

BEAVER CONFERENCE 2023

RESTORING BEAVERS TO
THE BRITISH LANDSCAPE

UNIVERSITY OF EXETER 18-20 APRIL

CONFERENCE SUMMARY REPORT



**BEAVER
TRUST**



University
of Exeter



**Devon
Wildlife Trust**



Beaver Trust CEO, Sandra King welcomes over 230 international delegates to the **Beaver Conference 2023**, hosted by the University of Exeter.

A three-day landmark gathering around the latest research, policy & practitioner experience of beaver restoration.



OVERALL AIM OF THE CONFERENCE

To share state of the art understanding from research, policy and practitioner experience of beaver restoration - enabling us to address the challenges and opportunities ahead.

CONFERENCE PROGRAMME

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Lorna Slater,
*MSP for Green Skills,
Circular Economy & Biodiversity*

Professor Richard Brazier,
CREWW Director

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KEYNOTE

Dr Tony Juniper CBE,
Chair, Natural England

“Beavers are unusually rich in the benefits they can bring to society.”

HIGHLIGHTS

- Over the past 40 years, new policies and ideas have been introduced.
- We need every tool available to reconnect fragmented areas and return missing species.
- The Beaver Consultation, Natural England’s proposed approach to further reintroductions of beavers in England and their management in the wild, is now with civil servants.

CHALLENGES

- The misconceptions of the risk beavers pose on landscapes and fish.
- Farmland and infrastructure flooding is managed by Natural England’s licensing regime, enabling intervention.
- Communication of complicated scientific subjects.
- Communicating economic opportunities as well as benefits to humans and nature.



SESSION 1

NATIONAL POLICY



TALK 1

BEAVERS IN ENGLAND: WHAT DO WE WANT?

National-scale, integrated and strategic thinking around beaver reintroduction.

How reintroduction in England should have happened:

- As a concerted effort of collaborative decision making, following IUCN guidelines.

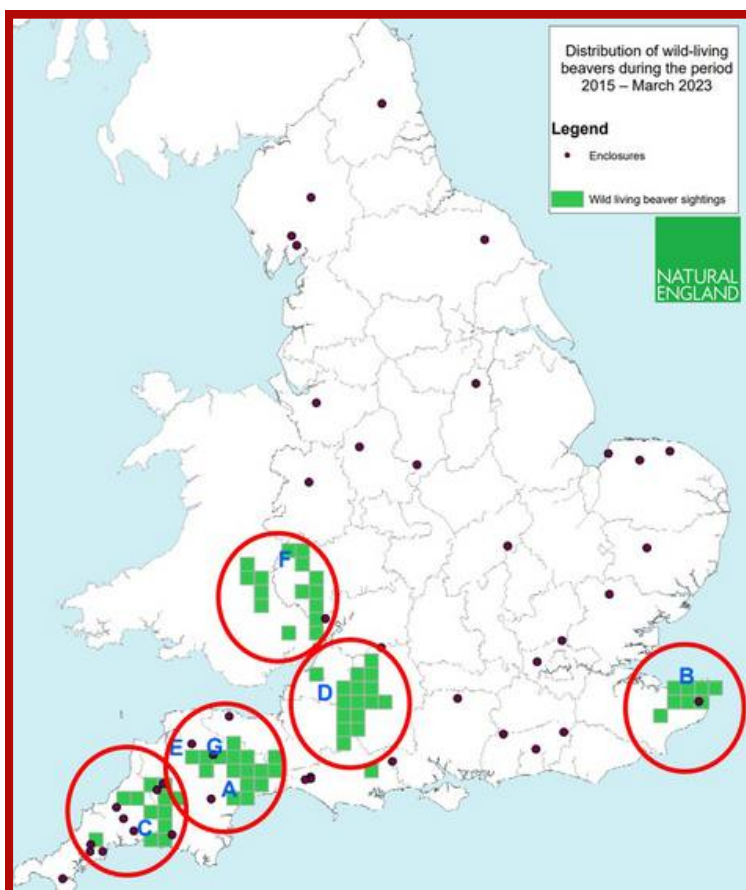
How reintroduction in England has happened:

- Releases to enclosures and wild populations emerging via escapes and illegal releases.

The River Otter Beaver Trial (ROBT) ran scientific studies to work through the mechanics of managing various conflict situations. The trial successfully paved the way for species restoration, but more needs to be done to ensure:

- The other free-living populations are healthy and resilient;
- There is a future for beavers outside of enclosures;
- We have the right mechanisms in place to learn to coexist with beavers;
- We prevent further escapes and illegal releases, which jeopardise future reintroductions.

These goals will require well-planned systems to help people adapt. The challenge is exploring how best to integrate existing policies with beaver policy and research will provide the necessary guidance for project facilitators.



Delphine Pouget,

*Principal Adviser - Species Recovery
& Reintroduction, Natural England*

TALK 2

BEAVERS IN SCOTLAND: LOOKING TO 2045

In the 2009 Scottish Beaver Trial, the Scottish Government authorised the first ever licensed mammal reintroduction. Now, with over 255 active beaver territories, the species has a significant media profile.

Scotland's Beaver Strategy: 2022 - 2045

was collaboratively designed and owned by stakeholders, reflecting the aspirations and concerns of 45 organisations.

The Scottish Beaver Advisory Group (SBAG)

'monitors, reviews and guides implementation of the strategy', fostering a collaborative rebuilding of trust.

The Scottish Code sets out socio-economic issues alongside the biological, acknowledging a complex learning process and the need to share guidance.

Major management challenges include the breakdown in stakeholder trust and the polarisation of views on human-wildlife conflict. Resourcing the new strategy and framework will open discussions and identify solutions.



Dr Martin Gaywood,
Species Project Manager, NatureScot





TALK 3

BEAVERS IN WALES: WHERE NEXT?

Natural Resources Wales (NRW) recognises the benefits of beaver reintroduction, whilst reviewing evidence and considering the concerns in the context of Wales' five enclosure sites and reports of wild beavers.

The Welsh government has provided some project funding. However, Julie James, Welsh Minister for Climate Change, wants a clearer policy position regarding beavers' role in Welsh ecosystems.

Surveys on the River Wye in 2019 outlined four areas of wild beavers, but no strong evidence of breeding. The 2020 River Dyfi survey found small numbers and although no burrows or lodges were found, breeding was suspected.

The NRW corporate plan to 2030 has three wellbeing objectives:

- Ensure nature is recovering
- Climate change resilience for communities
- Minimise pollution



Dr Liz Halliwell,

*Team Leader - Terrestrial Ecosystems
& Species, Natural Resources Wales*



SESSION 2

ACADEMIA

TALK 1

MAPPING & MONITORING ECOHYDROLOGICAL CHANGE WITH BEAVERS

- Direct evidence of the benefits of beaver reintroduction, highlighted in modelling work, could influence DEFRA policy.
- Their role in catchment management and habitat enhancement could be huge, but they're returning to a different environment.
- Drone footage is useful to observe structural and functional river change.

Beavers' notable ecohydrological impacts

- Beaver systems reconnect floodplains laterally, especially important during droughts.
- Water quality is improved with reduced sediment, nitrates and phosphate.
- Beavers enhance carbon depleted landscapes, storing dissolved organic carbon.
- Beaver habitats store sediment and nutrients.
- Modelling of potential hydrological change helps to understand local and downstream flooding.
- 28% of British watercourses have suitable space for beaver habitats.



Professor Richard Brazier,
CREWW Director, University of Exeter CREWW



TALK 2

RENEWING COEXISTENCE WITH THE BEAVER

Renewed coexistence with a species, historically present in the landscape, emphasises the need to consider human dimensions and pre-existing learning from the early stages of a sustainable species-return project.

The benefits of beaver tourism were highlighted in the River Otter Beaver Trial. Increased footfall near the site had economic benefits, especially where businesses incorporated beaver-related products and events. This positive outcome should be encouraged. However, whether this scale of benefits persists as beavers become more widespread, can only be speculated.

How can sustained coexistence normalise beavers as wild rather than reintroduced?

Observed conflicts in the River Otter Beaver Trial included flooded agricultural land, felled trees of social importance, and collapsed burrows.

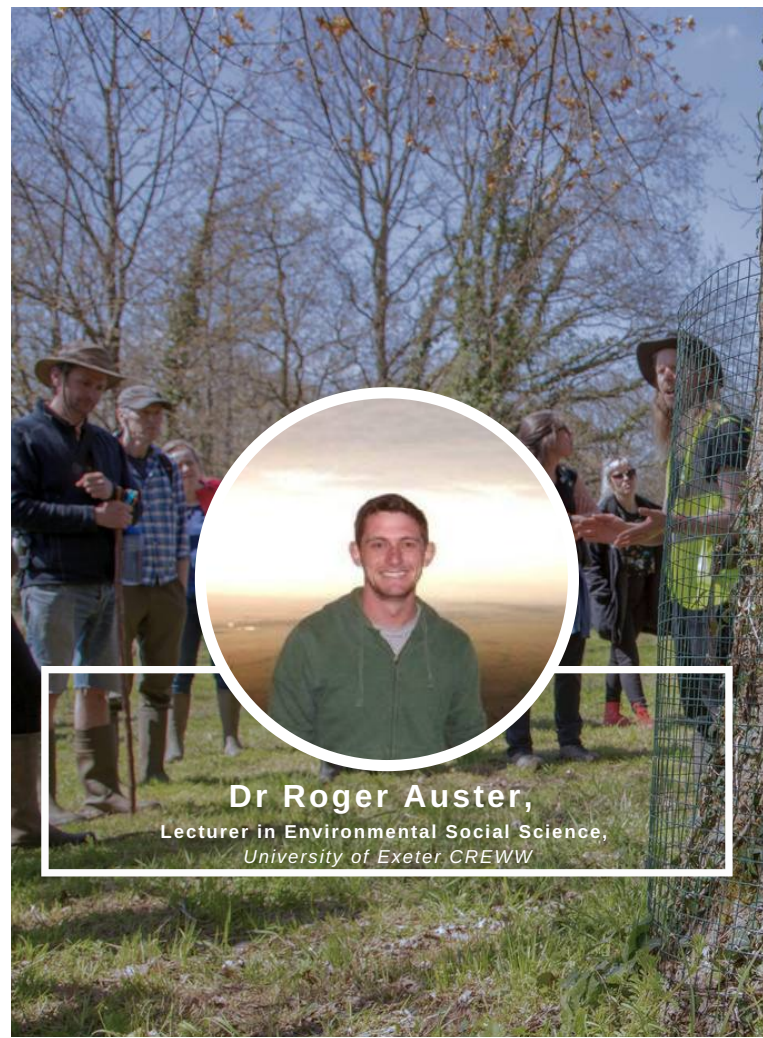
Interviews uncovered preferable engagement methods in conflict response:

- Proactive engagement and appropriate, honest and sympathetic communication build trust and facilitate shared decision-making.
- Those who perceive a link between the species and the people who reintroduced them have higher expectations of management response.
- Researching normalisation of a species as wild is recommended, as locals will need to be provided certainty around future management.

Beaver Management Groups (BMG) familiarise stakeholders and land managers with beavers and provide management support in catchment settings. These forums are influenced by resource availability and national policy.

This adaptive process consists of three stages:

1. **Formation** of relationships can be either proactive or reactive. Reactive groups may need higher investment to build trust.
2. A **functioning** BMG adapts to changing circumstances, adopting new people with new impacts and others leaving once familiar with beaver management actions.
3. **Future** familiarity of widespread beavers may alter the long-term role of BMGs. One in every catchment may be a resourcing challenge, especially if beavers become normalised as wildlife. Over time, their activities could integrate into existing organisations.



Dr Roger Auster,

Lecturer in Environmental Social Science,
University of Exeter CREWW

TALK 3

BEAVERS AND FISH

The ecosystem services beavers provide stem from heterogeneity, connectivity and a biodiversity increase at the landscape scale, whereas any change manifests at the river-reach scale.

Beaver habitats influence freshwater systems. They retain water and influence fish differently, depending on habitat modifications like water, sediment, temperature and nutrient levels.

Beavers and fish have co-evolved for millennia. Data from studies indicate positive interactions generally outweigh negatives.

Research on juvenile salmonids in Norway, comparing three dam sites with three beaver-free sites, found repeated movement was reduced, but not blocked and migratory movement was modified, whereby more fish crossed mid-reach in the beaver-free sites.

Beaver dams are not impassable. But, notably, a lot of beaver activity occurs where fish can not pass, such as above waterfalls.

“Beaver ponds provide rearing habitat for juvenile fish with increased food, cover and nutrients.”

Overall, the potential for beavers to negatively impact the country in Norway is very low on the grand scale. At the river scale, beavers have an overwhelmingly positive impact on fish populations, even if they have both positive and negative impacts in any one local area.

Research on Alaskan chinook salmon found higher growth rates and larger individuals in early successional beaver habitats than in spring brooks. Again, beaver ponds serve as important winter rearing grounds, especially with the presence of slow water.

“Beaver habitats correlate with the survival of fish species that otherwise wouldn't be present.”

Systems-level research on both adult and juvenile fish is needed and on greater scales to understand population dynamics, as well as linking the life history of fish species and food web linkages in the context of human-altered landscapes.



Dr Rachel Malison,

*Assistant Research Professor, Flathead Lake
Biological Station, University of Montana USA*





SESSION 3

MANAGEMENT PRACTITIONERS

TALK 1

GENETIC DIVERSITY IN BRITISH BEAVERS: SCREENING & STUD-BOOK MANAGEMENT

"We can't reproduce what the original British beaver once was, but we can find a way to maximise genetic diversity for long-term viability."

Knowledge of genetic diversity and genetics tools are vital to the Eurasian beaver's ability to adapt to recent reintroductions across Britain. The British population, mostly of Bavarian origin, is more diverse than expected. However, they're isolated, so need to be managed carefully.

Population identification and measures of genetic diversity have informed founder selection, assessed populations and informed animal management.

The Eurasian beaver has recovered from small, homogenous populations and now diversity ranges across Europe. However, accessing samples for ancient DNA studies from museums can be difficult.

Rapid genetic field tests or examination of anal gland secretions can determine North American and Eurasian species, which don't hybridise.

Beaver releases from unknown origins may present health risks and failure due to a lack of genetic diversity and adaptation to future events.

To ensure long-term health and viability, beaver numbers should be increased to facilitate connectivity with future consideration of novel diversity introduction.'

Moving animals away from the threat of lethal control in Scotland to other British projects is a priority for genetic diversity.

The population should be managed as a meta-population:

- Importations are politically difficult and restricted due to disease risk, animal welfare challenges, resource implications and ethical considerations of lethal control.
- Managing as a meta-population requires using the stud-book to maximise genetic diversity.



Dr Roisin Campbell-Palmer

Head of Restoration, Beaver Trust

TALK 2

HEALTH AND WELFARE DURING
BEAVER TRANSLOCATIONS

The survival rate of 92 beavers translocated over three years is 90% to one year post-translocation for adults and 87% of all ages. There have been no fatalities during trapping.

Trapping and translocation is legally constrained and vets are liable, for disease risk to humans, domestic animals and other wildlife. Continued disease risk analysis and biobanking baseline samples will mitigate future emerging diseases.

Beavers are social animals, prone to stress in captivity, which is part of the complexity of pre-translocation trapping and testing. Assessing beaver welfare on an individual, family group and species basis is challenging as they are shy, nocturnal species that hide symptoms.

There is debate over the level of intervention, the cost of testing procedures, invasiveness and anaesthesia versus conscious examinations. It is also illegal to transport a pregnant beaver that might give birth during transport.



Dr Romain Pizzi,

*Specialist Wildlife Veterinarian,
Beaver Trust & Five Sisters Zoo*

TALK 3

A NORTH AMERICAN
PERSPECTIVE ON BEAVER
RESTORATION

Lessons from the US need to consider scale difference, as there is more potential for conflict in the UK, and state-by-state legal differences.

The California partnership welcomed beavers as a nature-based solution to wildfires and climate resilience. They identified additional staff to support expansion by coordinating restoration, revising policies, demonstrating benefits, mitigating human-beaver conflict, modelling habitat suitability and improving public awareness.

Beavers can be a restoration tool on land suffering from agricultural runoff and nutrient loss, and could return wood debris to British river systems. River system functionality underpins restoration measures, as flowing rivers maintain food web connections.

US concerns include:

- The disruption of fish migration.
- Debris and dams building up fine sediment.
- Waterlogging of adjacent land.
- Increased temperatures.
- Stakeholder conflicts and management costs.



Dr Rachel Malison,

*Assistant Research Professor, Flathead Lake
Biological Station, University of Montana USA*

"Beavers will do in the long term what they do today - and what they did for the last 15 million years."



Gerhard Schwab,

Beaver Manager, Bund Naturschutz in Bayern e.V.

TALK 4

LESSONS FROM EUROPE: WHAT DOES LIVING WITH BEAVERS IN THE LONG TERM LOOK LIKE?

Whilst there is debate over the long-term consequences of living with beavers, their behaviour will remain consistent.

Most people are in favour, but conflict at buffer zones will require people to abandon land with financial compensation or incentives.

"We should give beavers and other burrowing animals space along river banks in sensitive areas."

Although beavers do transform their chosen habitats, **over 95% of land will be unaffected by beavers**. University of Exeter modelling of a 20m buffer on either side of all streams and rivers, typically only covers 5% of the total catchment.

The long-term future of beavers depends on people. Field trips, public engagement, and science communication resources can connect people with beavers.

"It's not reinventing the wheel, and not everything will work in Britain, but we know what tools are available."



SESSION 4

LANDOWNERS PERSPECTIVES

TALK 1

THE NATIONAL TRUST'S APPROACH TO MANAGING BEAVERS IN THE BRITISH COUNTRYSIDE

25,000 hectares of National Trust land has been restored, plus an additional 25,000 hectares through partnerships.

University of Exeter data monitoring sites, at Holnicote, Exmoor and the South Downs, suggest that beavers slow, store and filter water.

Beaver Dam Analogues (BDA) are in use, enabling progress to be made at a wild release site in Purbeck.

River restoration schemes need to be funded, as UK wetlands disappear. Beavers cannot fix it all, however, the flood and drought resilience they offer is a great climate adaptation.

Using catchment mapping can help take advantage of the opportunities the species provides.

The National Trust hopes to reconnect people and nature by diversifying membership and working with tenant farmers on river corridors.

"Overall, there is an ethical imperative for the species to exist on their own.

We've got locked into a benefits debate, when we have to prioritise coexistence."



Dr Stewart Clarke,
Project Manager, National Trust

TALK 2

BEAVERS AT LOWTHER ESTATE: A FARMER'S PERSPECTIVE

"Increasing riparian zones are breathing life into the depleted uplands of England."

This 2,500 hectare farm was once intensively farmed, with 10,000 sheep on depleted land.

Today, 120 English longhorn sheep are managed with no fence collar tech for rotational grazing, no supplementary feed or winter housing. And a 26 acre enclosure, already unsuitable for livestock, now supports a family of beavers who can be beneficial with minimal negative impact.

Beavers made an impact on the farm by linking to man-made water channels, which helps meet targets for environmental schemes and maintain habitat for breeding waders. During drought, beavers help grass growth on cattle pasture.

Beavers are re-wetting the land and

increasing biodiversity by expanding ponds and damming the stream course. The return of kingfishers indicates the presence of fish in waters previously surveyed as empty, and lapwings have taken winter refuge in the beaver enclosure.

This regenerative change is unaffordable and unknown for most productive arable farms.

However, farms like Lowther have the opportunity to engage with the community through science communication and sharing the methods by which it now profits from environmental schemes, wood pasture creation, eco-tourism and beef sales.

By diversifying, they are less vulnerable to business costs. Furthermore, flood reduction and biodiversity improvements build a more resilient farm landscape.



Jim Bliss,
*Assistant Estate Manager,
Lowther Estate Cumbria*



TALK 3

THE WILDLIFE TRUSTS' APPROACH TO WILD BEAVER RELEASES

"As I stand here talking, we are losing biodiversity. At The Wildlife Trusts, we don't believe that's acceptable."

The Wildlife Trust's strategy to return wild beavers to every river catchment in Britain hinges on their capability to mitigate extreme climate change events by adapting habitats cost-effectively.

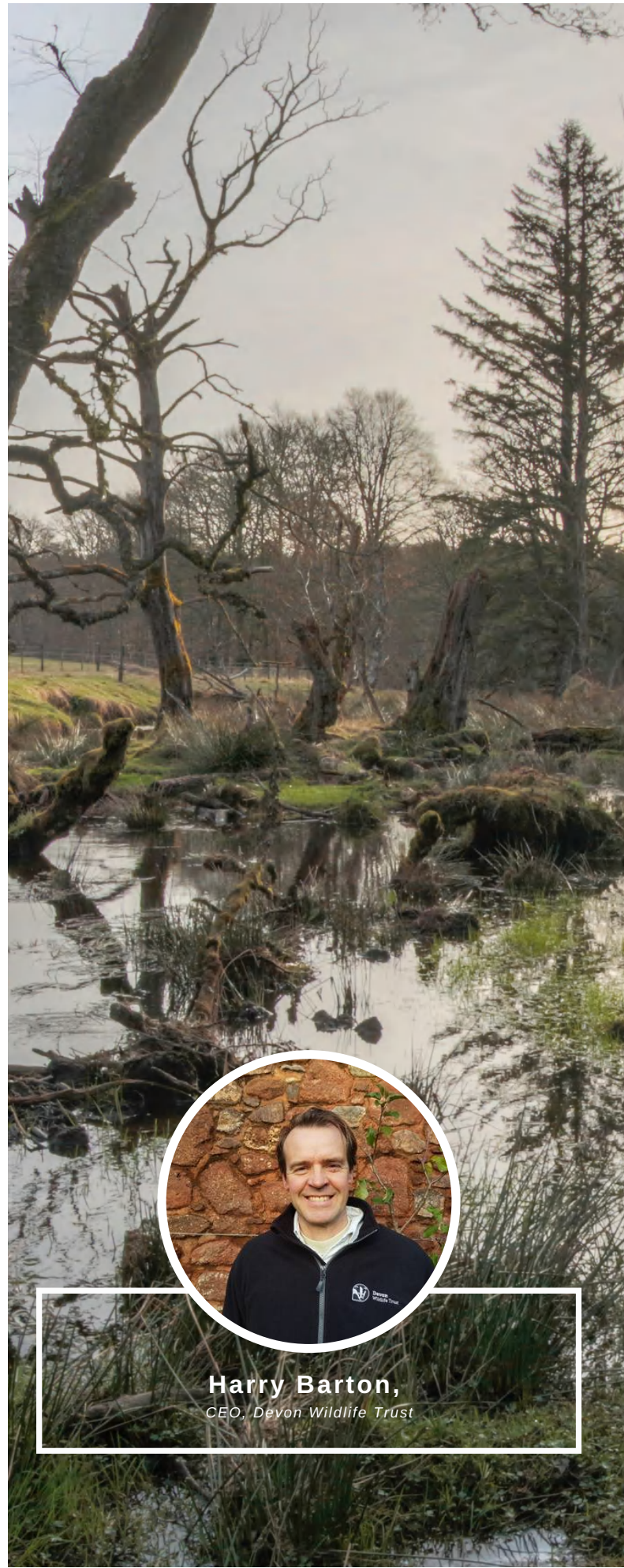
What are the keys to a successful release?

- Develop partnerships on the back of recent positive changes and offer incentives rather than compensation to stakeholders. This is how to spend current money more wisely.
- Take responsibility for beavers, no matter how they got into a waterway and resolve any landowner issues quickly.
- Host community consultations to reassure concerned parties.

What needs to change?

Ongoing uncertainty on the legal status of wild beaver populations is damaging to reintroduction. A full government buy-in and an ambitious, considered and well-funded strategy of reintroduction is required.

The chance for a natural recolonisation has been lost, so beaver management practitioners need to prioritise advice and support, giving foresight to the way the species can heavily modify hydrology.



Harry Barton,
CEO, Devon Wildlife Trust

TALK 4

BEAVERS & FARMING: GETTING THE BALANCE RIGHT

Busy farmers are balancing government scrutiny and small budgets for huge areas, so most won't be thinking about beavers, despite enormous enthusiasm in sections of the public.

Good relationships between farming and conservation need to be encouraged.

Land Use Frameworks are welcome, but should've been done earlier as farms are interested in carbon emissions, nature and Net Zero. In fact, farmers often boost biodiversity on farms without government support.

Farmers are concerned with consumer behaviour change and any possible crop damage, as they are businesses working to global production targets.

Because farming is about water level management, beaver infrastructure can be concerning from a cost and management perspective, making it essential to engage with Internal Drainage Boards (IDB). Footpath flooding from burrows also carries safety issues.

The lack of any government-allocated budget is a worry. If this is a wild animal, with no liability for damage, will the costs just fall on economically-squeezed farmers and create more division? Does the management structure, people and funding exist to support large numbers of beavers?

The NFU is challenged with many current complications, so engagement with farmers and realistic initial habitats for wild beavers is essential.



Richard Bramley,
Mañor Farm & Environment Forum Chair,
National Farmers Union



New Education

- Informal activities
 - Diorama
 - Dam building
 - Fun activities
- Formal learning:
 - KS1&2 Curriculum linked (Eng) lesson packs - 6 week sequences;
 - Geography
 - Science
 - Guided reading
 - History
 - Writing
 - Fieldtrip guide

BEAVER TRUST

KS1 Guided Reading Lesson: discussion points & tasks

This resource is designed to be used as part of a lesson on the story of the beaver. It includes the text, teacher marking points, discussion questions and tasks.

Little Beaver and the Log, by Amy MacDonald

Little Beaver is alone on the edge of a pond. He has no family or friends. One day he meets a squirrel and a mole. Together they help him build a dam and a home. The story follows his journey to find a new home.

Class Information:

Title: Little Beaver and the Log

Author: Amy MacDonald

Year Group: Year 1

Read the story as a class, encouraging pupils to make predictions to discuss the story events and characters and their feelings.

Learning Objectives:

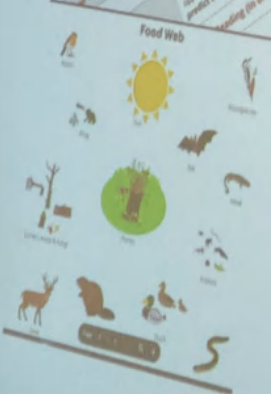
Identify the main characters in the story.

Describe the setting of the story.

Explain why Little Beaver needs a home.

Describe how Little Beaver and his friends build a dam.

Describe how Little Beaver and his friends build a home.



Special features of the Eurasian beaver

Answer sheet

1. What is a special feature of the Eurasian beaver?

2. How does the beaver use its teeth?

3. How does the beaver use its tail?

4. How does the beaver use its webbed feet?

5. How does the beaver use its long nose?

6. How does the beaver use its long ears?

7. How does the beaver use its long tail?

8. How does the beaver use its long nose?

9. How does the beaver use its long ears?

10. How does the beaver use its long tail?

EDUCATION PACK

DAY 2

WORKSHOPS

WORKSHOP 1

BEAVERS AS HABITAT RESTORATION AND FLOOD MANAGEMENT TOOLS: LESSONS FROM CASE STUDIES

Dr Alan Puttock, Ecohydrologist & Research Fellow, University of Exeter CREWW
Matthew Moore, Flood Partnership Manager, Anglian Water

Beavers are a genuine nature-based solution

delivering natural flood management benefits. The uncertainty around how beavers modify man-made landscapes can be addressed with increased monitoring, mapping, understanding and new techniques, to maximise their benefits. Lots of studies have been on enclosed beavers, but results from wild populations are growing.

There is a nuance to funding beaver activity.

We can't capitalise a beaver dam, so incorporating existing funding mechanisms is a challenge. Maximising the success of beavers as a restoration tool is about identifying material things you can capitalise and increasing downstream infrastructure resilience.

WORKSHOP 3

A WATER COMPANY'S PERSPECTIVE: RISKS, OPPORTUNITIES, ATTITUDES AND FUNDING PARTNERSHIPS

Kate Hills, Bio-security and Invasives Manager, South West Water
Rebecca Northey, Bio-security and Invasives Officer, South West Water
Carolyn Cadman, Director of Natural Resources, South West Water

On the River Tamar, beavers are changing water courses and South West Water (SWW) recognises beavers as an inevitable part of their strategy.

Upstream thinking is a vital part of the strategic toolkit to change the business model, making beavers a positive part of the solution.

WORKSHOP 2

GREEN FINANCE: NAVIGATING THE OPPORTUNITIES AND PITFALLS

Dr Matt Holden, Beaver Project Lead, Devon Wildlife Trust
Dr Holly Barclay, Green Finance Officer, Devon Wildlife Trust

Whilst a clear government push to explore private sector funding for nature recovery is appealing, this new approach needs:

- To compliment existing and new public funding schemes (e.g. ELMs).
- Long-term, standardised and consistent government support.
- More pilot studies to demonstrate successful public/private payments for beaver wetlands.
- To focus on rewarding landowners for making space for riparian habitats.
- Schemes like Biodiversity Net Gain, Carbon Markets and Nutrient Neutrality to work for beaver habitats.
- Development of new markets for other ecosystem services.
- Systematic change where corporations fund nature (e.g. Triodos' redistribution of funds).
- To better direct environmental taxation into nature recovery.

Working with other water companies, SWW is keen to set up a water company 'beaver forum' for case studies, collaboration and learning.

Modelling beaver movements requires risk assessments and funding. Engagement with stakeholder groups will help plan a budget.

WORKSHOP 4

BEAVER MANAGEMENT: FINDING LOCAL GROUPS, SHARING BEST PRACTICES & ENGAGING WITH ONLINE RESOURCES

Pete Burgess, *Director of Nature Recovery, Devon Wildlife Trust*
Dr Rob Needham, *Restoration Manager, Beaver Trust*
Amy Fitzmaurice, *Beaver Project Manager, Kent Wildlife Trust*

People will learn renewed coexistence. But, as beavers are managed differently to fox and deer, what will this look like? How will it differ from urban areas to the countryside?

Incentives are better than compensation for stakeholders in a beaver-human coexistence strategy.

Beaver Management Groups (BMG) need to follow a hierarchy of education and awareness, risk avoidance, mitigation, translocation and lethal control. They involve three phases:

1. **Building** a BMG is long-term and any impact and subsequent work depends on the environment you're operating within.
2. **Establishing** BMG objectives and asking who implements them and which stakeholders are involved, will inform the next steps. Combine dam-capacity modelling and suitability models to identify problems, then focus intentions on preventing issues arising in these areas.
3. **Maintaining** a BMG needs to be dynamic and adaptable. As beaver populations change, so will management and mitigation. BMGs must provide a moving front line to build trust among stakeholders.

BMGs are resource and time intensive.
Will they be sustainable in 10 years?

WORKSHOP 5

OPPORTUNITIES TO INSPIRE THE NEXT GENERATION THROUGH BEAVER EDUCATION

Olwen Hemmings, *Co-founder, Heart of Argyll Wildlife Organisation*
Eva Bishop, *Head of Communications, Beaver Trust*

Education underpins all discussion on beaver reintroduction. It's vital to **teach the teachers**, support time-poor but passionate educators, and provide support to colleges during teacher training.

Beavers should be in curriculums across land management courses, agricultural colleges and Forest School qualifications. Unfortunately, the English curriculum is less flexible than in Scotland and the role of beavers in the arts is often overlooked, despite huge potential to engage new audiences.

Equality, diversity and inclusion is a priority. Considering accessibility, funding and resources for urban schools experiencing rural habitats help will improve connection with nature.

Beaver Trust is developing a beaver education hub to plug knowledge gaps across age groups.

Visual building activities deconstructing habitats can cement learning, like subtracting beavers from a diorama to see how the landscape changes.



WORKSHOP 6

COMMUNITY CONSULTATION FOR BEAVER WILD RELEASE: SHARING LESSONS ON CONSTRUCTIVE LOCAL STAKEHOLDER ENGAGEMENT

Alan McDonnell, *Programme Development Manager, Trees For Life*
Paula Baker, *Site Manager, Loch Lomond, RSPB*

Best practice from consultations at RSPB Loch Lomond National Nature Reserve and Glen Affric, Scotland, with Trees for Life:

- Don't assume prior knowledge.
- **Identify key groups to proactively avoid conflict** and treat negative perspectives with genuine curiosity and compassion.
- **Reinforce the positive effects of beavers.**
- Be proportionate. Focus on a reasonable list of people and what can be replicated by a small landowner doing a release.
- What is the **purpose of engagement?**
- Introducing ideas before you've identified a site reduces conflict and builds trust.
- Avoid a fixed time scale and reduce pressure.
- Find out **local issues** and who to talk with to formulate a future approach.
- External stakeholders should be respected.
- Talk about **coexistence**.
- There is a wide range of potential stakeholders that can be easily overlooked.
- **Engage audiences** with location-tailored methods to identify individual concerns.
- Ensure sufficient time to feedback ideas, helping solve concerns.
- Ensure you have a **consistent message** internally and externally.
- Don't be tokenistic with engagement; don't be afraid to say you don't know.

WORKSHOP 7

THINKING AHEAD: HOW TO PREPARE FOR A BEAVER LICENCE APPLICATION

Dr Stuart Otway, *Principal Project Manager, Natural England*
Dr Jenny Bryce, *Wildlife Ecologist, NatureScot*

Both Scotland and England's codes are built on IUCN guidelines, which provide common ground for reintroductions. However, having separate codes and catchment scale assessments is challenging.

In England, there will be a pre-application process and guidance on how to enter the application process. This aims to improve applicant success and actively discourage applicants applying from unsuitable areas, or those with weak applications.

When applying for a licence, consider:

- Is the project legal?
- Has it got a defined purpose?
- Does it maximise success from a genetic diversity, health and welfare perspective?
- What's in place for governance resources, stakeholder engagement and public consultation?
- Has it identified biodiversity risks?
- Has it considered socio-economics?
- Has it got management / mitigation in place?

The importance of stakeholder engagement / risk management / monitoring:

- How could we involve infrastructure managers?
- Is the approach in England too onerous for larger catchments with high populations?
- How do we balance the present licence regime to ministers for approval, against what some NGOs see as a demand on time and resources?

Beavers live here
Beavers are currently living and breeding on this section of the River Otter
To ensure

WORKSHOP 8

BEAVER HEALTH & WELFARE: SOURCING, GENETIC TESTING, ONGOING MONITORING AND SCREENING IN ENCLOSURES

Dr Romain Pizzi, *Specialist Wildlife Veterinarian, Five Sisters Zoo*
Dr Roisin Campbell-Palmer, *Head of Restoration, Beaver Trust*

Beaver demand is growing and to avoid tunnel vision, key questions need a renewed perspective.

Animal importation for new blood is difficult in Britain and disease risk is a concern, as is quarantined animal welfare.

Genetic diversity is not as bad as previously thought. However, managing beavers as a metapopulation is key to avoiding problems.

More planned screening training and knowledge sharing are needed. Recognised diagnostics, sample collection and captive husbandry vary in experience of implementation. Pollution issues in industrial landscapes aren't frequent, but disease risk needs modelling.

Only 57% of those surveyed were aware of their legal obligation for the welfare of captured beavers before the conference. The welfare of animals during translocation and post-release depends on more awareness, processes and contingency plans.

WORKSHOP 9

WHAT DO WE STILL NEED TO LEARN ABOUT BEAVERS? IDENTIFYING AND STEERING FUTURE RESEARCH TOPICS

Dr Roo Campbell, *Mammals Adviser, NatureScot*,
Dr Claire Howe, *Senior Specialist, Mammals, Natural England*
Dr Martin Gaywood, *Species Projects Manager, NatureScot*

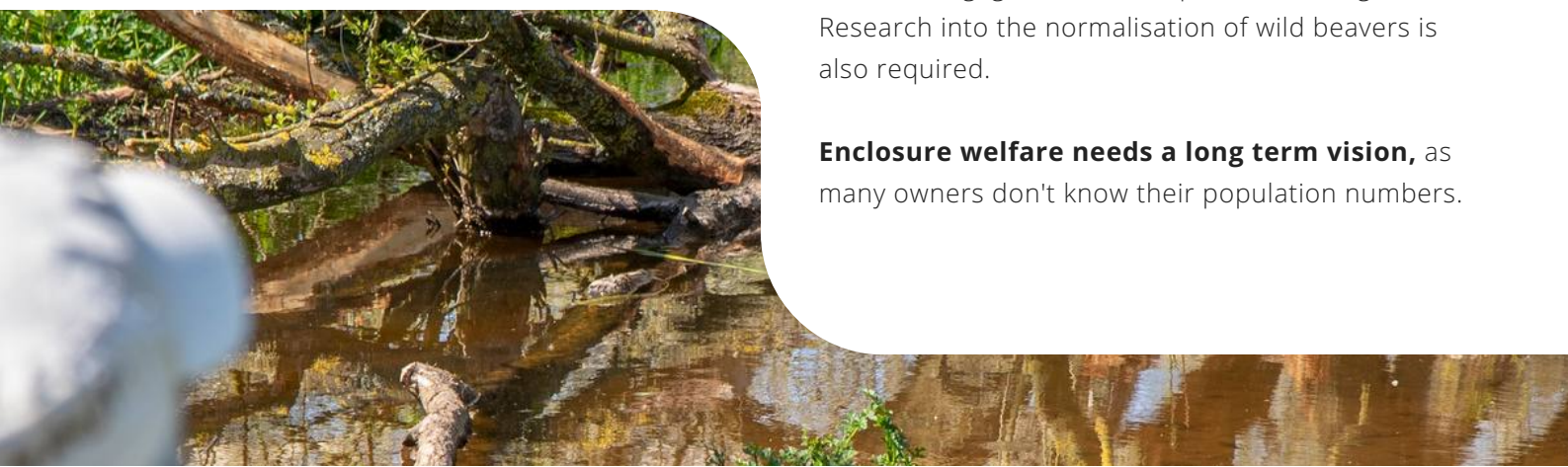
There were fewer research gaps identified in biology / conservation status, indicating knowledge priorities weren't as high. But an understanding of the dispersal process is lacking and genetic diversity needs continued study. There are also gaps in studies investigating the welfare of beavers in braided river systems.

Socio-economic effects of beavers:

- We need appropriate methods and access to datasets for assessing effects of beavers and to promote knowledge sharing.
- We need British research into the impacts of dams on migrating salmonids.
- We need to explore beaver interaction with other protected species, like freshwater pearl mussels, with invasive species, like crayfish, and with deer populations.

Gaps remain in land ownership, stakeholder incentives and legal knowledge of wild-release liability. Knowledge of mitigation methods across different land systems and catchment areas, needs sharing. Standardised management toolkits and effective engagement techniques are lacking. Research into the normalisation of wild beavers is also required.

Enclosure welfare needs a long term vision, as many owners don't know their population numbers.





DAY 3

FIELD TRIPS

- Budleigh Brook Wetlands
- Lower Otter beaver wetland



CLOSING THOUGHTS

Lorna Slater,

MSP for Green Skills, Circular Economy & Biodiversity

“I’m looking forward to a future where communities live with beavers once again.”

- Beavers will make a difference for generations to come.
- There’s not enough focus on the significant benefits beavers can provide.
- We need to think really clearly about promoting the benefits of beavers.

“Beavers are such a different nature story than the one we normally associate with loss and destruction. It is one of renewal and abundance.”

- Beavers are a concrete example of nature loss to nature restored.
- We shouldn't forget wildlife tourism opportunities.
- Appropriate consultation and stakeholder engagement is key.
- No two projects are the same; we learn as we go.
- Gaining support and trust of locals is crucial to long-term success.



CLOSING THOUGHTS

Professor Richard Brazier,
CREWW Director, University of Exeter CREWW

“In 10 years time, I shouldn’t need to be doing research into beaver reintroductions. We should have moved onto other interesting species, such as elk or bison, that might interact with these riparian zones.”

- More coordinated and integrated beaver reintroduction.
- Make time to work between the spaces of our expertise.
- Show collaboration pushing the government for policy change.
- Invite people out to wetlands, especially members of parliament.
- Create two-way dialogues between management groups.

“Managing the riparian zone is essential to make space for nature.”

- Adaptive management processes need collaboration and integration of all other nature recovery plans. But these need financial support.
- Boots on the ground and organisational relationships are critical.
- Beavers will become normal management land practice.
- Promote the right media messages on coexistence and riparian restoration, using positive language like *give back land*.
- Imposing land abandonment for all riparian zones is unreasonable. We must celebrate that variability, and support the areas that can.

BEAVER CONFERENCE 2023

CONFERENCE EVALUATION SUMMARY

THEY SAID, WE SAID

More media presence should have been at the conference:
A deliberate planning decision to enable free and frank debate.

More opposing views should have been invited:
We reached out very proactively for this, but did not achieve desired uptake.

More content from real life experiences could be included:
This was the focus of days 2 & 3, however some participants solely attended day 1.

More workshops should be geared to helping stakeholders:
We tried to get good spread, however this is a consideration for next time.

92.5%

were **highly satisfied** with the conference content and talks

MOST USEFUL TALKS

Beavers in England

Beavers & Fish: what does science tell us about challenges and opportunities?

Lessons from Europe: what does living with beavers in the long term look like?

A Farmer's Perspective

MOST USEFUL WORKSHOPS

Beavers as a Tool for Habitat Restoration & Natural Flood Management

How to prepare for Beaver Licence Application

Community Consultation for Beaver Releases

BEAVER CONFERENCE 2023



For more information on the Beaver Conference, including copies of academic posters, visit beavertrust.org

  
[@beavertrust](https://www.instagram.com/beavertrust)

For more information on the work of any of the conference partners, contact them directly at:



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