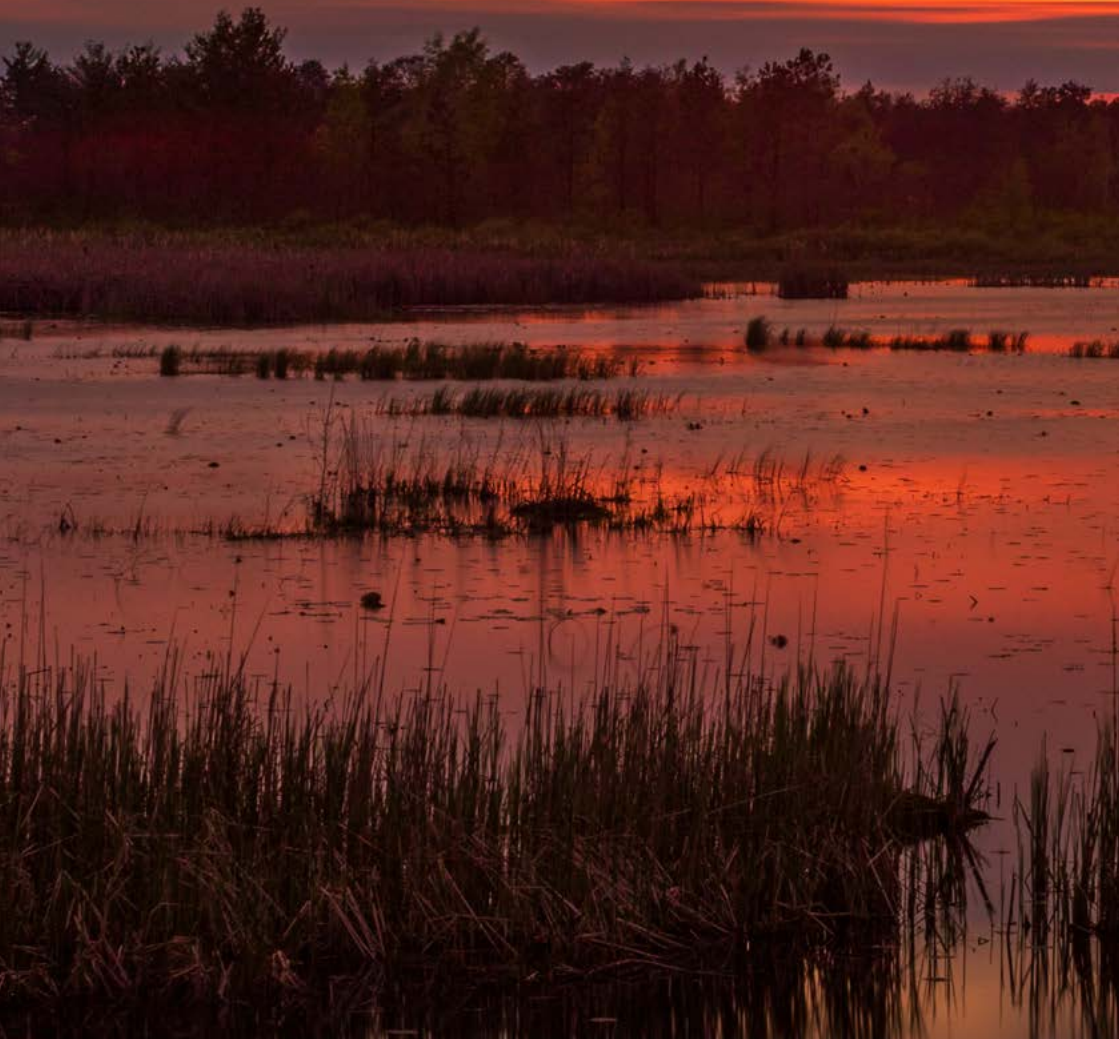


A Guide to Beavers



**“Since the absence of
beavers across Britain and
Europe, wetland environments
have been in a state of
continual decline.”**





History of Beavers

Beavers, once commonplace in the UK, have been extinct here since around 500 years ago. Valued for their fur, meat and a natural secretion called castoreum, which is still used in perfume and food additive in some countries today, beavers were also mistakenly blamed for decreasing fish stocks, thanks to the common misconception that they eat fish. Not only do beavers not eat fish, but their dams provide pools perfect for fish spawning and help to keep rivers stocked with trout and other species. In reality, fish stocks were reducing due to human activity, but the beavers took the blame and were wiped out by overhunting and persecution.

Beavers were also hunted close to extinction in mainland Europe, with numbers falling to as low as 1000 across the continent. Before then, beavers had been a keystone species, creating and maintaining wetland environments for more than 30 million years.

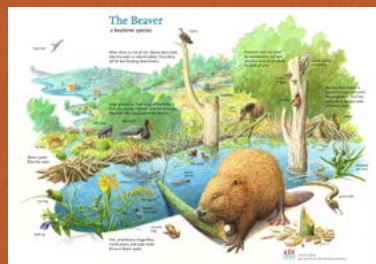
Since the absence of beavers across Britain and Europe, wetland environments have been in a state of continual decline. In Britain, the loss of wetland environments has been as much as 75-90% in the last 300 years.

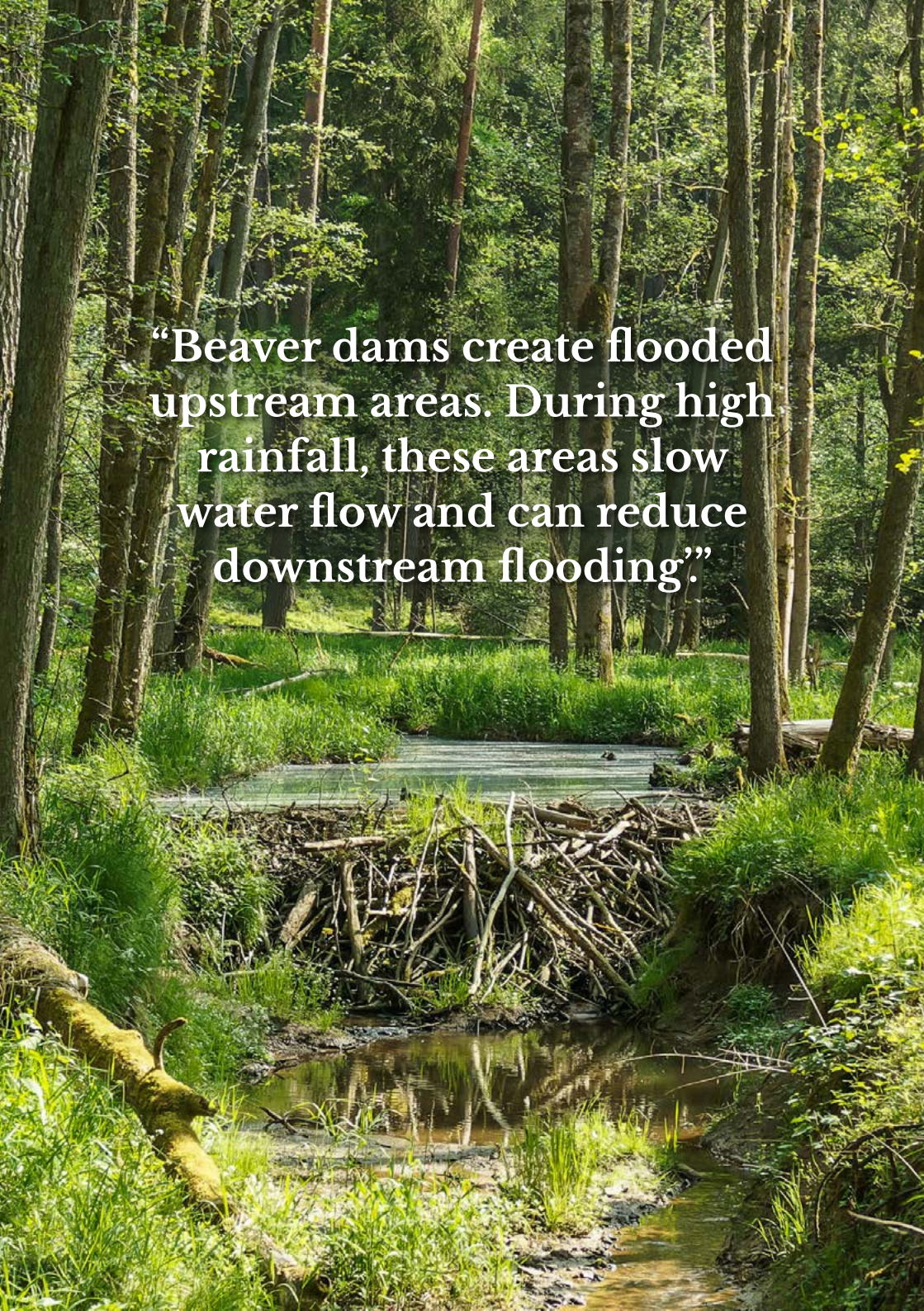
Beavers' Role in Biodiversity and Climate Change

Beavers are renowned as true ecosystem engineers and can play a vital role in boosting biodiversity as well as providing a range of benefits to the local environment. Using their large teeth and powerful jaws, beavers bring down trees and split them into smaller pieces, which they drag into place to build dams. Within the dams, beavers use sticks and mud (which adds insulation) to build lodges to live in. These dams create flooded areas, drowning trees (which in turn become livable habitats themselves), and create pools and channels which store nutrients and provide habitats for other wildlife.

These beaver-modified habitats are beneficial for a whole host of wildlife, including bats, birds, small mammals, fish, and amphibians. For example, beaver habitats can benefit water voles because beavers create ponds behind their dams and channels to move water around their areas, which are perfect water vole habitats. In return, water vole droppings act as a natural fertiliser – rich in nutrients that can encourage the growth of vegetation around the dam, which helps to stabilise the structure and prevent erosion. The resulting increase in vegetation can provide food and habitat for other wildlife, further enhancing local biodiversity. The build-up of silt in beaver dams also locks up carbon, while the increased plant growth creates a carbon sink.

At the back of the booklet you can see a full size version of Jeroen Helmer's illustration demonstrating the benefits of Beavers as a keystone species.



A photograph of a forest stream. In the foreground, a small pool of water reflects the surrounding greenery. A large, intricate dam made of sticks and branches blocks the stream. Behind the dam, the water is calm and reflects the sky. The background is a dense forest of tall, thin trees with lush green foliage. The text is overlaid on the upper part of the image.

“Beaver dams create flooded upstream areas. During high rainfall, these areas slow water flow and can reduce downstream flooding.”

Beavers and Water

Bringing healthy beaver populations back to Cornish upland areas could benefit the flow and quality of downstream water, not just to wildlife but to the communities that live in those downstream areas.

There is strong evidence that beaver activity can contribute to water supply and purification, moderation of extreme events, nutrient cycling and river restoration.

Beaver dams create flooded upstream areas. During high rainfall, these areas slow water flow and can reduce downstream flooding. During low rainfall or drought, beaver areas store water and release it more slowly, meaning there will be more water for longer.

Beaver dams also slow and filter water, which causes sediment and nutrients to settle in the ponds behind the dams. These habitats also reduce nitrogen pollution, with bacteria in the ponds digesting nitrates while sediments trap other pollutants.



Beaver Diets

Despite misconceptions still widespread today, beavers do not eat fish. Beavers are, in fact, entirely herbivorous, maintaining themselves on a plant-based diet of tree bark, leaves and aquatic plants. The favourite foods of the beaver are aspen and willow, the latter being a particularly robust tree which has adapted over millions of years to be cut back and regrown, largely due to its deliciousness to wildlife. Millions of years ago, it would have not just been beavers feasting on willow, but large mammals such as elephants would have also roamed the land we now live on. Trees, such as willow, hazel, ash and others, have evolved to regrow vigorously after having their shoots eaten by elephants and other large beasts. Humans have benefitted for thousands of years from the benefits of this through the sustainable forestry practice of coppicing. Beavers also eat understory plants, such as brambles and ferns and are known to enjoy invasive plants such as Himalayan balsam. While their diets are nutrient-poor, beavers tend to carry worms in their digestive system to help them digest, while they will also eat their faeces to help them ingest as many nutrients as possible.



Coppiced Trees



Invasive Himalayan Balsam



“In 2022, after a consultation on wild beavers, they were reclassified as native species in England and given Schedule 2 protection status”

The Return of the Beaver

Beaver populations have been recovering across Europe since the early twentieth century. Conservation efforts have led to protective legislation and reintroduction projects in many countries since the 1920s. The UK has been slower in progress than on the continent, with the first wild beaver release in Scotland in 2009. Beavers have also been classified as a native species in Scotland and granted European Protected Species status since 2019.

In England, Kent Wildlife Trust pioneered the release of beavers into a 30-acre fenced enclosure at Ham Fen in 2001. The pair of Norwegian beavers have since happily made their home there, in turn helping to conserve the fen by modifying the landscape, and have grown their family to 10. Since then, close to 30 beaver enclosures have been opened in England.

In 2014, wild beavers were found to be living in the River Otter and were licenced for removal by the government. It's unknown where they came from, but they were likely either illegally released or had escaped from an established enclosure and gone unreported. After successful lobbying from the local community and Devon Wildlife Trust, the trust was allowed to leave the beavers in situ and monitor them for five years. Thankfully, the trial was a success, and in 2020, the government came to a landmark decision and allowed the beavers to remain in the wild. In 2022, after a consultation on wild beavers, they were reclassified as a native species in England and given Schedule 2 protection status, paving the way for future wild releases.

In February 2025, the government finally announced the news we had all been waiting for: for the first time, wild beaver releases in England will be allowed under license. Just a week later, the National Trust released the first two pairs of Eurasian beavers legally into the wild in Purbeck, Dorset.

Beavers in Cornwall

The Cornwall Beaver Project, a 5.5-hectare site at Woodland Valley Farm near Laddock, was launched in 2017. For the first time, a pair of beavers were released into an enclosure on Cornish soil and in the following spring, a pair of kits were born. In the years since, several similar projects have been established, with beaver enclosures now occupied at the Cornwall Seal Sanctuary, the Trewithen Estate, Cabilla, Hammartaethy Farm and The Lost Gardens of Helligan.

Then, last year, Cornwall Wildlife Trust acquired Helman Tor – a 700-acre site of mixed environment landscape in mid-Cornwall. Not long after acquiring the site, the trust was notified of a possible beaver sighting by a member of the public. After deploying camera traps, the trust soon confirmed that wild beavers were already living on Helman Tor, like those River Otter beavers, either released illegally or escaped unreported from an enclosure.

With the legal question of wild beaver releases now answered, Cornwall Wildlife Trust is working towards a relatively large-scale reintroduction programme in the Par and River Fowey catchment area towards the east of Cornwall and hopes to reintroduce more beavers to Helman Tor.

You can read more about the Kernow Conservation Beaver Project at the end of this guide.



Beaver Dam at The Cornwall Beaver Project, Laddock



“With beaver populations increasing, the way we adapt to living alongside them will be key to their long-term survival.”

Beavers and people

With beaver populations increasing, the way we adapt to living alongside them will be key to their long-term survival. Issues arise when beaver dams cause flooding to adjacent agricultural land. Or when they turn their teeth to trees and woodlands we want to protect. But measures can be taken to mitigate these issues. Wire mesh can be wrapped around the trunks, or gum can be applied to deter beavers from damaging certain trees. Beavers actually prefer young shoots, so fast-growing trees such as willow can be planted to attract the beavers to certain areas and divert them away from others.

In future, public engagement and awareness will be vital, particularly among farming and landowning communities near beaver dams. In Bavaria, where wild beaver reintroductions are at a much more advanced stage than in the UK, regional beaver ambassadors have been used to great effect. Coming in to mediate, educate and find solutions to issues arising when beavers and humans coexist. A similar model here will be needed to ensure the journey to the coexistence of humans and beavers in 21st-century Cornwall is a success.

It's worth remembering that beavers were here for 30 million years before being wiped out just 500 years ago. It's the absence of beavers in our landscape that is unusual. Our native flora and fauna have already adapted to living with beavers millions of years ago. It is we who need to adapt when beavers become our neighbours once again.



In late 2024, we ran a Crowdfunder campaign to launch our beaver project. If you've read this guide, there's a good chance you contributed to that campaign, so from all of us at Kernow Conservation, thank you! Although we didn't reach our overall target for the campaign, we still raised almost £20k, which was enough to launch our project in early 2025.

We are embarking on a long-term project to identify suitable locations, engage with landowners and communities in Cornwall, and gather evidence to obtain the required licence that will lead us to an eventual beaver release. The law change in February has given us renewed purpose, and although initial landowner engagement is ongoing, we are already having positive conversations and have a growing list of potential sites for wild beaver releases. This law change also poses challenges to an organisation of our size. To obtain a license, projects must undergo a rigorous application process with large, whole catchment-scale projects required. Projects must be funded and fully cost-accounted for ten-year periods to ensure the impacts of beaver reintroductions are fully mitigated and that the genetic diversity of the animals is preserved.

For the first year of our project, we'll engage with landowners and other stakeholders in potential areas for beaver reintroduction. We will also look to forge partnerships and find allies to expand the range and scope of our project with a view to a future license application.

We will update all of our followers, supporters and members along the way, and we'll be beavering away on the documentary film of this journey. Keep following us for updates, and watch out for our newsletters.

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Written by Joe Marshall

Design by Louise Dawson @plant.life.creative

Photos:

Pg 1: Tim Umphreys

Pg 2: Paul Massie Pg 3: McGill Library

Pg 5: Robert Mertl Pg 10 & 13: David Carrier

Illustration: The Beaver, a Keystone Species

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The Beaver

a keystone species

When there is a lot of rain, beaver dams hold back the water in natural valleys. Thus there will be less flooding downstream.

Large grazers eat from twigs of the felled trees, the stump regrowth, and the meadows that arise after departure of the beavers

Drowned trees are loved by woodpeckers and bats, and they serve as a lookout for birds of prey

Martens find shelter in beaver burrows and profit, like kingfishers, from the temporarily ice-free state of beaver pools



Fish, amphibians, dragonflies, marsh plants, and water birds thrive in beaver pools