. The main purpose of firearms legislation in NSW is to:

- a. Help farmers control pest animals
- b. Protect the public from harm
- c. Teach firearms safety to all licence holders
- d. All of the above

2. To qualify for a firearms licence, the applicant must:

- a. Be at least 18 years old
- b. Be of good character
- c. Have a genuine reason
- d. All of the above

3. A firearm is legally deemed to be in your possession:

- a. Only if it is formally registered to you
- b. Only if you are physically holding it in your hands at the time
- c. If they are located in any place where the firearms owner knowingly has custody of them
- d. Only if you own it, whether it is registered or not

4. The purchase of a firearm must be completed by who:

- a. The Commissioner of Police
- b. The intending new owner
- c. The person to whom it was previously registered
- d. The firearms dealer

5. Which of the following is not a "genuine reason" for possessing a firearm:

- a. Personal protection
- b. Protection of crops against feral animals
- c. Shooting at targets for recreational purposes
- d. Employment as a vertebrate pest controller

6. What should be done by a person seeking to have an additional barrel fitted to a rifle:

- a. Obtain a permit to acquire the barrel.
- b. Ensure the barrel has the correct twist rate
- c. Ensure the dealer or gunsmith fitting the barrel notifies the Firearms Registry.
- d. All of the above

7. In the spaces provided, write the missing details as indicated:

- a) Calibre = .177
Type of firearm = Air Rifle
Action type = Break-action



Category of firearm _____

- b) Calibre = 12 gauge
Type of firearm = Shotgun
Action type = Break-action



Category of firearm _____

- c) Calibre = .308 Winchester
Type of firearm = Rifle
Action type = Bolt-action



Category of firearm _____

- d) Calibre = 12 gauge: Magazine capacity 7 rounds
Type of firearm = Shotgun
Action type = Pump action



Category of firearm _____

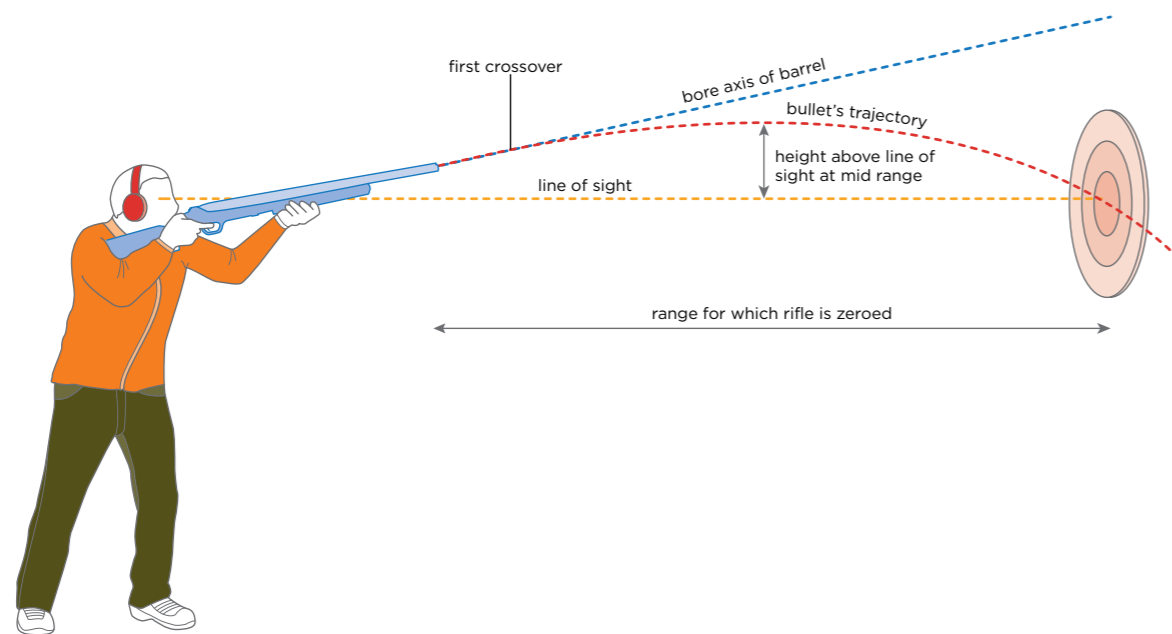
5.1 Ballistics and sighting in

It is vital that you sight in your rifle properly. The purpose of the sight is to enable you to predict where the projectile will strike at a particular range. The sight is most important to the success of a hunter as it determines the point of impact of the bullet. It's important you keep shooting to point of aim by repeated checking and lots of practice.

There are three main types of sights used on hunting rifles: open sights, aperture or peep sights, and telescope sights. Each has its own advantages and disadvantages.

It's essential when using a rifle to understand the concept of bullet drop and midrange trajectory. Once a projectile begins its flight from the muzzle, it becomes subject to gravity. Gravity pulls the projectile towards the centre of the earth with an acceleration of about 9.8 metres per second for each second of its flight. This means that to hit the target, the axis of the bore must be aimed above the target to enable the projectile to "fall" onto it. Applying this precise angle of elevation to the barrel to ensure the projectile strikes the target at the required distance is called sighting in.

To hit the target, you need to sight in the rifle for a particular range and accurately estimate the distance from the muzzle to the target. Some shooters use electronic range finders to get the exact distance, although practice in estimating ranges will help you increase accuracy.



Trajectory of a rifle bullet (angles exaggerated).

For example, consider a .22 rimfire rifle intended for shooting rabbits. The maximum range at which rabbits can be taken very much depends upon the grouping capacity of the rifle to begin with.

Most shooters in the field would calculate their ranges in yards or metres. Assuming the rifle can manage a group the size of the rabbit's head (40 mm diameter) at 40 metres, it would be reasonable to sight this rifle in to hit point of aim at 50 metres.

A .22 rimfire projectile will cross the line of sight twice during its trajectory or flight path. This would mean that at around 15 metres from the muzzle, the projectile would cross the line of sight for the first time. Prior to this it would be below this line as it exits the muzzle. Beyond 25 metres the projectile climbs above the line of sight, reaching a maximum height of about 20 mm at approximately 40 metres.

After this, the projectile begins to fall so that it is back on target at 50 metres, crossing the line of sight for the second time. This is the rifle's zero.

At the maximum range at which rabbits could be expected to be taken, given the rifle's grouping capacity (about 70 metres), the projectile will be between 10 and 20 mm below this.

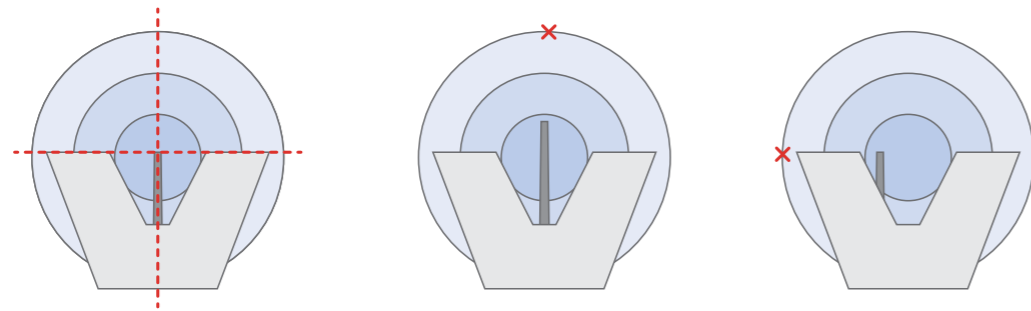
This means with carefully estimated ranges and a reasonable shooting position, the rabbit hunter should be able to consistently and humanely take rabbits out to about 70 metres with minimal misses.

The best way to understand this, having properly sighted in, is to set up a cardboard box or similar target at the proper range (say 70 metres). Carefully shoot a group, then repeat this at 25, 50, 60 and 70 metres, aiming at the same mark and establishing how far above or below the point of aim is the actual point of impact. Repeat this process from time to time, especially if you change brand or type of ammunition.

When using centre-fire rifles, the same principles apply but the ranges will be greater. A shotgun is also subject to the effects of gravity, but as the range of a shotgun is much less than even a rimfire rifle, it is not as necessary to establish drop.

Instead, shotguns should be "patterned" onto a large sheet of paper or card, to ensure that the gun is shooting to the point at which it is aimed, and that the pattern is sufficiently uniform and tight to ensure the target species will be properly killed. These features can be optimised by using the right choke, the right pellet size and the right shot charge weight.

All sighting in, patterning and ammunition testing should be done at an approved shooting range.



Open Sights: The front of the sight must be centred in the notch of the rear sight and level with the top, otherwise the projectile will impact as shown, the point of the impact (as shown by the red cross) will shift in the same direction as the front of the sight.

To deliver an accurate single projectile into a precise place on the target you will need to hold the rifle as still as possible using the proper grip and ensuring there is no excessive pressure on the barrel or fore-end. Rifles must fit and be mounted to exactly the same spot each time. The key is consistency.

5.2 Terminal ballistics

The whole point of shooting is to deliver a projectile to the target and exert a force upon it. The force exerted comes from the transfer of energy. When the projectile hits the target it slows down and the energy of its motion is transferred to the target. Terminal ballistics is about ensuring that the projectile allows the efficient and humane harvest of game through energy transfer.

The shape, hardness, mass and velocity at impact are all important factors. To kill a large, tough-skinned animal, much more momentum is needed than for a small animal with thin skin. While personal preferences sometimes cause disagreement among shooters and hunters, there are basic recommendations about which calibres, bullet weights and shot sizes are most suitable for the various species of game available in Australia. Table 3 on the next page shows the minimum recommended calibres for common game.

The ideal hunting projectile is one which is accurate, penetrates to the vital area and remains just under the skin on the other side of the animal. By coming completely to rest inside the animal it yields all of its energy and can do no more work. In order to do this, there is usually some degree of deforming or “mushrooming” of the projectile so that it slows down more effectively.

Hunting heavy, potentially dangerous game, however, requires a cartridge that will not only humanely kill a target animal but also stop it from continuing after the shot and potentially injuring the hunter or other bystanders.

Shooting very large animals while hunting is different from doing so at close quarters, such as when euthanising sick or injured stock. Avoid using high-powered rifles at close range as there is a high risk of fragments of bullet, bone and other debris flying back. There are few animals that cannot be safely killed with a .22 rimfire delivered to exactly the right spot at close range.



An unfired .30 calibre projectile (left) compared with one of the same type removed from a harvested game animal (image Tim Fraser).

Table 3: Recommended minimum calibres for hunting in NSW

Species	NSW DPI
Hog deer	.243 Win
Fallow deer	.243 Win
Chital deer	.243 Win
Rusa deer	.270 Win
Red deer	.270 Win
Wapiti	.270 Win
Sambar	.270 Win
Feral goat	.243 Win
Feral pig	.243 Win
Wild dog	.222 Rem
Fox	.22 Rf
Feral cat	.22 Rf
Hare	.22 Rf
Rabbit	.22 Rf

5.3 Rifle shooting positions

There are four main positions that are traditionally adopted when rifle shooting: standing or off-hand, kneeling, sitting and prone. There are variations within these and in the field a variety of alternatives may also present themselves (such as resting over a log or leaning against a tree trunk).

A clean kill is the most important feature of hunting or shooting at animals. For this reason the shooter must adopt the most stable position from which to shoot. Use anything available on which to rest your rifle. A sling will also help make your rifle more stable in the field. An even better aid is the bipod, which can be attached to the fore-end and folded up for easy carriage.

Whichever shooting position you adopt, you will need to think through your stance. When standing, space your feet a shoulder width apart, with the rifle's butt plate tucked into your shoulder, your face on the cheek piece and the rifle supported so that the rifle's centre of gravity is comfortably positioned between your hands.

When kneeling, sitting or prone, make sure your body is as close to the ground as possible. Grip the stock with your trigger finger out of the trigger guard until you are ready to fire. With your other hand, support the fore-end without touching the barrel itself.

Keep your grip firm but comfortable and support the weight of your body by your skeleton rather than the muscles. Position your eye in line with the sights of the rifle.



Standing: note the use of the sling.



Prone: the bipod greatly improves steadiness in the field.



Kneeling: bracing the left arm on the knee.



Seated: with rifle, supported by both arms and knees.

When using a scope, eye relief is critical. Move your head back and forth while looking through the scope so that the image completely fills the eye-piece. With higher powered centre-fire rifles (and, surprisingly, with certain air rifles) there is a hazard involved in shooting with the eye too close to the scope eyepiece. Many shooters have cut their eyebrow open as a result of the eyepiece recoiling back into their forehead. The typical eye relief for most scopes is about 80 mm to 100 mm.

When using open sights, the eye can normally only focus on one distance at a time. Make sure the front sight is in focus – the rear sight will be slightly blurry. The target will also possibly be slightly blurry.

Once the sight picture is formed, you must hold the rifle onto the same aiming point while the trigger is depressed. Slowly increase the application of force to the trigger, using the pad of your index finger. The exact moment that the trigger breaks should not be predictable.

At the same time this is happening, you will notice that controlling the movement of the rifle is difficult (unless you have temporarily stopped breathing). This is why breathing control is important. Immediately before forming the sight picture, draw a normal breath, let about one third of this out, and then hold your breath until the shot has been fired. As the shot fires, retain the sight picture, stance and grip for a few seconds. This is called "follow through" and is important to ensure the shot exits without disturbance.

Having fired the shot, the next step when hunting is to determine whether your shot was successful. It may be necessary to follow up with a second shot to stop injured animals escaping.

5.4 Shotgun shooting positions

The technique employed when using shotguns differs greatly from that with rifles. With a shotgun, the shooter is not looking at sights, but rather at the object at which he or she is intending to fire. The action is a reflex – nothing about it is pre-planned.

The first requirement is that the gun must fit the shooter. If the gun doesn't fit properly, you will have difficulty putting the centre of the pattern onto the target.

Your dominant eye is an important consideration. A right-handed shooter may be "left eyed" or vice versa. Under these circumstances, you will either have to shoot from the non-dominant hand or force the non-dominant eye to do the work by closing the dominant eye, by putting an eye patch over your dominant eye, or by wearing a pair of safety glasses with the lens over the dominant eye covered.

There is no back-sight on a shotgun. This function is taken over by the shooter's eye. If the shooter is using the non-dominant eye, the centre of the shot pattern will be shifted to the other side of the muzzle, typically up to several metres.

To find your dominant eye, place both hands together so that there is a small gap between the thumbs and forefingers. Extend both arms and look through this small hole at a distant object, say a clock on a wall. Then, while staring at this object with both eyes open, slowly bring the hands back to the face. The small hole will come to the dominant eye.

The stance adopted by the shotgun shooter differs from that of the rifle shooter. Shotguns are usually fired from the standing position, although fox shooters who call the animals in with a whistle sometimes shoot from the sitting or kneeling position.

Place your feet about shoulder width apart facing the target and leaning slightly forwards. Bend your back from just above the hips. Bend your knees slightly. This position will enable you to swivel and follow the target as it moves.



Left and right: Standing with shotgun.

The cheek piece on the stock must be in firm contact with your cheek and the gun held so that it almost forms a part of your body. When the gun comes up to your shoulder and cheek, the eye is automatically in position.

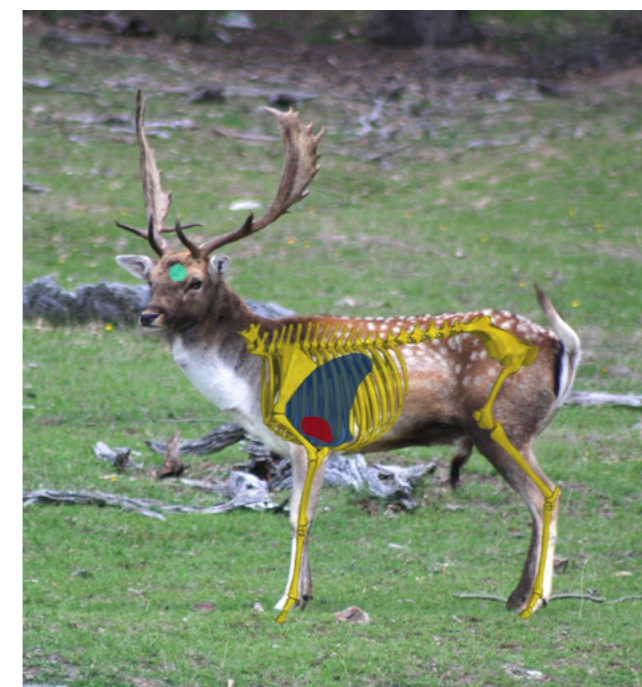
When shooting, look at the target, usually with both eyes open. Follow the target with your gun then slap the trigger when the sight picture is right. With moving targets this means the gun will be pointed at the spot where the target will be when the pellets arrive. The gun is normally kept moving during firing; stopping to fire means the lead is lost and so the shot misses (normally behind the target).

5.5 Humane killing

In order to hit the target in exactly the right spot, you need to understand the trajectory of the projectile. As explained earlier in this section, the projectile is immediately affected by gravity as it leaves the muzzle.

Assuming the rifle is properly zeroed, it will be below the line of sight until the first crossover, then above the line of sight until the second crossover (which occurs at exactly the range for which it was zeroed). From then on it will again be below the line of sight.

To place your shots exactly, you need to understand this process and be able to estimate range with some accuracy. Aim the chest shot one third of the way up the chest and behind the front leg on a perfect standing broadside shot, or at the top of the apex formed by the front legs of an animal with its legs splayed forward (where the animal is stationary).



The two acceptable kill zones on an animal are the head kill zone (green) and the chest kill zone (blue and red).

Although game animals in some species are quite large, it's important to remember that the vital areas are relatively small. To achieve a brain shot on a goat, deer or pig requires a group size of about 75 mm. Foxes and feral cats are about two thirds of this size and hares and rabbits are only in the 30 mm range.

It is recommended therefore that hunters target the much larger heart and lung killing zone on all game and feral animal species. When an adequate firearm is used by a well-trained hunter, head shots may be acceptable under ideal conditions on smaller game and feral animal species like foxes, cats, hares and rabbits.

If there is any question about whether the shot will miss the animal, do not fire. If there are any safety questions, such as “Is it the right species?” or “Is there a safe backstop?” do not fire.

Above all else, you must be able to answer the following questions before taking the irreversible step of squeezing the trigger:

1. Is it safe to fire?
2. Is the target animal absolutely identified?
3. Has the range been estimated effectively?
4. Is the sight picture correct for this range?
5. Will the shot be successful?
6. Are there dependant young to consider?

There are only two acceptable points of aim when hunting animals with firearms: the head-kill zone and the chest-kill zone. These kill zones are larger than the actual physical extent of either the brain or the chest. The head-kill zone includes the spinal cord in the upper neck. The chest-kill zone includes the lungs and great vessels such as the vena cava and aorta. The chest-kill zone is preferred to a head shot in most hunting situations. The humane kill target area is much larger, more animals are taken with this aim and the likelihood of any animal escaping wounded is minimised.

The danger with the head-kill zone is that a small deflection in aim may result in an animal being wounded. Only ever attempt head-kill shots if you are sure of the shot. Head-kill shots are also required for some professional shooters such as commercial kangaroo hunters using specialised equipment.

You must always keep in mind the seriousness of hunting. There are profound ethical and legal issues at stake, as well as the reputation of hunters as a whole. When you have formed a sight picture of the chosen target animal, stop and consider exactly where you need to deliver the shot to ensure that the animal dies as rapidly as possible.

Only take the shot after you have fully answered all the safety and ethical questions.

The successful shot is one single shot that drops your animal instantaneously on or within a few seconds of the projectile impact. Death is swift and the struggle is minimal. You will achieve this when:

- you stalk as close to the animal as possible without disturbing it
- you use a firearm/ammunition combination with adequate killing power
- you use a firearm that shoots true to point of aim
- you estimate the range and distance before taking the shot
- you take a firm, secure rest for your shot.

5.6 Hunting etiquette

If you hunt on private land, the landowner is granting you a huge privilege by allowing access to his or her property. In return for this privilege, the minimum you need to do is to:

- observe any special requirements from the landowner
- leave gates as they are found
- seek permission to have camp-fires
- keep camp-fires as small as possible
- always put camp-fires out properly before leaving
- observe rules about gathering firewood
- keep away from stock and stock routes
- report any sick or down stock
- keep away from stock water troughs
- never contaminate stock water with soaps
- drive only on defined tracks
- take your rubbish away with you
- identify targets beyond all doubt
- take care with danger zones
- ensure landowners are well aware of your movements
- report any suspicious activities to the landowner
- don't keep coming back with new people
- look after hunting areas as though they were your own
- always seek permission to bring a hunting dog before you arrive at the property.

When you are hunting, make sure there are no bystanders except those having a legitimate reason to be there.

5.7 Hunters' Code of Practice

Licensed hunters in NSW must be familiar with and abide by a mandatory Code of Practice. The Code is part of the *Game and Feral Animal Control Act 2002* and the *Game and Feral Animal Control Regulation 2012*. It's a legally binding condition of a game hunting licence in NSW.

Awareness of relevant legislation

It is your responsibility as a licence holder to be aware of and comply with all relevant legislation relating to hunting, animal welfare and the use of firearms.

Safe handling of firearms

If you are using firearms, you must comply with the rules for safe handling, set out in the *NSW Firearms Safety Awareness handbook*, at all times.

Permission required to enter land

Your licence does not automatically authorise you to hunt on any land. You must not hunt on any land unless you hold the express authority (permission) of the landowner.

Target identification and safety

You must not fire at a game or pest animal unless it can be clearly seen and identified. The shot taken must not pose any discernible risk of injury to any person or damage to any property.

Obligation to avoid suffering

An animal being hunted must not be inflicted with unnecessary pain. To achieve a humane death, you must:

- target the animal so that a humane kill is likely
- shoot within the reasonably accepted killing range of the firearm, ammunition or bow, and
- always use hunting equipment (firearm and ammunition, bow and arrow), that can be reasonably expected to humanely kill the animal you are targeting.

Lactating female with dependent young

If you harvest a lactating female, every reasonable effort must be made to locate and kill any dependent young.

Wounded animals

If an animal is wounded, you must take all reasonable steps to locate it so that it can be killed quickly and humanely.

Use of dogs

Dogs and other animals may be used, but only if:

- their use does not contravene the *Prevention of Cruelty to Animals Act 1979*, and
- their use is with the permission of the occupier of the land concerned.

5.8 Ethical hunting

When hunting there is sometimes a temptation to take the first opportunity that presents itself to shoot the animal being sought. Impulsively taking this first opportunity may not be the wisest thing to do. Hunting ethics provide hunters, particularly those who are new to the pursuit, with guidance about what is right and what is wrong.

As one of the oldest traditions of humankind, the rules of hunting have evolved to:

- ensure public safety
- protect the public image of hunting
- maintain or improve access to hunting areas
- prevent damage and injury
- assist conservation efforts
- minimise suffering for hunted species
- legitimise the validity of hunting.

Field etiquette is an important part of ethical hunting. You must be aware of your obligations to farmers and landowners as well as all others who share the outdoors with you. Always follow the Hunters' Code. The Code is a statement of the rules universally agreed upon by all who love hunting.

5.0 Essential Learning

5.9 Handling diseased animals

For it to be safe to eat, game taken for food must be disease-free. Even if you don't intend to take game for food, there are still diseases that can transfer from animals to humans. This can happen when handling game meat, whether you are culling feral animals or preparing a trophy mount.

Apart from your own safety, alerting land managers to the presence of disease that may have serious impact on their domestic stock will ensure you are a valued visitor.

Dead animals can contain pathogens, such as bacteria, fungi, viruses, protozoa or parasites that are potentially harmful to you or your family. Always take the following precautions:

1. Never dress the carcass of a sick animal for human consumption.
2. Wear vinyl, latex or dishwashing gloves when handling dead animals.
3. Wash your hands and equipment thoroughly after handling dead animals.
4. Change your clothes before you have contact with your children, live animals or food.
5. Never handle bats as they could infect you with dangerous viruses.
6. Don't collect samples from animals which have suddenly died in areas where anthrax is known to occur.

There are a number of zoonotic (diseases transferred between animals and humans) as well as exotic diseases which, if they were to become established in Australia, could threaten human health or cause much pain and suffering to our domestic livestock. These diseases could also seriously damage Australian trade in primary produce. Who better than hunters to detect and report on exotic disease outbreaks in game or feral animals? By doing so, you will be acting in Australia's national interest.

There are also some diseases that can have serious impacts on our native wildlife. It is important for conservation that outbreaks of disease in our wildlife are promptly identified and reported so they can be contained.

If you come across an outbreak of disease in native wildlife contact the NSW state coordinator for Wildlife Health Australia on 02 6391 3688.

For more information go to www.wildlifehealthaustralia.com.au.

6.1 Handling and inspection procedures

On first picking up a firearm you must follow the procedure below:

1. Keep the muzzle pointed safely.
2. Keep your hands clear of the trigger.
3. Open the action.
4. Remove any cartridges from the breach (if present).
5. Ensure the safety catch is engaged. (If possible).
6. Remove the magazine where possible.
7. Ensure the magazine contains no ammunition.
8. Inspect the feed mechanism.
9. Inspect the chamber.
10. Having cleared the firearm, ensure there are no barrel obstructions.

This process for picking up a firearm depends upon action types. The bolt-action firearm requires removal of the bolt, after which it must be pointed safely towards a bright area so that the bore can be inspected.

Break-action shotguns are easily inspected by opening the action (by operating the top lever) and looking through the barrels.

Once cleared thoroughly, the lever or pump action rifle must have the breech opened and a small strip of white card, paper or flannel inserted, to give a view from the muzzle end.

It is natural to feel apprehensive about looking from “the wrong end” into a rifle muzzle, but without special equipment this is often the only way in which the bore can be inspected.

6.2 Hints for cleaning your firearm

Firearms need to be cleaned after use. It’s essential that you take care while cleaning your firearm and that you use the appropriate tools.

1. The chemicals used are often toxic. Read the instructions carefully!
2. Cut flannel patches to exactly the right size to prevent them getting stuck in the barrel.
3. Clean from the breech end if at all possible and take care not to damage the bore.
4. Clean centre-fires and shotguns after each use (rimfire bores less often).

5. Use oil sparingly. Don’t leave excessive oil in mechanisms or barrels as it can cause problems including unreliability, excessive pressure and damage to woodwork.
6. Take care with cleaning rods to avoid personal injury.
7. Keep tools in good condition (especially screwdriver blades) and also take care not to lose any small parts.
8. Always ensure the bore is clear of obstructions, including flannel patches or brushes after cleaning and again before using any firearms.

Include the following in your basic cleaning kit:

- gun oils (bottles or spray packs)
- degreasing solvent
- bore solvents (copper, carbon and powder)
- rags
- flannel patches
- small jars
- an old tooth brush
- basic hand tools
- cleaning rods, brushes and jags
- instruction books
- solvent proof rubber gloves
- safety glasses.



6.3 Possible health hazards when cleaning firearms

When cleaning your firearm, avoid breathing the fumes, spilling the solvents on bare skin or getting spatter into your eyes as brushes emerge from the barrels. Many cleaning products are flammable, so keep clear of sparks and naked flames. Never smoke while cleaning firearms.

When you have finished cleaning your firearm, wash your hands thoroughly. Lead, which is poisonous, is one of the major residues.

6.4 Completing your practical assessment

After you have finished the multiple-choice written assessment, you will need to pass a practical firearm handling test.

You will be given a firearm and asked to demonstrate how to correctly and safely handle a firearm, how to use a firearm and how to maintain a firearm (including an explanation of some of the possible maintenance hazards).

6.0 Practical Firearms Handling

Handling a firearm

Complete every task ensuring that the muzzle is pointing in a safe direction. You will also be required to demonstrate how to inspect or pick up a firearm safely including how to:

- open the action
- check to see if the chamber is empty.

You will be expected to know how to handle a firearm correctly and safely in a range of situations including:

- placing a firearm into a vehicle
- taking a firearm out of a vehicle
- crossing a fence with a firearm when out with a mate
- crossing a fence when alone
- securing a firearm in a gun cupboard
- loading and unloading the firearm (using drill cartridges)
- ensuring there are no barrel obstructions
- holding and aiming rifles and shotguns in field positions responding to malfunctions (for example, misfiring, stuck cartridges, bolt uncocked in rimfire)
- responding to commands from the range officer (such as “cease fire”). Your instructor will expect you to be able to safely handle a bolt-action rifle, a break-action shotgun and a lever or pump action rifle.

Using a firearm

You will be asked to demonstrate:

- how to load and unload a firearm safely and correctly
- how to fire a firearm safely and correctly in a variety of positions
- correct aiming procedure and correct trigger control
- what to do if a firearm malfunctions – in the field and at the range
- correct and safe firing procedures in field or range environments
- the procedure to follow if a live round is stuck in a firearm.

You will also be required to carry a firearm to the firing line at the range and lie it down for inspection by the range officer.

Maintaining a firearm

You will be asked to demonstrate:

- how to check a firearm is safe and remove ammunition before commencing inspection
- that a firearm is unloaded and safe before cleaning
- how to inspect a firearm to see if it is safe to use.

Further Reading 7.0

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Answers to self-tests

Answers to Section 2 self-test

1. (1) Stock (2) Bolt (3) Receiver (4) Sights (5) Muzzle (6) Barrel (7) Forend (8) Magazine (9) Trigger (10) Butt
2. (1) Bolt (2) Main Spring (3) Firing Pin (4) Cartridge (5) Barrel (6) Rifling (7) Chamber (8) Magazine (9) Floor plate (10) Trigger (11) Sear
3. (1) = b. spin; (2) = a. 50m; (3) = c. lever-action (4) = c. modified
4. The choking's for steel shot is also different; typically the modified choke tube for **lead** shot would be equivalent to full choke for **steel**, while the full choke for **lead** would be too tight for **steel** and potentially unsafe.

Answers to Section 3 self-test

1. i) = d; ii) = d; iii) = a; iv) = a.
2. a) = (1); b) = (1); c) = (2); d) = (3); e) = (1); f) = (2)
3. C

Answers to Section 4 self-test

1. = b; 2. = d; 3. = c; 4. = d; 5. = a; 6. = c;
7. a) = air rifle, category A, break-action;
b) = shotgun, category A, break-action
c) = rifle, category B, bolt-action;
d) = shotgun, category D, pump action



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