

Creation of a ‘water pathway’ for otters *Lutra lutra*, under an electric fence at Kingfishers Bridge, Cambridgeshire, England

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SUMMARY

A ‘water pathway’ was devised to allow otters *Lutra lutra* to pass into an area enclosed by an electric fence to prevent fox access. After its construction, several otter spraints (some close to the water pathway) were subsequently found within the fenced area. There was no evidence that red foxes *Vulpes vulpes*, entered by this route.

BACKGROUND

In 1995, 61 ha (150 acres) of arable farmland at Kingfishers Bridge, eastern England was converted into a wetland. Adjacent to this wetland and next to the River Cam, lies a 30 ha washland of pools and low, vegetated islands in which several wildfowl species breed. After manipulating the water level, it is hoped that several wader species will also breed, such as common snipe *Gallinago gallinago* (which have already been observed), lapwing *Vanellus vanellus* and redshank *Tringa totanus*; all three are declining breeding species in lowland Britain. However, red fox *Vulpes vulpes* predation is an issue over the site as a whole. To inhibit their predation of breeding wildfowl and waders, in 2005 an electric fence was erected around the washland. However, the fence also prevented access by otters *Lutra lutra*. The site contains suitable otter habitat and they have been observed within the area. Therefore, it was decided to attempt to provide access for otters under the electric fence, whilst still excluding foxes.

ACTION

Electric fence: In order to restrict access to foxes, the washlands at Kingfishers Bridge,



Figure 1. The electric fence with live wires at three different levels (two high, one low) from the ground.

Cambridgeshire, eastern England, were enclosed by a permanent electric fence. This was approximately 2 km long and 1.3 m high, and is live (activated) during the whole year.

The fence (Fig. 1) is made of galvanised wire 'horse mesh' supported by wooden stakes. The mesh size is small enough to prevent foxes (and otters) from passing through. At three heights above ground level (0.5 m, 1.2 m and 1.3 m) runs a charged wire of 5,000 volts. Because the lowest is at a height of 50 cm, the vegetation does not have to be constantly cut to prevent vegetation coming into contact with the wire, and thus losing electricity. The mesh continues for 30 cm into the ground making access by foxes through digging underneath very improbable.



Figure 2. 'Water pathway' created underneath the electric fence to allow otter access.

Otter pathway: Within a ditch adjoining the nearby River Cam a route for otters underneath the electric fence was created (Fig. 2). This location was chosen because otters were considered already likely to use the ditch to enter the site. The 'water pathway' allows otters to enter the washland habitat whilst restricting access to foxes; foxes do not like to swim, it is therefore considered unlikely that

they will use it. The water pathway is 1 m deep and 3 m wide. The sides, perpendicular to the electric fence (which passes overhead), are covered by wooden boards to ensure the banks do not collapse. These vertical banks also ensure that passing through can only be achieved by swimming. Both ends of the pathway are vegetated by reed and other riparian plants, and banks are gently sloping (c. 30°) to provide good access for otters.

CONSEQUENCES

Otter use of the water pathway: In spring 2005, several otter spraint were found within the fenced area, of which some were found at the edge of the purpose-built water pathway. Therefore, it is very probable that this water passageway was used by the otter.

Fox access: Within the electrified area there is no evidence (observations, scats or other signs) to date that foxes have entered the fenced washland. It is plausible that if the water is frozen in winter, foxes will be able to enter the site. However, the chances of the water freezing are low at this site and if this did happen it would be well outside of the wader breeding season. This would allow for any such incursions to be dealt with

Mink: The water pathway might also allow the entry of American mink *Mustela vison* as these swim readily. However, the fence mesh is not small enough to inhibit mink, therefore they can enter unhindered regardless.

Conclusions: The water pathway underneath the electric fence seems to provide a suitable entrance for otters. In addition, there is no evidence to date that foxes use the water pathway to enter the washland.