



OTTER– PROOF FENCING ADVICE

Predation by otters can be both emotional and expensive and we have spent many years learning about the ways in which otters move, hunt, climb and access fisheries are both fenced and unfenced. Often, they get inadvertently fenced in when fishery owners go to the expense of installing otter proof fencing, but do we need to spend thousands of pounds on fences that “could” be ineffective in the long term to the most persistent otters?

The following pages are the UK Wild Otter Trusts guide on what is effective, what works and how it can be approached. This document is well overdue and comes at a time when reports of predation by otters is growing. We should remember though, that there have been many new fisheries created and often in the middle of the otter’s territory where it previously hunted or travelled. As a result of that the goal is to make sure that fencing is not seen as an expensive option but rather an essential part of the business plan to include the maintenance and upkeep of any fences installed. If there is no fence in place then you should expect the inevitable to happen – that sentence is not drawn to be contentious or controversial, it’s the reality of nature as we see it today, so we need to be proactive rather than reactive in case the worst happens. We should all work together to ensure that those that do not have access to this information are made aware of such.

UKWOT will always be happy to give support, advice and help to those that want to do things correctly and within the law and we sincerely hope that this guide will be used to fence fisheries to prevent predation by otters. What we would say, is that the ability and behaviour ever change and as such we need to ensure that the information is up to date and not rely on old fence data that won’t be effective against the modern otters behaviour.

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Eurasian otter protection status

The Eurasian otter is the only native otter to the UK. It has a wide geographical range and is protected under the Wild & Countryside Act 1981 and is also afforded protection as an EPS listed species (European Protected Species)

It is illegal if you:

- **Disturb the otter, its place of rest, shelter or safety either by accident or intentionally**
- **Its holt or habitat either by accident or intentionally**
- **Restrict its access to the holt or place of rest, shelter or safety either by accident or intentionally**
- **To fall foul of the law could render you liable to an unlimited fine and 6 months in prison**

Whilst we know that the Eurasian otter is thought to be resident in every county of the UK, there are still areas where little or no signs of them are recorded. There is no question that the population has grown but we are unable to tell how big that population is due to the difficulty in counting the animal



Eurasian Otters

Stopping otters from gaining entry to your lake

Otters are very capable diggers and climbers. Coupled with being one of the most adaptable and intelligent animals they are also able to squeeze through very small gaps. At UKWOTs rehabilitation unit we have filmed an otter cub of a reasonable size just before release squeeze under a wooden holt with a gap of no more than 2" under it so we would be mindful that the quoted gaps that otters can get through (usually 100mm) may be incorrect.

If possible, we would recommend mesh fencing with no more than 50mm gaps and if possible, to go smaller, do so. We are simply not convinced that a fence with holes of 75 to 100mm is 100% effective but is better than having nothing. There should be no gaps in any part of the fence and especially at gates of more than 50mm as an absolute maximum to be effective. The fencing wire or mesh should also be of a strong design that will not allow the wire to be pushed aside to make gaps bigger as otters are incredibly strong animals. Electric fencing in addition to the main fence will also act as a deterrent but be mindful that the otters fur is insulated against low voltage electric currents and any wires put in should not allow for the otter to gain access behind the wires.

Stopping an otter from digging under the fence

Otters often circle and patrol the perimeter of the fence looking for a weak point. Often, they gain entry via an old rabbit hole or badger digging. As fences should be checked every day for holes, gaps, digs and soft ground. A mesh skirt of 900mm is the best deterrent and should be on the outside of the fence with an additional 300mm inside the fence line as a precaution. The actual fencing wire should also be buried a minimum of 900mm vertically into the ground. The skirting wire should also be pegged down and then let the undergrowth grow through it as this will give added protection. It is also proven that if there are obstacles placed to force the otter to take a detour from its normal fence patrolling to be effective as they dislike changing their routes

Can otters climb over the fence?

Yes, otters are very capable climbers indeed. Therefore, its particularly important to make sure that ALL posts and straining/corner posts are on the inside of the fence material. They can reach a metre-high fence by standing on their hind feet and could get over a 1.5 metre fence if there are footholds to be used. Therefore, it is important to have an overhang of at least 600mm and at an angle of 90° The norm has been a suggested 45° but we have had cases where otters have gained entry to fenced fisheries that have not dug in, were not present when the fences were erected and then simply disappeared which indicates that they must have climbed over! The New Forest Wildlife Park ran a trial of fences best suited to keep otters in and we are of the opinion that a fence with a 45° top angle could be breached with little effort.

Also be alerted to any overhanging branches or tree trunks that may be used from outside the fence to get in ... the last thing needed is for an otter to get in and then can't get out!

Otters are heavy, strong animals and can easily push a fence over of poor design and little strength always use the strongest wire you can afford and ensure that it can not be pushed apart to make gaps larger. It is possible that rabbit netting could be bitten through and we have witnessed one adult male otter bite through electrified netting to escape during a soft release of a rehabilitated animal. Fences are only as strong as its management team and members The members have a duty to actively check their fence daily without fail and any faults whether rectified by them or reported immediately to the fishery owner or bailiff. Often missed are inlets, outlets and gates. We cannot stress enough how important it is to ensure that inlets and outlets are also meshed – gates are a separate issue and we will talk on those later in the advice. Due to the terrain, you should also be wary of any areas that differ in height from gate to fence or fence to fence and these will need closing to prevent access at the lowest point.

REMEMBER THAT THE FENCE IS ONLY AS GOOD AS ITS WEAKEST POINT AND DON'T TAKE UNNESSESSCERY CHANCES TO SAVE TIME OR MONEY

Considerations to consider when installing a new fence

Landowners are often against any installation of new fences for various reasons, one being visual impact and the other they often don't understand how important it is for the fishery to be fenced to protect a large investment. UKWOT will always offer written support to landowners on behalf of fisheries.

Watercourses may be required to cross with any new fencing, and it needs to be considered that if this is the case, then the Environment Agency may need to be contacted for permission especially if the area in question is in

a flood plain. Flooding may also cause damage to your fence so all acre should be taken into consideration

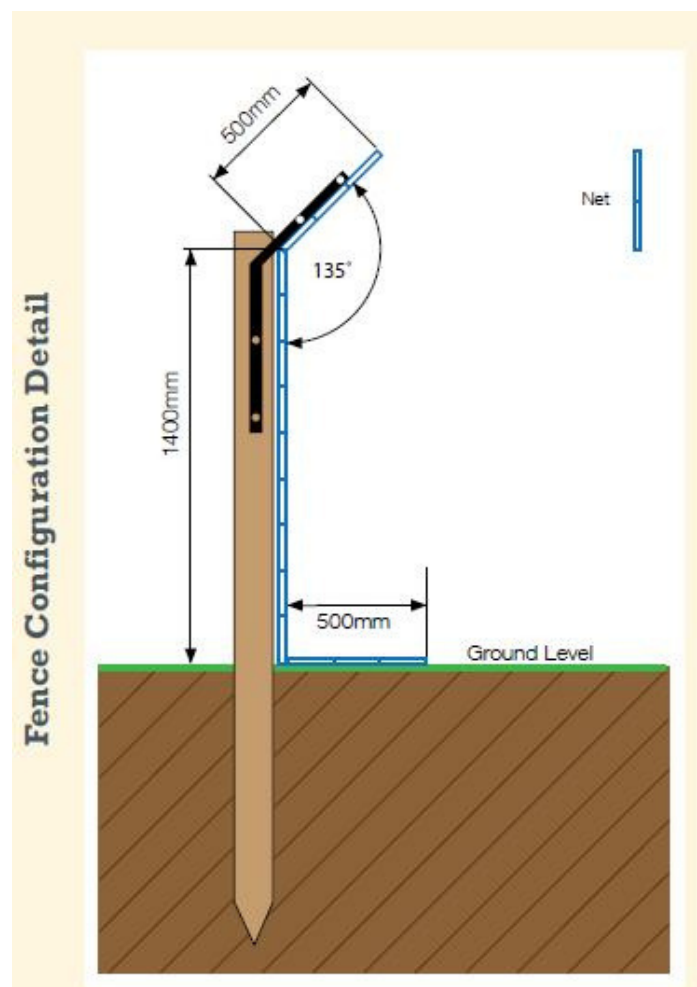
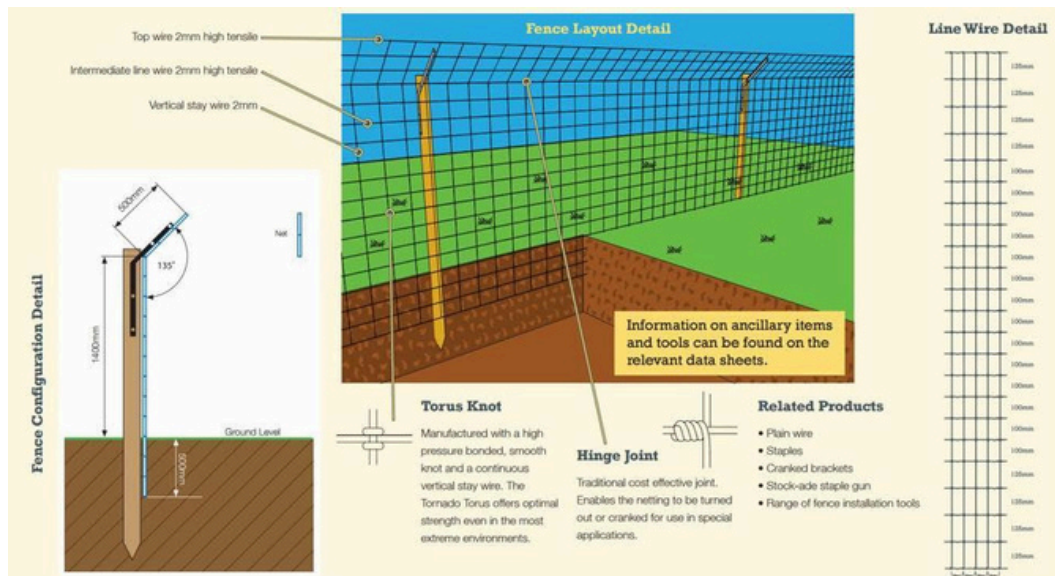
Ground and terrain can be the biggest issue for many wanting to erect new fences Soft soil, waterlogged or boggy soil, stones and pipes can all be problematic. However, if they are present then they need to be overcome so

don't just assume because it's difficult to fence that an otter can't get through that area – they will. Pay particular attention to any obstacles that the otters could use to climb and then jump in from – as mentioned previously, trees, rocks and terrain can be your enemy so should be avoided

or removed and snow can also be a problem if it drifts to the fence as an otter will also use that to gain entry! If the ground is soft, then use a wider ground skirt out to the harder sections of the ground



Fence specs:(but always install 90* overhang if possible)





Above: Buried fence mesh

Below: A good example of gates – concrete base under gate and close fitting to the ground BUT it should have an overhang outward and the latch should be covered to prevent otter's from climbing through



If you have a weak fence and poorly fitting gates, then an otter may well be able to get inside to your valuable stock. If you are putting in a new fence from scratch, then be vigilant near completion to ensure that you have not trapped the otter inside.

If for any reason you do find that you have fenced an otter inside, never consider removing it or dealing with it illegally. There is now a legal, humane option in UKWOTs humane trapping licence which to date (June 2019) has proven to be very effective, having trapped 6 otters, especially in the form of advice and working with fisheries to prevent rather than have to cure. UKWOT have submitted many applications to Natural England to set live traps and have been successful in trapping and releasing the otters trapped. That is the end goal – provide the service to remove otters humanely and of course, free of charge. It has given angling a legal, humane option which never existed before. (more on humane trapping further in document)

Other types of fence protection

Wire mesh fencing can be installed, and we have helped and advised on several lakes that couldn't afford full spec otter fencing or simply were not allowed to install due to landowner restraints. It can also offer reasonable protection against otters. The mesh used should be a minimum of 50mm if chicken wire. High tension net should be 75mm as a minimum and welded mesh and chain link are stronger than required but last longer and offer extra protection.

Advised spec for the above would be:

Minimum height of 900mm if possible

Corner posts should be properly braced and secured and importantly should be on the inside of the fence to prevent an otter from using them to climb. Despite some thinking it makes no difference, it does, and it will create a risk

If chain link mesh is used, then you should use straining wires at top and bottom and use 300mm higher (or more depending on ground) than needed to allow for burying into ground or as a skirt

Electric fencing requires a fast pulse rate, a powerful energiser if the fence to be electrified is long and a minimum of 1.5 Joule energiser is advised.

Mains power is the best supply and needs less maintenance as batteries need changing and recharging and you do not want to leave the lake unprotected due to someone not being able to recharge or replace the battery. Given that we mentioned previously that otters' fur is insulated, a good earth is essential for maximum effect and a main energiser needs to be fixed to a separate earth point and not to the earth of the main supply.

As with all fencing, maintenance is paramount to it working in an effective manner and shorts and leakages should be checked frequently. If batteries are used, then it is recommended that they should be replaced if the fence voltage falls below 4kV. All electric fences should comply with British & European Safety Standards. Electric chicken netting is a quick and reasonably cheap temporary protection and may even be enough to deter an otter for good but do not rely on it working all of the time.. it should always be classed as a temporary fix and not a permanent one. A three-strand electric fence can also act as a deterrent but remember that the otter can also jump so this type of protection is likely to not be effective in the long term or against a very persistent or hungry otter, especially with cubs. The normal setting of these wires would be recommended to be spaced 70mm, 140mm & 210mm from the ground.

As with ALL types of fencing, we cannot stress enough how important it is for proper maintenance to be continually carried out, walking the fence daily is even more important for basic electric fencing protection. It needs checking for undergrowth and vegetation growing creating a possible short in the circuit... it needs to be checked for rabbit holes creating gaps thus increasing the gaps between the wires check – check – check and then check again, daily



Remember that posts, particularly on electric fences can become loose ... be aware of livestock being in the same area as your fence. Sheep and cows will push weak fences over and leave your fishery at risk The word again is check! If possible, add an outer wire fence to minimise livestock damage



Above: A simple post and mesh fence with 3' skirt pegged to ground and with the posts driven through to help secure, with added electric wires. This site has had no predation for 2 years and the cost was around £6,000 for a 900m fence by using syndicate members for labour

Other suggestions for alternative fencing

There are many types of fencing that can be used; however, some are expensive, and some are outdated and would not necessarily be recommended due to us now knowing how well otters can climb.

Metal security fencing

Pro's: Excellent protection, strong

Con's: Expensive, difficult to install, poor visual impact

Cladding/feather board fencing

Pro's: Reasonable cost to install, easy to work with, good for closing gaps in fence & better visual impact

Con's: Rough surface allowing otters to climb easily, not long lasting so would need replacing eventually

Chestnut palings

Pro's: Long lasting, easy to install, cost effective, lasts long time without treatment for rotting

Con's: Gaps can be too big between rails, difficult to secure base to prevent digging, allows otters to grip and climb, easy to push over if not secured properly

As with all fencing, no matter what they cost or what they are made of they still require ongoing maintenance and you should allow a budget each year to compensate for such. Never assume that because you have a fence you will not be predated by otters. As we mentioned earlier, gates are a very vulnerable area of any fencing and often get overlooked simply because it's a gate. One of the most common access points for otters into fenced fisheries is through gates, primarily left open by anglers sadly, anglers are anglings worst enemy as some do not realise the importance of helping their fishery and seem oblivious to closing gates, so a self-closing system or a weighted self-closing gate is recommended

Embryo roller systems

We trialled an innovative roller system for Embryo Angling Habitats. The trials were conducted over a 9-month period on two otter cubs in rehabilitation prior to release. The otters were male & female, and we set a simple square of post and rollers on a wire at varying heights. The first trial was conducted with the roller system at a height of 6 inches off the ground and then this was increased or added to over the 9 month trial period. Only once did one of the otters simply jump over the roller when at the lowest setting. We observed the cubs being very inquisitive of the system and we placed food inside the square to entice the cubs in or over ... they never and always preferred to take the food we had hidden in other areas of the pens.

The rollers are plastic made, simple to install but our trial indicated that they needed to be extremely taught on wire straining guides and that two rows approximately 3 to 4 inches apart worked very well. There were indications that they made a noise when windy and also rattled which did deter the otters but over a period of time, the otters would certainly get used to the noise. Overall, this system could well have a place in fence protection especially where height is likely to be an issue. They are visually acceptable, easy to install and were effective during our trials.



Summary of fences & weak points

- Fences, no matter of what construction need regular, ongoing maintenance & checking daily Overhanging trees & branches should
- be removed Holes or gaps need repairing as soon as they are found
- Electric wires need to be checked and the ground around, near or
- under such need regular strimming/clearing to ensure maximum efficiency Gates need to be closed, especially at night AND when people are fishing. Otters see gates as weak points, so they need to
- be secure, closed and maintained. Always put a concrete base under gates of at 3' wide with the gate closing point in the middle of the concrete base and if possible, use a self-closing mechanism on all gates Wherever possible, fences should have an overhang of 90* and not
- 45* as this could well be breached by otters
- Fences with no overhang should be 1800mmm high with 900mm skirt
- Fences with overhang of 600mm should be at least 1200mm high with a 900mm skirt
- Ground skirts of 900mm should always be fitted, and the main fence mesh buried into the ground of least 300mm
- Electric netting should be at least 700mm high with a 1.5 Joule energiser
- Inlets/outlets need to be also secured with mesh to prevent otters from using these as a point of entry. They are vitally important and often missed as not seen as a threat, but they are! The recommended spacing for pipes is 75mm but we have observed smaller, younger otters getting through gaps of 50mm so UKWOT would always advise to use nothing bigger than 50mm as an absolute maximum
- An outer wire fence can help discourage livestock from pushing into fences and keep the fence line from being damaged
- If fencing across any watercourses, please be mindful that permission from the Environment Agency may be required
- An inefficient or poorly designed fence is as bad as having no fence



Embryo's roller system on the top of a short fence

UKWOT's humane trapping licence

After two years of various negotiations with Natural England, we were finally granted the very first humane trapping licence in September 2016 which enables us to humanely trap and relocate problematic otters from within well fenced fisheries. Whilst we completely understand the frustration of many fishery owners and anglers alike, we would always advise against shooting otters or trying to remove them on your own.

They are protected and you would be breaking the law which carries heavy penalties if caught. There is no question that the issuing of the CL36 licence provided the first and only legal and humane method of moving otters that have either gained entry to or have been inadvertently fenced into fisheries when installing fences. UKWOT provide the service free of charge and cover the whole of England. This initiative has been well supported by Embryo Angling Habitats and the Angling Trust and we are all in agreement that prevention is better than cure and it should be noted that trapping is only ever used as a last resort if all other methods of removing the otter fail (use of one way gates, flushing, using dogs etc). The CL36 licence overrides certain criteria that would otherwise be illegal under the Wildlife & Countryside Act 1981.



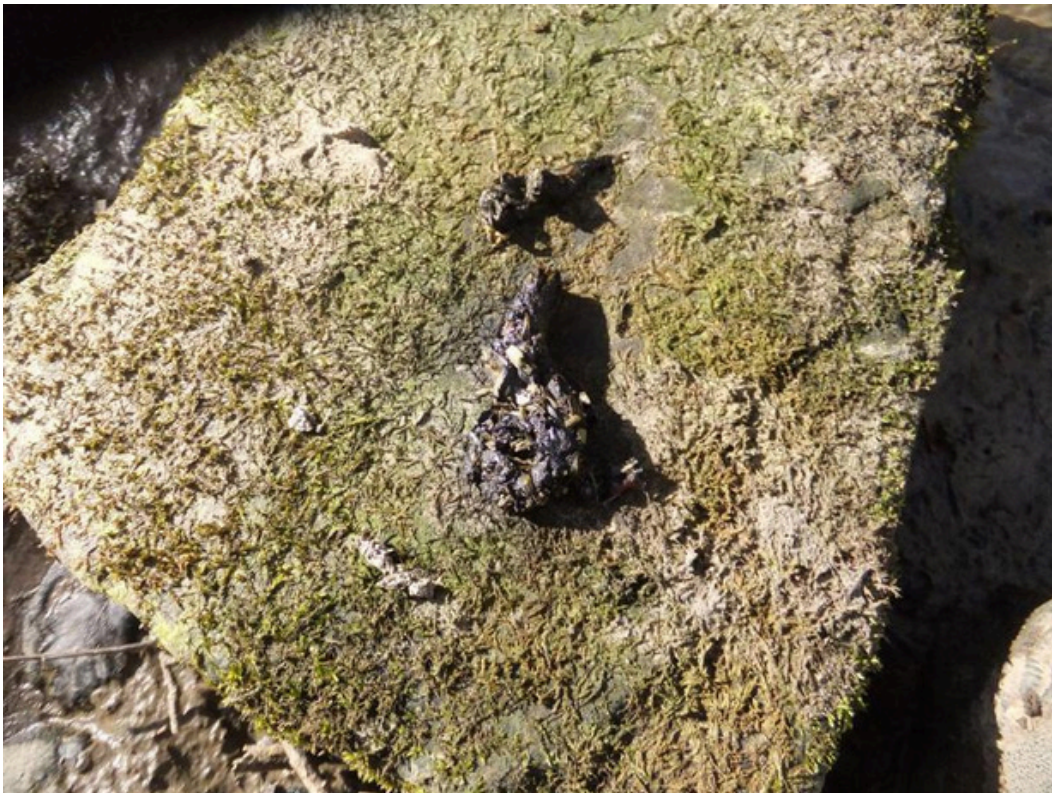
For all humane trapping advice, please use the contact details on the opening page. * note: We are unable to trap on rivers or unfenced fisheries but may be able to still help with advice

How do we know if we have otter predation?

OK, so this is probably the most important part of this information sheet ... if you are unable to recognise if you have an issue with otters then you have already lost the battle and will more than likely suffer predation as a result simply because you won't know that you need to be proactive! The following images show the tell tell signs that you need to look for .. some are obvious and others are not but they will help you. Don't forget, you can always call UKWOT for advice if you are still not sure.



Above: Otter footprints



Otter spraints



Fishkills – often the throat area just behind the gills are eaten but also, flesh can be stripped off just across the gill area



Toads & Frogs stripped of flesh or turned inside out to avoid foul tasting glands





Prints & tail slides in snow and mud slides on river and lake banks

Other possible causes for fish loss

Just because there are otters in the area and you lose fish, don't assume that an otter is responsible. Always take time to look at the facts, how has the fish been killed, where was it killed, where was it eaten, what evidence have you found that otters are responsible. Over the years we have noted that there are other possible causes for fish loss and predation, and these are listed below:

Oxygen drops in water – will give the impression that mass kills have taken place by predators. Often, the gills of dead fish will be open as a result.

Hérons – many larger & smaller fish will be taken by herons and then left on the bank. Signs to indicate herons would be stab wounds, puncture marks and beak marks down each side of the fish.

Fox – We have watched video footage of a fox entering the shallow margins of a lake in Hampshire and taking a fish out of the lake.

Poachers – Often Human theft is paramount. Nets left behind; fences cut are an indicator that animal species are not responsible.

Mink – Often mistaken for otters and certainly a ferocious predator, mink are capable of taking reasonable size fish. Signs are bite marks at back of neck or bite marks on dorsal fin areas

Otters – Naturally, we know that otters do predate fisheries and that their diet is predominantly 70% fish based but this does make them guilty of every fish kill. Indicators of otter kills are larger fish being taken, V shape bites in throat area and/or just behind the gills and tail damage if teaching young to hunt

Otter behaviour & ecology

There are many misconceptions about what otters can and can't do, so below is a list of behaviour & ecology points to clear up any myths that may lead people to assume that its otter predation when it's not.

- They are not sexually mature till 2 yrs. of age
- The average lifespan of a wild otter is 5 yrs.
- They breed at any time of the year
- Have 1 – 5 cubs but 3 are usual with 1 or 2 surviving
- Cubs stay with parent for 12 to 18 months
- Gestation period is around 60 – 64 days
- They will not completely void an area of fish as it would be detrimental to them and make it harder to find food
- Can weigh 14kgs
- Are an average of 1.2 metres in length including tail
- If you see more than one otter, it is very likely to be a mother and cubs as the male plays no part in rearing the young
- Males territory can be 40k – females 10 to 14k
- Will eat fish, amphibians, small mammals, eggs & fruit
- They are solitary animals
- Can swim at 6 – 10mph
- Can only hold breath underwater for an average of 30 or 40 seconds
- Can travel long distances over ground
- They are native to the UK
- Many stillwater lakes have been created adding to surplus food supplies for otters – there has also been an increase in the population of otters
- It is impossible to give population numbers due to the complexity of counting them as and such we will never know true population levels
- The original otter trusts captive breeding program released 117 animals in Northamptonshire, Wiltshire, North Yorkshire & Norfolk over a long period of time but these were known to have died quickly due to traffic accidents. There were a further 49 released by the Vincent Wildlife Trust but these releases did not have an impact and there are no ongoing impacts from such releases, and as such should not be blamed for the predation we see today