

**Submission
No 56**

**PREVENTION OF CRUELTY TO ANIMALS AMENDMENT (VIRTUAL STOCK
FENCING) BILL 2024**

Organisation: Sydney School of Veterinary Science, University of Sydney
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Dear My Roy Butler MP, Committee Chair

Thank you for the invitation to make a submission to the inquiry into the Prevention of Cruelty to Animals Amendment (Virtual Stock Fencing) Bill 2024. The Sydney School of Veterinary Science supports the proposed Bill, to permit the use of virtual stock fencing devices for the purposes of confining, tracking and monitoring stock animals.

This support results from reviewing available literature in addition to research that has been performed within the University of Sydney. The inquiry has requested comments on the impacts to animal welfare, biosecurity and the community.

Animal welfare

Overall, virtual fencing systems offer a range of benefits to animal welfare, which are outlined below. However, there are some potential negative impacts to animal welfare that are important to mitigate, and we have suggested ways in which the Bill might address this.

Positive animal welfare impacts:

- Freedom of movement: allows animals to roam within designated areas without physical barriers, giving them more freedom of movement compared to being confined within traditional fences.
- Reduced risk of injury: eliminates the risk of animals getting entangled in or injured by physical fences, which can be common with traditional fencing materials.
- Improved grazing management: enables rotational grazing practices.
- Improved environmental impact: by enabling more controlled grazing patterns, virtual fencing can help prevent overgrazing and soil erosion, leading to improved environmental conditions for both livestock and other wildlife.
- Behavioural conditioning: properly implemented virtual fencing systems can help train animals to respect boundaries and respond to cues, which can enhance their ability to cooperate with management practices and reduce stress associated with handling.
- Less impact on wildlife: doesn't create barriers and injury risks to wildlife.

Potential negative animal welfare impacts:

- Potential for anxiety and discomfort: the use of electrical stimulus collars in virtual fencing systems can risk causing anxiety and discomfort to animals, particularly during the training phase or if the electric stimulus is delivered too frequently or at high intensities. However there is little evidence that this is a significant concern.
- Learning curve: animals may require time to adapt to virtual fencing systems and learn the boundaries, which can initially cause confusion or frustration and may result in unintended boundary crossings.

- Risk of habituation: some animals may become habituated to the warning signals or electric stimulus delivered by virtual fencing collars, leading to decreased effectiveness over time and potentially requiring retraining or adjustments to the system.
- Technology reliability: malfunctions or inaccuracies in GPS tracking or communication systems can result in animals receiving incorrect electrical stimuli.

Areas that the Bill might address to mitigate potential negative welfare impacts:

- Regulation of virtual fencing technology: The Bill may seek to establish regulations and standards for the use of virtual stock fencing systems. This could include requirements for the design, installation, and operation of virtual fencing systems to ensure animal welfare and safety.
- Animal Welfare Standards: The Bill may include provisions to safeguard the welfare of animals subjected to virtual fencing, such as specifying maximum electrical stimulus levels, requiring regular monitoring of animal behaviour, and mandating training programs for livestock and farmers.
- Training and Certification: The Bill might require farmers and livestock managers to undergo training and certification in the proper use of virtual fencing technology. This could include instruction on system operation, animal behaviour, and troubleshooting common issues.
- Monitoring and Enforcement: The Bill may outline mechanisms for monitoring compliance with virtual fencing regulations and enforcing penalties for violations. This could involve inspections, reporting requirements, and penalties for non-compliance with welfare standards.
- Research and Development: The bill may allocate funding for research into the development of improved virtual fencing technologies and methods that minimize any anxiety and discomfort for animals while still effectively containing them within designated areas.

Biosecurity concerns

There are some potential biosecurity concerns that we have outlined below, along with suggestions for how these may be mitigated.

- Cross-contamination: potential to facilitate the spread of diseases or parasites between different groups of animals. This risk may be heightened if animals from different herds or flocks share grazing areas or if wildlife interacts with fenced-in livestock.
- Shared equipment: Virtual fencing systems often rely on shared equipment such as GPS collars or control units. If these devices are not properly cleaned and disinfected between uses, they could serve as vectors for the transmission of pathogens between animals or farms.
- Technology vulnerabilities: GPS signals and wireless communication could be vulnerable to hacking or cyber-attacks. Unauthorized access to or manipulation of the virtual fencing system could compromise biosecurity by allowing intruders to bypass boundaries or disrupt livestock management practices.
- Power outages: electric shock collars used in virtual fencing systems require power to function. In the event of a power outage or equipment failure, animals may be left without effective containment, increasing the risk of disease transmission or escape.
- Data security: Virtual fencing systems often collect and store data related to animal movements, behaviour, and system performance. If this data is not adequately protected, it could be accessed by unauthorized parties and used to compromise biosecurity or invade privacy.
- Inadequate training: Improper training of animals or farm personnel in the use of virtual fencing systems could lead to breaches in biosecurity protocols. For example, if animals are not trained to respond appropriately to boundary warnings, they may inadvertently cross into restricted areas where they could be exposed to disease or pests.

Areas that the Bill might address to mitigate biosecurity concerns:

To address these biosecurity concerns, it's essential for livestock producers to implement appropriate protocols and best practices when using virtual fencing systems. This includes regular cleaning and disinfection of

equipment, securing technology against unauthorized access, ensuring reliable power sources, and providing comprehensive training to both animals and personnel. Additionally, ongoing monitoring and surveillance can help detect and mitigate any biosecurity risks associated with virtual fencing.

Community impacts

There are both potential positive and negative community impacts, which we have outlined below, followed with suggestion for how negative impacts may be mitigated.

Positive community impacts:

- Reduced traffic hazards: no obstruction to drivers visibility.
- Prevention of animal-related incidents: reduces the likelihood of animal collisions with vehicles.
- Enhanced emergency response: in the event of a natural disaster or emergency situation, virtual fencing can facilitate the rapid containment and evacuation of livestock, allowing emergency responders to access affected areas more safely and efficiently.
- Improved public access: may enable greater access to public lands for recreational activities such as hiking and biking.

Negative community impacts:

- Inadequate containment: If virtual fencing systems fail to effectively contain livestock, there is a risk of animals escaping and posing safety hazards to the community. Stray livestock can cause traffic accidents, damage property, or pose a threat to public safety.
- Security concerns: Virtual fencing systems that rely on wireless communication or GPS technology may be susceptible to hacking or interference, potentially compromising the security of livestock and allowing unauthorized access to properties.
- Misinterpretation of signals: Members of the community may not be familiar with virtual fencing technology and may misinterpret warning signals or boundary markings, leading to confusion or inadvertent trespassing onto private property.
- Animal welfare concerns: community members may object to the use of aversive stimuli.
- Legal liability: In the event of an incident involving escaped livestock or property damage caused by virtual fencing malfunctions, landowners or livestock managers may face legal liability if they are found to be negligent in maintaining or operating the fencing system.

Areas that the Bill might address to mitigate biosecurity concerns:

Public Awareness and Education: The Bill might include provisions for public outreach and education campaigns to raise awareness about virtual fencing technology, its benefits, and its potential impact on animal welfare. This could involve collaboration with agricultural extension services, industry organizations, and animal welfare groups.

Yours sincerely

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