18th July 2026

DOC Traps Ramps and Treadle Plates

Dave Edwards

The DOC range of kill traps and copycat versions play a significant role in controlling pest animals in new Zealand. Unfortunately like most of our pest control tools the traps and box enclosures have not had a significant upgrade in their 20 year life, but in the same time our understanding of animal behaviour and how that might relate to better catch rates has increased.

An important consideration in design for the DOC traps and Boxes is that they need to pass the important, National Animal Welfare Advisory Committee standards (NAWAC).
It is worth clarifying that the NAWAC standard only deals with the Humane killing of animals, it is not a measure of the actual efficiency of the trap and box to attract and encourage animals to walk into the trap.

Discussions around improving catch rates generally revolve around baits/lures and placement of traps, but there are other areas we can also look at.

I could not get the test results for mustelids, but if we look at available online test results for rats during both NAWAC and other reputable testing, we see that around 15 to 20 % of rats that enter the DOC best practice trap box, end up walking back out the entrance to live another day. They either changed their mind, touched the trap treadle plate and changed their mind or set the trap off and were quick enough not to be caught. Surely we can do better.

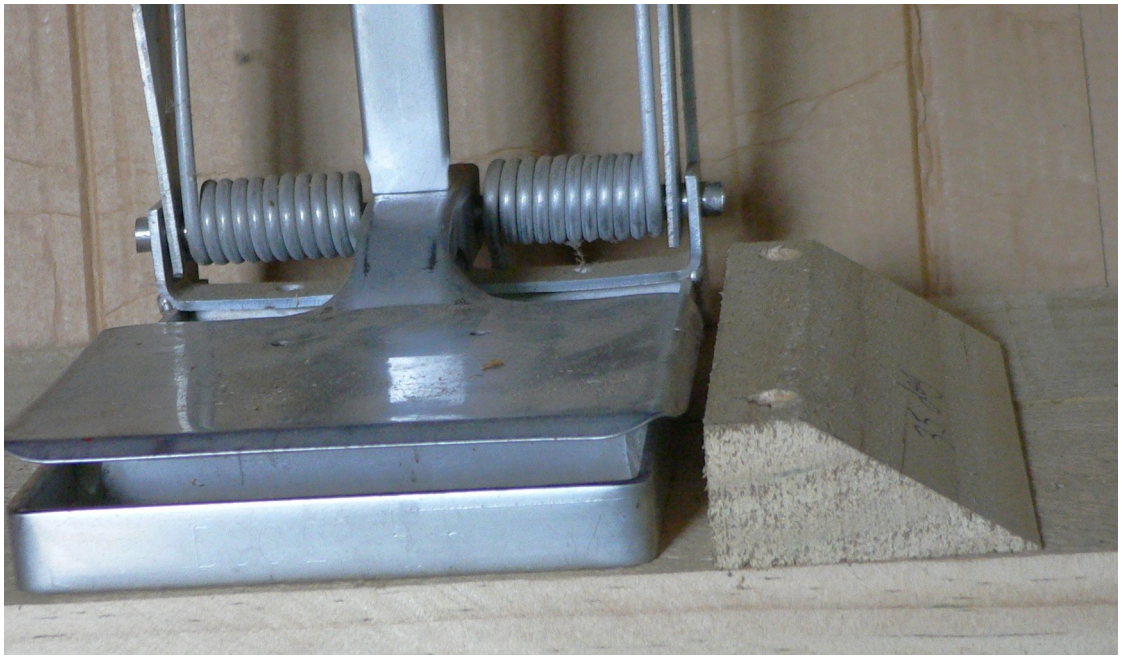
It is beyond the scope of this info sheet to look at all areas of possible improvements to DOC Traps and Boxes, so we will just look at animal interaction with the trap.
In a standard best practice box the trap sits on top of the floor. For a 200 trap the treadle plate is about 25 mm above the floor, so for a stoat to get caught it must climb up into the trap. The rounded edge of the treadle plate which is outside the strike line of the kill bar is an ideal first spot for a stoat to push on. Anything we can do to smooth the transition from Box floor to Trap Treadle plate has to be a help.

There is a growing body of evidence that some animals may have an aversion to touching steel, more work needs to be done there but it could be related to the ability of steel to wick heat away from the Paws.
I first came across this in a UK paper in 2018 while developing the Excluder Baffles for Philproof bait stations, this is the main reason why the baffles are made from plastic and not the cheap easier option of sheet metal.

So for animal interaction with the trap we have two areas to deal with, firstly to get the animal at the same height as the treadle plate and secondly to make the Treadle plate a more attractive place to step onto.

Options to get the animal at the same level as the treadle plate include making a wooden ramp, or recessing the trap into the Box floor so that the treadle plates sits level with the floor. Recessing the trap does help to create a more open design and was best practice with the Fenn traps, we also sprinkled fine leaf litter on the treadle plate to help disguise it.
But for this exercise we will just cover the easier to retrofit option of ramps.

Ramps can vary from a full length slight incline from box entrance to trap treadle plate, or a simple wooden block cut at 45 deg sitting in front of the trap. Pen trial work is required to test designs.



DOC 200 trap with a 35 deg ramp, Internal mesh left out for clarity

Treadle Plates

A simple cheap method we use to help disguise treadle plates, is to use Scotch Guard Camo Duct Tape. Scotch Guard has a waterproof adhesive backing which so far has stood up well.
The Tape disguises the shiny surface and helps to provide a barrier between the animals paws and the steel.

Current UK best practice is to cover treadle plates to hide the shiny steel.

DOC 200 with a 45 deg ramp, Treadle Plate with Camo Duct tape
Internal mesh left out for clarity

Note: The lower opening in internal mesh must not sit above the wooden block.

Internal Mesh

The vertical opening in the Best Practice Internal mesh can appear to be a bit restrictive, it was like that so that during testing it slowed the animal which gave more Head Strikes. But obviously from test data some animals were not far enough engaged with the trap and quick enough to escape.

Only testing would tell if by using a ramp and covered treadle plate one could have a less restrictive vertical opening and still be NAWAC compliant.

A problem that does crop up on DOC and BT traps and further restricts the Internal opening is, from new the treadle plates can be bent up at an angle, this can occasionally also happen when an animal is caught, it can put extra stress near the joint treadle plate to arm which bends the outer section of the treadle plate up.

To correct the problem see info sheet
DOC and BT Traps Treadle Plate, How to Correct angle problem

The work on ramps and covering treadle plates was in part prompted by people using trail cameras on trap boxes and seeing the number of animals that walked back out the entrance.
To date only a couple of small camera trials have been done using ramps and covered treadles but one comment was “Great results would never go back to a standard setup”.