



How to fence your riparian zone and what to look out for

Fencing can be an effective management tool to protect waterways and native fish as well as exclude or control domestic stock and feral animals from the river channel and adjacent riparian areas or other wetland systems.

A variety of fencing materials and methods can be used depending on the target animals for exclusion, the scale of the site, adjacent land uses and native animal access requirements.

Following are some things to consider if you are thinking of using fencing to enhance management of animals in and adjacent to waterways or other wetlands.

What type of fence should I choose?

Fencing on rural properties differs greatly from that in residential or commercial areas. Farmers and people who live on acreage have unique needs that are not met by fencing ordinarily seen in more urban settings.

While the homestead may have regular fencing or a safety fence around the pool, the property itself is likely to have a variety of fencing installations and could include a combination of plain wire, post and rail, barbed wire, electric or mesh fencing.

So how do you decide which fencing combination is right for you? The most suitable type of fencing for your purpose can be determined by asking yourself the following questions.

- **What is the purpose of the fence?** Do you want it to keep stock in? Or are you trying to keep predators out?
- **What are the needs of the native animals?** Do they need to be able to get to water? Can they climb? Are they big and therefore not able to fit through small mesh squares?
- **How long do you expect the fence to be there?** No point in spending a lot of money if you only want the fence temporarily. Alternatively, if you plan on the fence being there for a long time, choosing high quality material and contractors with a good reputation will save you repairs in the long term.
- **What is the local topography like?** Are there slopes? Is the soil problematic? Is there endangered vegetation I need to consider? Are there gully crossings?
- **What skills and resources are needed to construct the fence?**

Fence designs and materials to keep ferals out or stock in?

Cattle are typically managed with three or four strand fences. For these fences, barbed wire is typically used, but wildlife-friendly alternatives are increasingly being considered. These options may include plain wire on the top strand/s or visible marker panels on the top wires, particularly in areas with a high concentration of native wildlife movement.

Sheep, goats, and pigs require more wire strands or mesh fencing that extends at least 900mm above the ground. Mesh fencing is more expensive to install and may need to be maintained more frequently due to flood debris or other damage.

Dogs and macropods may need additional securing of fences or aprons at the base, as well as increased fencing height.

For long straight reaches, heavier gauge wire and larger posts can allow for higher tensions and wider post spacing. Lighter gauge materials may be used in more 'windy' fences, such as those near upland streams, to reduce material and labour costs.



What else should I consider?

Farm fencing is a significant investment for land managers and can last 20 years or more when properly managed and maintained. Fencing is never set and forget infrastructure; it requires constant checking, repairs and maintenance both on the fence itself and the surrounding landscape. To get the maximum benefit from fencing you should also consider:

Setting fencing back from waterways

Fence placement should take into account the likelihood and impact of inundation, as well as stock, feral, and native animal considerations. Fences should generally be placed well back from the top of the stream bank. This enables the retention or regeneration of multi-tiered vegetation, which improves bank stability and instream habitat function. It also allows for the continuous movement of stream banks as a result of natural or other processes. Riparian zones are not necessarily 'lost' grazing production areas because carefully managed riparian grazing can provide drought fodder and weed management benefits, as well as bank stability and improved habitat function.

Fencing for floods

Fencing in flood-prone areas usually requires additional considerations. The fence's longevity and function will be preserved if the construction is strong enough to withstand flood inundation and the force of water and debris. Fences can also be designed to 'go with the flow'. Hanging suspension fences, drop fences, and laydown fences are all options for this approach. Fencing in flood-prone areas should also take into account the impact of the fence on adjacent land, animals, and infrastructure. Diversion or concentration of flows due to fencing increases the risk of erosion, which should be minimised or managed during the fence's construction and operational life.

What about my legal obligations?

Consideration should be given during construction and maintenance of fencing and associated water infrastructure to the possibility of works requiring permits under government regulations. Queensland-specific regulations will include, but are not limited to:

- The Vegetation Management Act 1999, together with the Planning Act 2016, which regulates the clearing of native vegetation in Queensland.
- The Aboriginal Cultural Heritage Act 2003 and the Torres Strait Islander Cultural Heritage Act 2003. Land managers are required to take all reasonable and practicable measures to avoid harming Aboriginal or Torres Strait Islander cultural heritage.
- The Work Health and Safety Act 2011 to secure the health and safety of workers and visitors to works sites.

What are the production and environmental benefits of fencing?

A fence creates a physical barrier and regulates animal movement on and around your farm. Fencing also improves the health and diversity of riparian vegetation which helps to moderate air and water temperatures, reduce stream bank erosion and maintain stable stream function allowing native fish to thrive.

What are the implications to production and the environment from fencing?

Off-stream watering and riparian fencing can help improve the environmental and productive function of streams and adjacent land areas.

Fencing and related works, on the other hand, should be done in conjunction with forage budgeting, total grazing pressure management, coordinated weed and pest management, and other industry best practises.

References

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The Australian Government funded Fencing Northern Basin Riverbanks Project (Qld) is a \$7.5 million dollar investment to support works to benefit farmers and fish. Southern Queensland Landscapes with support from the Queensland Government is working with local communities, Aboriginal organisations and riparian land managers to deliver the project before June 2023.

