

# Roadside Wildlife Reflector (Virtual Fencing) Trial - Report

## Virtual Fencing

Council is installing and trialling Roadside Wildlife Reflectors (Virtual Fencing) along a section of Angus Smith Drive in Douglas with the aim to reduce animal and vehicle collisions. Virtual Fencing is a sequential warning system that alerts animals with sound and flashing lights before they cross the road as a vehicle's headlights flash a reflector on a pole.

## A Stage Based Approach

This project is being conducted in four stages. In the first stage, we have installed nine reflector posts, and two cameras.

The following is an account on progress in our first stage to date:

- Installed cameras have recorded for a period of two to three months (Oct-Dec 2023).
- We have been recording;
  - Wallabies visiting and grazing on the site next to the road.
  - Vehicles passing by along the same road.
  - Humans walking, biking and running along the road.
- To date, no wallabies have been recorded on the cameras crossing the road which is a surprise.
- We expected to see wallabies on the road, and they weren't recorded on the road at any time during the photographic period.
- They are grazing beside the road and appear not to be crossing it frequently or at all during the recorded period.
- As wallabies were recorded grazing on the side of the road with cars passing by, they do not seem to be scared away.
- We have recorded an even flow of traffic (cars) along the road - the camera takes a picture every time there is movement, and the amount of traffic indicates cars are moving approximately every minute.
- In our images, there were no interactions recorded between humans and wallabies.
- Wallabies and humans were never seen together in a photo recorded movement suggesting that the wallabies move and get out of the way before the humans and the bikes come along and cross their paths.
- By contrast, we have photos showing wallabies and cars together in the same area and the pictures indicate that the wallabies keep grazing and don't even

look up.

- There is no clear photographic evidence at this time that indicates a conflict between wallabies and cars, yet we have evidence that this is occurring from time to time due to deaths of wallabies hit by cars.
- This may mean that when they do cross the road, they seem likely that they are going to get hit by a car due to the frequency of the traffic and speed, despite the apparent infrequency of the wallabies crossing the road (10 reporting's on dead wallabies on Angus Smith Drive between Jul-Sep 2022).

In the ongoing second stage, we are validating the data with James Cook University researchers to ensure we have sufficient data to continue this trial. Following this, we will install the nine reflectors onto their posts, and continue monitoring for an additional two to three months (third stage).

In the fourth stage, researchers will utilize AI modelling for in-depth analysis. This AI model will predict outcomes by looking at behavioural patterns in wallabies and kangaroos within the data and provide the Council with an accurate report on the success rate of the roadside wildlife reflectors.

## Benefits for the Community

The trajectory of this trial is likely to lead to:

- Significant decrease in wildlife road deaths in our city.
- Reduced collisions that may cause harm to humans, vehicles and/or wildlife.
- Reduced hazards and time on the road for Council officers and external wildlife carers who drive around our city to collect deceased wildlife when reported.
- Potential to further virtual fencing installations in other high-risk areas.