



## Fencing for fox control

**Introduction:** Barrier or exclusion fencing is a non-lethal method commonly used to prevent fox attacks on domestic livestock and threatened wildlife species. Although fences are commonly used to protect livestock (eg poultry) from fox predation on a small backyard scale, they have only recently been used on a larger scale in Australia. This has mainly been in response to the need to protect threatened wildlife species and the availability of electric fencing materials.

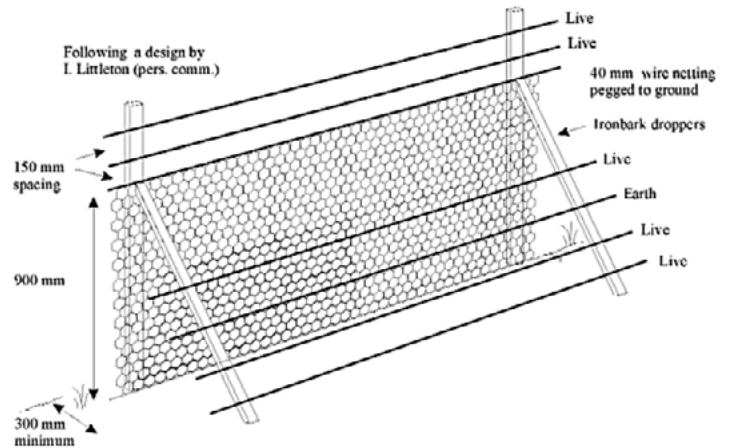
Fencing can be effective, but the barrier is not absolute. A monitoring system and a management plan need to be in place to rapidly detect and control any breaches. Surplus killing (where they kill more than they can eat) by foxes that manage to breach a fence protecting endangered species can be catastrophic. Additional fox control in a buffer zone outside the enclosure can make fencing much more effective.

“Fencing can be effective, but the barrier is not absolute”

**Design features:** There are a range of fence designs that have been developed to exclude foxes. Choosing the best design depends on:

- which species are to be protected
- the area to be covered
- whether other pests are also to be excluded (eg rabbits)
- the presence of non-target animals
- maintenance resources and budget.

Features of the local environment also need to be considered, such as the topography, substrate (soil, rock etc), vegetation density, climatic conditions and geographical location.



*A standard-height fence with electric wires added for deterrence. This is a relatively cheap fence to construct and maintain, although it does not provide a complete barrier to all foxes. It is best used in areas that can tolerate occasional fox incursions<sup>1,2</sup>.*

Most fence designs are composites containing wire netting and electric wires. Wire netting (40–50 mm diameter hexagonal) stops foxes pushing through the base of the fence (30 mm diameter is needed if rabbits are to be excluded as well). Electric wires are used as added deterrents, although they are generally ineffective by themselves. Placement and spacing of wires can vary (see diagrams).

Foxes are excellent diggers, so the wire netting should be either buried at least 450 mm underground or attached to a concrete or wooden floor (in the case of a small pen). Alternatively, an apron of netting angled outwards across the ground for 300–600 mm at the base of the fence is also effective. These aprons need to be secured with weights or pegs in areas of soft substrate or water courses.

Foxes are also excellent jumpers and climbers. They can jump a standard 900 mm fence; so many designs double this height (1800 mm) using more netting or various spacings of electric wires. However, this naturally increases the cost of the fence. Standard-height fences are often used when the area can tolerate occasional fox incursions and the cost needs to be minimised.

An outward-facing overhang can also prevent animals scaling the fence. These overhangs can be floppy or rigid



Image: Chris Lane

and incorporate electric wires as added deterrents. In smaller pens, a complete wire netting roof is also an option.

Posts and corners are often targeted by foxes and should be given special consideration. Steel posts are more difficult than timber ones for an animal to climb. Extra netting should be added at corners to discourage climbing. Weak points in netting and joins should be strengthened to prevent foxes from forcing their way through. Wire needs to be thicker than 0.9 mm, as foxes can chew through this gauge.

### Further information:

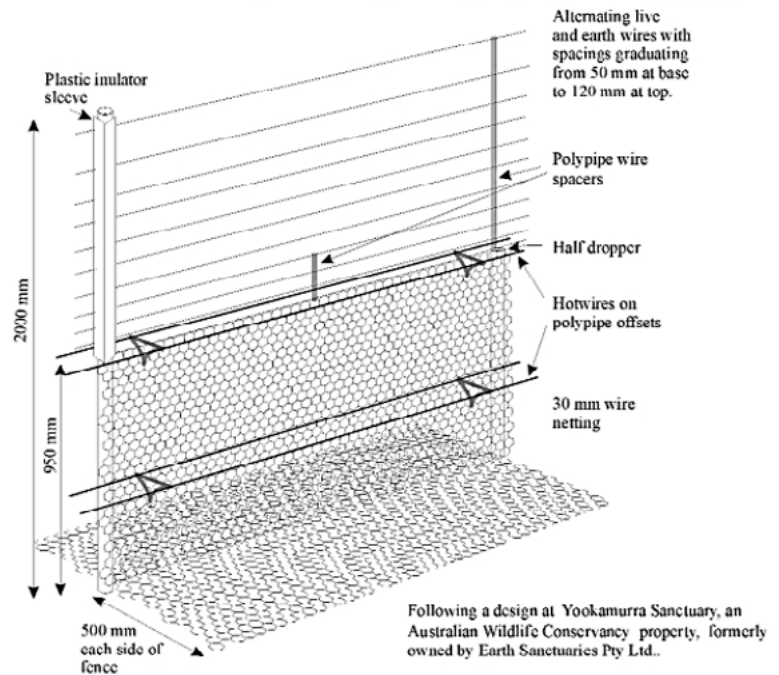
Long K and Robley A (2004). [Cost Effective Feral Animal Exclusion Fencing for Areas of High Conservation Value in Australia Part 1](#). Natural Heritage Trust, Canberra.

Long K and Robley A (2004). [Cost Effective Feral Animal Exclusion Fencing for Areas of High Conservation Value in Australia Part 2: Catalogue of Fence Designs](#). Natural Heritage Trust, Canberra.

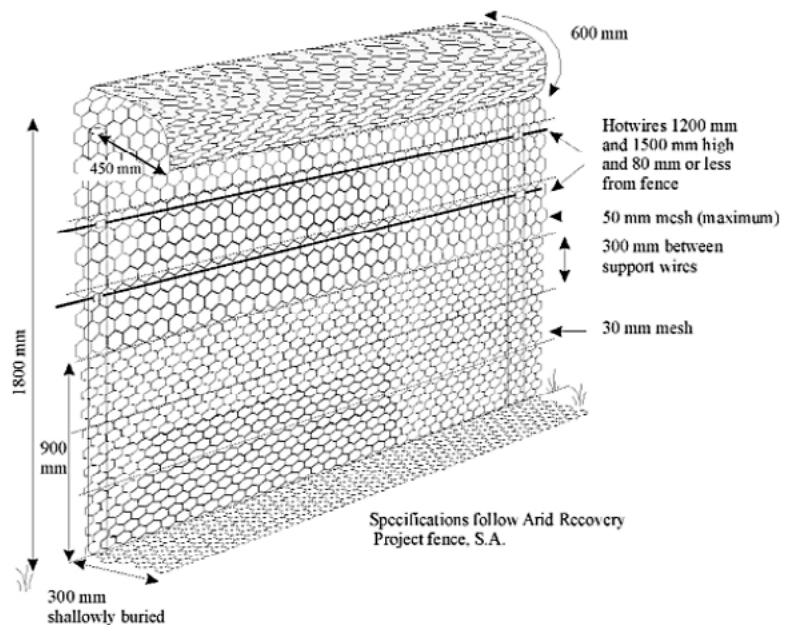
Coman BJ and McCutchan J (1994). *Predator Exclusion Fencing for Wildlife Management in Australia*. Unpublished report Australian Nature Conservation Agency, Canberra.

Moseby KE and Read JL (2006). The efficacy of feral cat, fox and rabbit exclusion fence designs for threatened species protection. *Biological Conservation* 127:429-437.

Robley A, Purdey D, Johnston M, Lindeman M and Busana F (2006). [Experimental Trials to Determine Effective Feral Cat and Fox Exclusion Fence Designs](#). Arthur Rylah Institute for Environmental Research, Department of Sustainability and Environment, Melbourne.



*A fence of mid-range price that increases the height of a standard fence by using closely spaced electric wires to prevent foxes climbing and jumping. The mesh apron prevents digging, and the smaller size mesh at the bottom prevents access by rabbits<sup>1,2</sup>.*



*A relatively expensive fence, designed to protect native wildlife. The extra height and use of wire overhang make it virtually impossible for foxes (and cats) to gain access by jumping or climbing. The mesh apron prevents digging, and the smaller size mesh at the bottom prevents access by rabbits<sup>1,2</sup>.*