

Wildlife Friendly Fencing and Netting

Fencing is an integral part of land management. Fences delineate legal boundaries, restrict stock movements and often provide access routes for land managers. This Note identifies material and design options that allow for the movement of wildlife and reduce the potential for fence related wildlife injuries and deaths.

Unfortunately, although fencing is an integral part of land management, it can have a negative impact on wildlife. Fences can restrict the movement of native wildlife and can disrupt the feeding, migration, breeding and social patterns of wild animals, as well as cause deaths. There are similar problems associated with the use of netting over fruit crops.

Fencing material

Barbed wire fencing is very popular, with an estimated 10 million kilometres in existence throughout Australia. Barbed wire fences are generally preferred over plain wire as large stock are capable of simply pushing through plain wire. However, it is estimated that tens to hundreds of thousands of wildlife die every year due to entanglement on barbed wire. More than 70 Australian species of wildlife have been identified as occasional or regular victims of barbed wire fences. Most entanglements occur on the top one or two strands of a barbed wire fence.

Sadly, most animals that become entangled die. Nocturnal animals, such as bats, gliders and owls are especially at risk. Barbed wire is now recognised as a threat in the recovery of a number of species including the Yellow-Bellied Glider, Mahogany Glider, Spectacled Flying-Fox and Grey-Headed Flying-Fox.

Any barbed wire presents a risk of entanglement; however, higher risks exist:

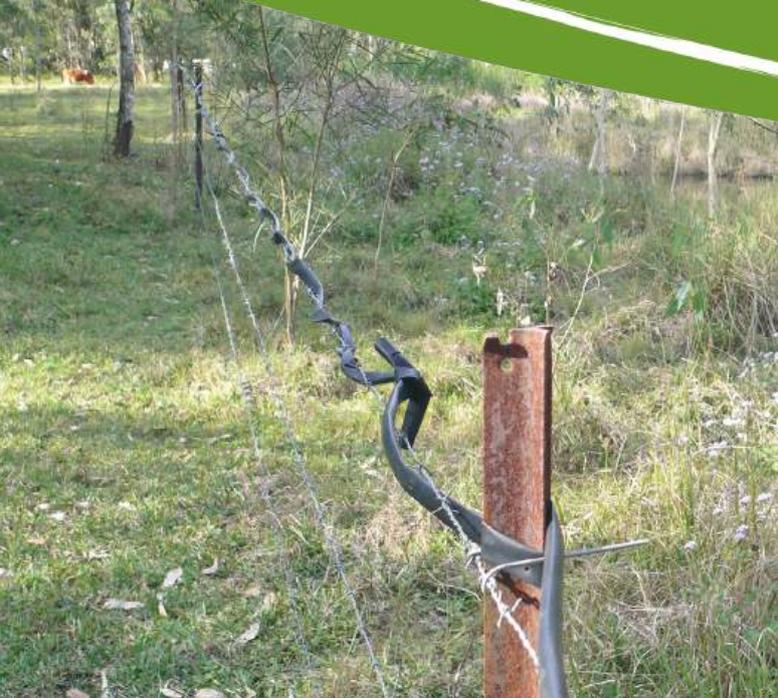
1. Where fences are:
 - Newly constructed.
 - On ridgelines.
 - Crossing or surrounding waterways and dams.
 - Near feed trees.
 - Higher than surrounding vegetation.
2. When weather conditions are windy.
3. When visibility is poor (such as night time, especially when there is no moon).
4. For very old and very young animals.

There are alternatives to barbed wire fencing and modifications that can be made to existing fences to help reduce the likelihood of wildlife entanglement whilst not restricting the movement of wildlife. Such fences are referred to as 'wildlife friendly'. Given the vast diversity in the size, shape and movements of wildlife, fences need to be designed to suit local wildlife species and conditions. A fence that assists the movement of one species may not be appropriate for others.



Many animals can become entangled in barbed wire especially around dams, fruiting/flowering trees and on windy ridgelines. These animals were rescued by trained wildlife carers. Shown above is a Sugar Glider (photo by Redlands 24hr Wildlife Rescue), and right, a Little Red Flying-fox (photo by Susanne Nelles, Bat Conservation and Rescue Qld).





Wrapping old irrigation polypipe around the top strand of a barbed wire fence can help reduce wildlife entanglements, especially in high risk areas such as around this dam.



A simple hardwood post and three strand plain wire fence is friendly to both wildlife and domestic animals.

Minimising the risk to wildlife

There are a number of ways you can reduce the risk of wildlife becoming entangled on your barbed wire fence. These include removal, modification with alternative materials, making the fence more visible and easier to cross, planting vegetation, and modifying it to include suitable gaps between strands.

Removal. If you do not run stock, you may not require fences. Instead, consider using vegetation to make your property more private. A combination of native trees, shrubs and ground covers can screen your property while providing habitat values and allowing wildlife movement.

Modification. If you require a wire fence, replace the top strand of barbed wire with plain or borderline (white plastic coated) wire. This will significantly reduce the risk of entanglement. Where barbed wire is needed to contain stock, you can cover the top strand with polypipe in high risk areas. This is especially beneficial in wildlife rich areas, such as ridgelines, around dams, along waterways and near wildlife feed trees or roosting sites. Electric fencing can be an effective alternative for stock containment but requires more regular maintenance.

Improve visibility. Many animals have difficulty seeing wire fences. You can improve visibility by stringing electric fence tape above the top strand of barbed wire. Alternatively, you can attach reflective materials such as metal tags (shown below) or used CDs along the top wire.

Planting vegetation. You can assist the movement of wildlife that live in trees (such as Koalas and possums) by planting native trees and shrubs along both sides of fence lines. This allows wildlife quick access and cover when moving from the vegetation on one side to the other. Poles can act in a similar way. You can place a pole on an angle against the inside of a fence to allow for a quick escape route. A pole placed between two trees on either side of a fence creates a natural bridge for wildlife. Keep in mind that if you do have barbed wire fencing, do not plant wildlife-attracting trees or shrubs nearby. This will help avoid entanglement by birds and flying foxes that seek out nectar and/or fruit.

Fence spacing. Fences can be modified to allow enough space underneath the lowest fence strand, which will assist the movement of ground-living wildlife such as kangaroos, wallabies and bettongs. A 50 cm gap between the ground and lowest fence strand is recommended.

Reflective metal tags can be attached to barbed wire to minimise wildlife entanglements.



What about netting?

Netting of fruit trees and other horticultural crops is used to prevent wildlife such as birds and bats from eating or damaging crops. Some animals - including bats, reptiles (e.g. snakes and lizards), birds, and even possums - may become entangled and die in netting. While all types of netting have the potential to kill wildlife if not erected properly, the most serious is monofilament netting (or 'bird netting'). This fine, nylon netting (which is not actually designed for use in trees) is readily available, and is so fine that it is invisible to nocturnal wildlife. Unfortunately, nets continue to be a threat to wildlife even after they lose their usefulness in protecting fruit. It is important to remove any old netting from your property.

There are less harmful alternatives available, including nets of white knitted materials, which is more visible to wildlife. This netting must be pulled tight over a frame surrounding the tree or trees, so that wildlife 'bounce' off it rather than getting entangled. It is also important to check your netting daily for entangled wildlife.



A top strand of plain wire or borderline (as shown) will help reduce wildlife entanglements and is strongly recommended in high risk sites such as around dams, on flight paths and along ridgelines. Borderline is a high-tension nylon wire that is both strong and highly visible. Photo by Sylvia Hood.

Teepee Method
Illustrations by Louise Saunders

Frame Method

Teepee and frame method of netting fruit trees with knitted mesh will keep out birds, possums and flying foxes. Do not use thin nylon (monofilament) netting in which animals can easily become entangled.

The wildlife friendly fencing project

Many people, including wildlife carers and farmers, are finding local solutions to wildlife entanglement. The Wildlife Friendly Fencing project aims to raise awareness of the impact of barbed wire and netting on Australian wildlife and develop national guidelines for good practice. For more information visit the project website www.wildlifefriendlyfencing.com or contact the Project Coordinator on 07 4091 2683.

What you can do

- ✓ Design your fence to allow wildlife to pass easily.
- ✓ Use plain wire for the top two strands of the fence.
- ✓ Keep a 50 cm gap between ground level and the first rail or strand.
- ✓ Keep 30 cm gaps between the rails or remaining strands.
- ✓ Use box wire mesh (with squares of no less than 15 cm). Leave a 30-50 cm gap between the ground level and fence bottom, and ensure the fence is not more than 1.2 metres high. A capping rail along the top also allows for easy movement.
- ✓ If you have to use barbed wire fencing, attach reflective materials such as metal tags or used CDs along the top wire, or wrap the top strand with used polypipe or similar material.
- ✓ Consider planting vegetation into, or adjacent, to your fence.



A Barn Owl caught on a barbed wire fence. Photo by Tim Low.



A Koala climbing through a fence at Mount Cotton demonstrates the difficulties wildlife face with some fencing. Photos by Heather Preston.

Land for Wildlife is a voluntary program that encourages and assists landholders to provide habitat for wildlife on their properties. For more information about Land for Wildlife South East Queensland, or to download *Land for Wildlife Notes* free of charge, visit www.lfwseq.com.au

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