

## Install, Maintain and Repair Fencing



Learning Guide

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Student name:.....

Student number:.....

# INTRODUCTION

Welcome to *Install, Maintain and Repair Fencing*. You might need to be able to build or repair a fence when carrying out bush regeneration work, doing feral animal control work or for other land management activities. This could be when you are working for your council, doing ranger work or when managing your own country. Training should be completed on the job out in the field over an extended period of time.

This learning guide covers fences that are commonly seen in conservation and land management situations. The focus is on rural fencing rather than fences in urban situations.



## EQUIPMENT REQUIRED

To complete this training you will need the following:

1. Appropriate Personal Protective Equipment (PPE).
2. Safety gear including first aid kit and water.
3. A sketch pad, pencils, calculator and ruler for planning.
4. Fencing materials.
5. Fencing tools and equipment.

## ASSIGNMENTS

There are three assignments you will need to complete.

Some of these assignments may go towards your final assessment.

Section	Assignment	Competent (C) Not yet competent (NYC)	Date Achieved
<b>Getting Prepared</b>	Assignment 1. Project Risk Assessment		
<b>Building a Fence</b>	Assignment 2. Build a Fence		
<b>Maintaining and Repairing Fences</b>	Assignment 3. Inspect and Repair a Fence		
<b>Finishing Up</b>			

# 1

## GETTING PREPARED

### 1A. FENCING INFORMATION

Information about fencing can be found at your local hardware store or fencing supplier or through manufacturers' websites. See References on page 25 for more information.

Most local councils have fencing guidelines and you should make yourself familiar with these before you build your fence. Restrictions are often made on the height and type of fence you can build and you may need a permit. The Northern Territory Lands group has information about NT requirements including a fact sheet about fencing.

 [www.nt.gov.au/lands/building](http://www.nt.gov.au/lands/building)

### 1B. FENCING SAFELY

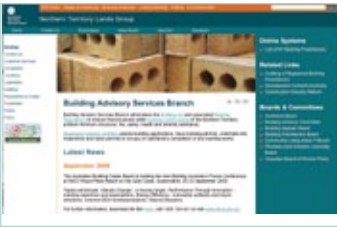
There are many hazards associated with fencing. It is important that you are aware of some of the potential dangers so that you can avoid getting injured.

#### PERSONAL SAFETY

1. Fencing requires strength and stamina and staying fit and healthy is very important. Make sure you have plenty of sleep and a good feed before starting fencing.
2. Wear good Personal Protective Equipment (PPE).
3. Strong long trousers, long sleeved shirt, thick gloves and sturdy boots will protect you from scratches and cuts from wire and splinters from wood posts.
4. A hat and sunscreen will help protect you from the sun. Proper safety glasses will prevent eye injuries from wire. Earmuffs will be necessary when working with noisy machinery or power tools.
5. Fencing materials can be very heavy – always lift heavy objects correctly to avoid injuring your back (see Resource 1).

#### SAFETY IN THE FIELD

1. Inform your trainer about where you are going and when you expect to return. Ideally you should not go out into the field with less than three people.
2. Always carry a first aid kit, maps and plenty of water for drinking. Make sure someone in your group has first aid training.
3. Make sure your vehicle is properly maintained. Check all safety equipment such as radio and mobile or satellite phone before you leave to see if they are working properly.
4. Before you set off check the weather, road and fire reports for your local area.



## TRANSPORTING FENCING GEAR SAFELY

Fencing materials are often heavy and awkward to carry around. You will probably need to carry them around in a vehicle such as a trayback ute.

1. Work out what materials, tools and equipment you need, make a list and tick them off as they are loaded into the ute.
2. Make sure all tools and equipment are securely tied down.
3. Include fuel and oil for the ute and any motorised equipment such as chainsaws and post hole diggers.
4. Drop materials off along the fence line to avoid double handling.
5. Use a suitable vehicle and drive very carefully when on uneven surfaces.

## SAFETY AT THE FENCING SITE

1. Avoid cuts and eye injuries from high tension and old rusty wire (high tension wire is very 'springy' when cut and may cause nasty injuries) - control both sides of a wire before cutting it and avoid overstraining wire.
2. Keep the site tidy to avoid people tripping over and hurting themselves.
3. Be careful to avoid snake and spider bites when working in long grass and around stored fencing materials.
4. Avoid poisoning and skin irritations from posts treated with chemicals (such as copper chrome arsenate or creosote) – wear good PPE and wear a dust mask when cutting.
5. Prevent electrocution when working near powerlines or underground cables – check for underground services first.
6. Mark holes that have been dug so people don't fall in them or trip over.
7. Avoid injury to children and livestock. They all need to be kept away from the work site.
8. Have a method of communicating with workers at the other end of the fence (e.g. walkie talkies).

## SAFE USE OF TOOLS AND EQUIPMENT

1. Keep safe distances away from other workers around tools and equipment.
2. Learn how to maintain and use hand tools correctly to avoid injury – always use the right tool for the job.
3. Extreme caution should be taken with motorised machinery such as post hole diggers and chainsaws. Only properly trained people should use motorised machinery and correct PPE must be worn.



### NOTE

*Learn handy tips and techniques from experienced workers.*

# 1 – GETTING PREPARED

Before you begin, use this checklist to confirm you have followed good safety procedures and have all the right resources.

## SAFETY CHECKLIST ACTIVITY



Long trousers, shirt and boots		
Hat and gloves		
Sunscreen, insect repellent and sunglasses		
Safety glasses		
Ear muffs		
Safety vests		
Water		
First aid kit		
Notified others and have phone/2 way radio		
Checked weather, road and fire reports		
Permits (if required) and maps		

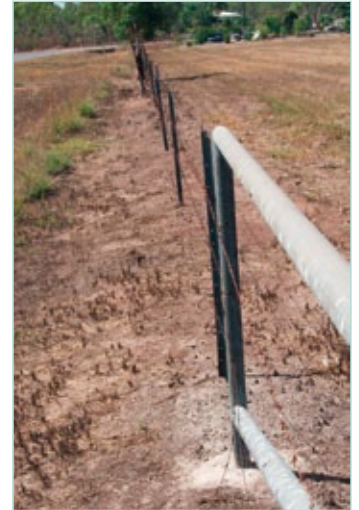
## REMEMBER

*Most fencing injuries are the result of rushing the job and taking short cuts. Don't try and save time by taking short cuts. Work slowly and methodically, especially around machinery.*

## 1C. WHY FENCE?

Fences are used to control the movement of animals, people and vehicles:

- **Boundaries:** A fence can indicate a property boundary. Boundary fences should always be constructed along a legal surveyed line. The cost of erecting and maintaining a boundary fence is usually shared between the property owners.
- **Livestock control:** Landholders have a responsibility to contain livestock so they do not stray onto neighbouring properties or wander onto roadways. Fences help manage livestock and prevent crops being eaten or trampled by livestock. They are also useful in restricting the movement of feral animals.
- **Land management:** Fences are very important for conservation and land management work. They are used to protect native vegetation from feral animals and livestock, and to stop people driving their cars all over the place. Fences can restrict animal and people access to fragile river habitats, rehabilitated areas and other important habitats.
- **Preventing access:** Fences can be used to prevent access by people to certain areas such as the whole property, buildings, paddocks or machinery and equipment. These may be for security or safety reasons.



## 1D. TYPES OF FENCE

There are many types of fencing for many different purposes. It is important to carefully select the right fence for the job. Some fence types used in land management work include:

- **Plain wire fence:** These fences are common in rural areas and are cheap, especially if you can use local timber for posts. The number of wire strands and height depend on the reason for the fence. The steel droppers are normally suspended in the air, not driven into the ground – sometimes these fences are called ‘suspension fences’.
- **Barbed wire fence:** Barbed wire can help in containing animals such as cattle. Sometimes barbed wire is used as well as plain wire in a fence. There is a higher risk of animals getting injured in barbed wire fences.
- **Woven wire fence:** Some animals such as pigs and dogs will not be contained by barbed wire alone. Hinged joint and ringlock are types of woven wire with large openings. They are often used in combination with barbed wire.
- **Post and rail:** Combinations of wooden posts and rails with wire strands makes this an effective fence for stock, especially horses. When using local timber this form of fence becomes cost effective.

