

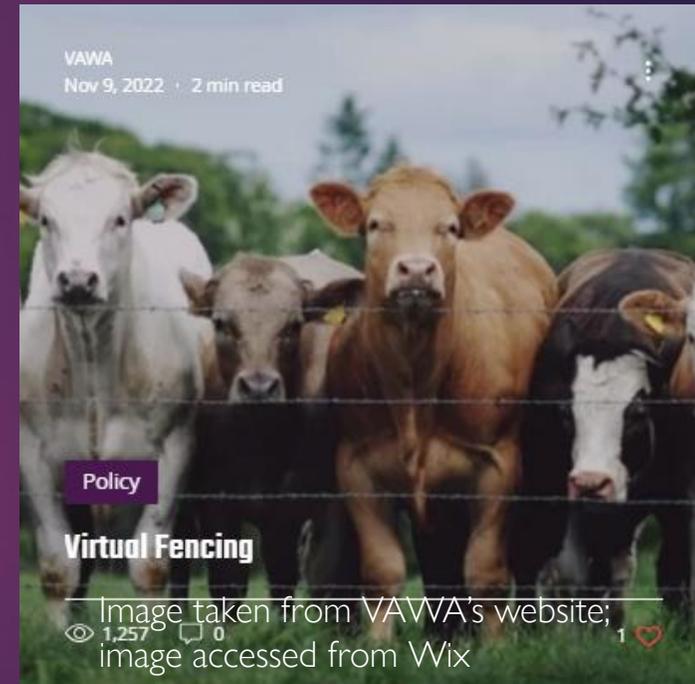


Veterinarians for Animal Welfare Aotearoa

HELEN BEATTIE | VETERINARIAN  
MANAGING DIRECTOR | VAWA

# Code of Ethical Conduct for Virtual Fencing Technology

1. The Code – what, who, why, how, what?
2. Environmental scan
3. Key points and concerns
4. Key recommendation
5. Good, bad and ugly



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# Virtual Fencing (VF)

*'...uses global positioning technologies (ie GPS) to send audible and electrical cues to livestock that create invisible boundaries to replace physical fencing.'*

*'Virtual fencing refers to both the containment of animals within a defined area, and the herding of animals from one location to another. Both containment and herding uses a combination of hardware, usually a collar fitted to each animal, and software, usually accessed by a farmer using their smartphone or computer to connect to a system and the collars.'*



# Who?

## VAWA

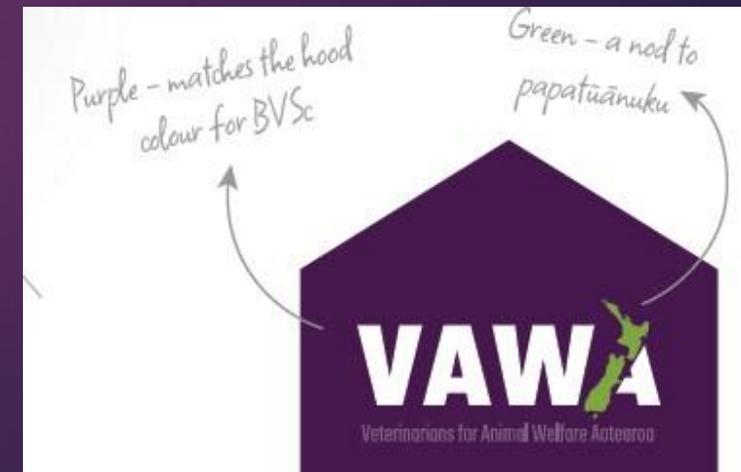
- Independent, animal welfare advocacy membership-based charity
- No vested interests
- One Health | One Welfare | Te Ao Māori lens

### ➤ **Mandi McLeod: farmer, Nuffield Scholar, M. Phil candidate (low stress stock handling)**

- Dairy cow animal welfare auditor and standards developer
- Dairy cattle welfare and behaviour consultant

### ➤ **Helen Beattie: veterinarian; managing director, VAWA**

- Special interest in animal welfare
- Third year law student
- Policy nerd



# What?

1. Code with animal welfare safeguarding standards
2. Background information (dossier)
3. Aims include:
  - a) Setting out and/or addressing concerns raised by animal welfare experts and researchers, manufacturers, farmers and the public.
  - b) Developing a starting point for comprehensive regulation
    - i. More prescriptive and wider scope (!) than Australian guidance.
    - ii. Animal welfare focused; not electrical safety.
  - c) Basis for self-regulation (more later).



# Why & how?

## VAWA's position and concerns

- No specific regulation for use of VF nor use of electricity in devices
- Unsubstantiated claims – welfare and efficiencies
- Evidence that some manufacturers had not considered welfare at all, had no knowledge of welfare and no animal welfare advisors
- THIS WAS ALL QUITE ALARMING!



# Environment Scan | Electrical Regulation of Devices

1. International Electrotechnical Commission (IEC)
2. National Standards
  - Member countries adopt and publish these safety standards including any national deviations for use in their country.
3. Regulatory Compliance Mark (RCM) & Risk Classification System
  - AS/NZS 4417 – plays crucial role in regulating electrical appliances
  - Specifies the requirements for the Regulatory Compliance Mark (RCM) and its placement on electrical and electronic equipment and establishes a framework for risk classification



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# Environment Scan | Legality in Aus/NZ (February 2026)



Australia	
Western Australia	Legal
Northern Territories	Legal
New South Wales	Legal
Victoria	Legal – limits?
Tasmania	Legal
South Australia	Coming soon!
ACT	Illegal

# Key points and concerns

## 1. Research and knowledge gaps

### a) Animal welfare

- i. Social node disruption (i.e., not being able to hang out with your mates!).
- ii. Long term welfare including audio impacts.
- iii. Physical impacts (fitting and injuries).
- iv. Predictability & control – connectivity drop outs.

*'The cows also reacted to herd mates receiving electric impulses showing that they are influenced by their herd mates.'*

*- Aasher et al (2022)*

### b) Farm systems

- i. Pasture efficiency
- ii. Improved production



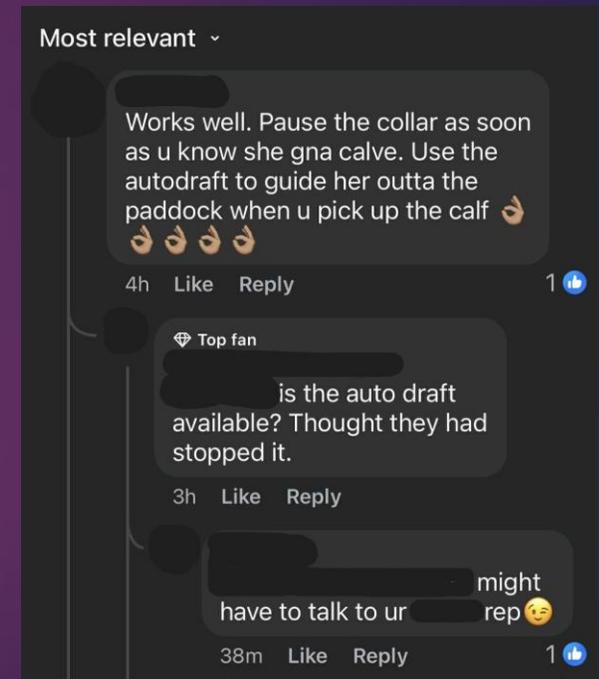
# Key points and concerns

## 2. Extension beyond researched application

- a) Research vs reality
- b) Dairy to beef (and vice versa)
- c) *Bos taurus* v *Bos indicus*
- d) Other species
- e) Intensive – extensive – rangeland

## 3. No regulation, nor limits on audio cues, vibration, nor shocks

- a) Inappropriate use – drafting and change in ‘plans’
- b) Risks re newcomers to the market
- c) Imported device quality (think e-scooters)



Screenshot taken from Facebook (2025)

# Key points and concerns

## 4. Unsubstantiated claims

### a) Improved animal welfare

- i. Due to poor stockpersonship? Harried? Low skills?
- ii. Due to health data capture? Separate claim to VFT

Claims need to differentiate any VFT animal welfare benefits from health data capture and/or poor stockpersonship

### b) Green house gases, carbon – locally or globally??

- i. Claims now used to support better loan rates and mortgages – can this be validated for international auditing? – where does this leave farmers?
- ii. One industry funded, non-peer reviewed opinion on this in the New Zealand context

# Key points and concerns

5. Farmer to farmer training / quasi-consultancy
  - a) NSW and Victoria regulations
6. Use of non-disclosure agreements (NDAs) – general and specific
  - a) Prevent issues being identified, shared and resolved with least impact on cattle
  - b) Social licence to operate = trust and transparency – NDAs do not help with this

**For example:**

*The Customer must not make any public statements including statement and comments via news media and social media, disparaging the services, ...*

# Key points and concerns

## 7. Other – the learning curve

- a) Use of artificial intelligence – covered earlier
- b) Connectivity – conflicting reports
- c) Cost – per Kellogg reports
- d) Injuries and entanglement – coming up



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# Key points and concerns

## Note on collar fit:

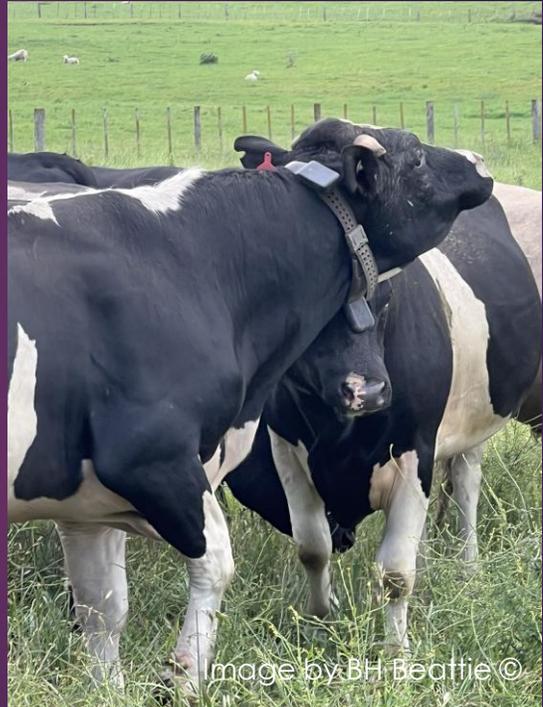
- Strip electrodes of chains
  - Growth, and/or weight gain
  - Slippage / loss
  - Faults / entrapment / entanglement
  - Injuries (ulcers; callouses; oedematous swellings)
  - Mismatching
- How does this work in extensive rangeland situations?



Image by BH Beattie ©



# Key points and concerns



## A key safeguarding standard

### Virtual Fencing Manufacturers' Association ('VFMA')

In the absence of animal welfare focused regulation for the use of VFT, establishing a Virtual Fencing Manufacturer's Association ('VFMA') is necessary to establish agreed, industry-wide safety parameters (i.e., self-regulation).

Good	Bad	Ugly
Support from industry partners and information and openness of farmers	Dismissive / not engaged manufacturers	Hostility or failure to engage entirely
Lots more research (including where there was none) and reports; questions being asked	Welfare washing (VF v data; 'good for welfare')	Dialling up the shock on demand
Animal welfare matters – at least everyone says it does!	Green washing (Life Cycle Analysis is needed)	Injuries, entanglement and entrapment
Australia's regulation	Lack of transparency <ul style="list-style-type: none"> <li>• Electricity</li> <li>• AI</li> <li>• Contingency planning</li> </ul>	Extension without research; and/or on farm trialling without ethical oversight
Improvements over time in system design (anecdotal)		Poor body condition score in intensive winter grazing scenarios; use in intensive grazing situations
Benefits to local environment (protection of waterways and biodiversity)	Human novelty >> animal welfare (e.g., Christmas lights on collars with no (?) regard for animals welfare)	Herding in to obstructions and in-paddock drafting; in-paddock drafting
Less fence entanglement (including wildlife)	Reduced human animal interaction (assuming good interaction) and 'automation' of sentient animal farming	Bad perimeter choices and near misses/death
Better performance on farm?	Loss of critical husbandry skills and farming skills	Tech fails (power cuts, floods, hacks, connectivity drop outs)
Learning a lot		Losing to Australia

# Resources (not exhaustive)

1. UK's Animal Welfare Committee's Opinion on VFT
2. NSW Select Committee Report
3. Cornish and Fisher literature review
4. Research – published and pending
5. Other reports (eg Cave, March)
6. Personal communications, interviews and discussions

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**CODE of ETHICAL CONDUCT  
for  
VIRTUAL FENCING TECHNOLOGY**

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