

Curlew Country

Working to help the recovery of the Eurasian Curlew.

Fencing for Nest Protection

Guidance from Curlew Country

This document is intended to help structured Curlew Recovery projects; those working with farmers across privately owned land, or for organisations working on their own land, carrying out fieldwork under the supervision of a qualified ornithologist.

Curlew Country Background

Curlew Country (CC) is the leading Curlew Recovery Project working to protect populations of lowland curlew. Building on the evidence of in depth survey and monitoring in Shropshire and the Welsh Marches, the project has now begun to implement intervention methods in an attempt to reverse curlew population decline.

Working with farmers and land managers is vital for the ongoing work that Curlew Country carries out, and the project is now supported by over 60 farmers and land managers.

Why do we fence nests?

Three years of close nest monitoring by CC field ornithologists have found that failure at egg stage is a major issue facing curlew. Curlew naturally have a low breeding success rate, of approximately 0.5 chicks per pair per year, however they are currently unable to reach even this low number of fledged young. This is in part due to high levels of predation at egg stage, primarily from mammalian predators such as badgers and foxes.



In an attempt to increase the number of nests reaching hatching stage, and boost the number of chicks, Curlew Country have trialled the use of protective electric fencing. Curlew Country collaborated with a contact from NABU in Germany who had successfully used temporary electric fencing to help protect curlew nests.

Specification

The following fencing specification is used by Curlew Country to protect curlew nests:

- Electric fencing was placed in a 20m square with the nest at the centre. 7-strand galvanised steel wire was used. (200m reels of stranded steel wire can be found [here](#))
- For fields **without** livestock, place three parallel steel wires the first at 20cm from the ground, and the next two wires approximately 20cm apart.
- For fields **with** livestock present, place four parallel steel wires, the first placed at 20cm from the ground, the next two wires approximately 20cm apart, and the final wire near the top of the post.
- Wires are supported by either plastic posts or plastic insulators on steel posts, spaced every 5m. (Rappa steel stakes and stake insulators can be found [here](#) and [here](#))
- The fencing is powered by 12V leisure batteries, these will require charging using a battery charger. The best charger to use is a 3 stage charger (sometimes called 'smart' or 'intelligent' charger). These tailor the charge to the state of the battery, decreasing the chance of over-charging and damaging the batteries. (Can be found at most agricultural suppliers)
- Each fence also requires an electric fence energiser and stand. This could be a 12V electric fence energiser (as found [here](#)), or Rappa provide a battery energiser with solar panel and stand (more information [here](#)).
- Electric fence tester (as seen [here](#)).



Locating the Nests

Finding nests takes a lot of time and patience. Any alien presence can disturb a bird and it is very important that any fieldwork is undertaken under the supervision of a qualified ornithologist as the utmost care must be taken to minimise disturbance to birds. Curlew go to great lengths to keep their nest locations a secret, not landing directly on the nest but trying to attract attention away from the site even as they approach it.

Any curlew recovery must be carried out in partnership with landowners and managers and land should not be entered without the appropriate permissions.

For more details of curlew nesting behaviour please visit www.curlewcountry.org

Protecting Nests

Once a nest has been located, further permission should be sought from the appropriate landowner to erect a fence. Farmers and landowners are vital allies in the fight to save curlew, and it is important to share the location of the nest with them. Many farmers and landowners enjoy seeing curlew on their land, and will try to avoid the nest site if possible. With permission granted, the following steps are then taken to erect the protective fencing:



Ensure the nest is not in danger of being accidentally trodden on by temporarily marking its position. Fences should not be placed until a full clutch of eggs has been laid (usually between 3 or 4 eggs), this reduces the likelihood of desertion.



Pace 10m away from the nest and place the first stake. From here pace 5 meters perpendicular and place the second post, continue for another 5m and place the corner post. Return to the first post and pace the same distances in the opposite direction. To save time pre-assemble the isolators on the posts, and adjust their positions later.



Reinforce the corner posts for extra durability. This can be done with a spare fence post, stake or guy rope. This is best done from the **inside** of the fence line, to prevent creating a trip hazard and reduce the obstructions to farmers.



Placing the fence is best done with two people. This helps to ensure that it is done as quickly and efficiently as possible. It is important to keep disturbance of the birds to a minimum, and to let them get back to the eggs as soon as possible. Tracks to and from the nest should be covered up as much as is practicable.



Once the first line of posts is in place, the other 3 sides of the fencing square should be positioned. The insulated clips on each post should be facing outwards, except at the corner posts which should be facing towards the middle. This reduces the risk of the wires shorting if metal posts are used.



The wire must then be wound around the whole of the fence. First attach to one of the insulators on a corner post. Then walk the whole perimeter. The wire should pass through each insulator, and start with the lowest strand (20cm above ground). It is easiest to keep the wire on a reel and travel around letting it out and tightening it at each corner of the plot.



Each strand should be connected to the one above, this is most easily done when back at the beginning corner. The next two wires should be 20cm apart. If using 4 strands, the top wire should be close to the top of the post.



The energiser should be placed on a stand in the ground, usually at one corner of the fence. The energiser will need to be connected to a good earth. The battery should be placed nearby and connected to the energiser and the fence. Ensure the energiser is switched off whilst connecting.



Once connected up, switch on the energiser and ensure that the fence is working. There should be a faint click, but it may be useful to use an electric fence tester. Remove all other equipment and retreat to a safe distance. Use binoculars to ensure that the birds go back onto the nest successfully.



From a distant vantage point check to see that the bird returns to the nest successfully, leave unattended and follow maintenance guidance as below. If the birds do not accept the fence, it is important that the fence is removed as quickly as possible. The birds should again be watched back onto the nest.

Maintenance

The fences require maintenance to ensure that they continue to be effective against predators. The batteries may run down and need changing before the nesting season is up. Checking the fence with an electric fence tester will help to determine if it is working correctly, ideally you would want between 3000 and 6000V on the wire. Batteries may also be checked with a voltmeter, the table below will help you determine the meaning of the voltmeter reading. Having spare batteries ready and charged is important for the continual protection of nests.

Voltmeter Reading	Approx. State of Battery Charge
12.7V or over	100%
12.5V	75%
12.4V	50%
12.2V	25%
12V or under	Discharged

Vegetation growth along the fence line must be managed. If the fence starts to touch the grass at too many points this will increase the speed at which the battery is drained, and reduce the voltage of the fence, which will eventually cause it to fail. To prevent this we recommend strimming or cutting a small strip along the bottom line of the fence. The battery should be disconnected whilst doing so, and great care taken not to hit the wire. The frequency of cutting will depend on the vegetation growth, but should be checked every 5 days to a week. The cut strip may need to be widened during the season, as the vegetation grows taller and leans onto the fence.

It is best to carry out all maintenance tasks in a single visit, to keep disturbance of the birds to a minimum. Number of visitors to the nest should also be restricted, however an extra person may prove useful to erect and maintain fences. This will also help to keep times at the nest low. Birds will often stay sat on the nest, however if they do leave whilst maintaining the fence, we would place a hat over the eggs to keep them warm or protect them from the sun.

It is important to ensure that you have all kit with you when leaving the nest site. Leftover wire or tools could seriously damage farm equipment. Counting tools and equipment before and after you leave is a good way to prevent this. **Remember to switch the fence back on and test it before you leave.**

This type of protective electric fencing has proved successful at getting more nests to the hatching stage. Once the chicks hatch they remain in the nest for only a few days, so the fence is no longer a viable way of protecting the young. By getting more chicks to hatch, we hope that there is a better chance of at least some of these surviving. Curlew Country is continuing to research what chicks need to survive in the longer term.

For more information on UK lowland curlew recovery, please see:

www.curlewcountry.org