

Woodland creation in the presence of beaver (*Castor fiber*)

Kelsey Wilson, Jenny Bryce and Roisin Campbell-Palmer. How to create woodlands that are resilient in the presence of beaver (*Castor fiber*): a review of current evidence. NatureScot Research Report 1368..

Background & Objectives

- **Woodland expansion:** Scotland aims to increase woodland cover.
- **Beaver overlap:** Riparian engineers increasingly share target areas.
- **Study aim:** Provide practical guidance for woodland creation with beavers.

Methods

- **Literature Review:** Compiled studies on woodland management with beavers.
- **Questionnaire:** Surveyed 8 land managers across 6 countries.
- **Scottish Field Survey:** Measured beaver and deer impacts at 14 Scottish sites.

Key Findings

- **Literature Review:** No formal guidance currently exists; Impacts are similar across beaver species; 36 studies many with relevance to woodland creation.
- **Questionnaire:** Woodland creation goals vary (biodiversity, timber, flood mitigation, carbon) but 88% of managers seek more guidance. Deer browsing viewed as a greater challenge than beaver activity.
- **Scottish Field Survey:** Beaver impacts at 3/14 sites. An average 38% of trees browsed in riparian zone or 4.4% of overall scheme, flooding only at 1 site, deer impacts were difficult to assess due to the common use of deer fencing.

Conclusions

- Beavers provide significant ecosystem benefits but also present management challenges.
- Their presence should not deter woodland creation, even in upland or fragmented areas where opportunities for new planting exist.
- As central-place foragers, beaver browsing tends to be clustered and highly localised rather than evenly spread across sites.
- Effective deer management remains a critical factor in ensuring the success of woodland creation
- The goal should be to promote woodlands that are resilient, rather than resistant, to natural processes and wildlife impacts.
- Further trials are required to generate the evidence needed for robust, practical design guidance.
- Finally, integrating beavers into woodland policy and planning is essential for long-term success.



One of 6 entry points (all similar) into Site A from the adjacent watercourse (Photo: K Wilson).

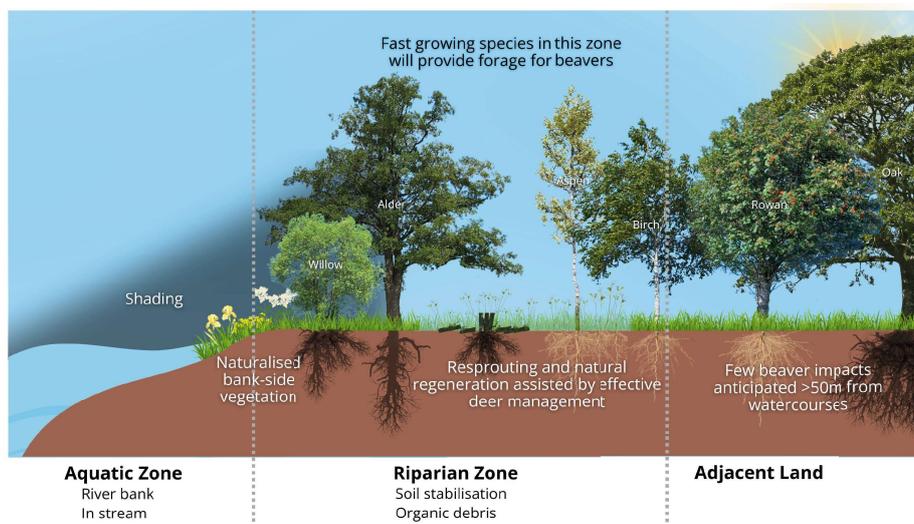


Protection of young trees with wire mesh guards where traditional plastic tubes have been ineffective in deterring beaver (Photo: R Campbell).



Beaver browsing impacts (above vole guards) of varying ages on planted trees at Site C (Photos: K Wilson).

Recommendations for Beaver Resilient Woodland



Riparian focus:
Set clear riverside habitat objectives.

Beaver inclusion: Plan tolerance vs. protection from the outset.

Design choices:
Adapt species, density, and layout for resilience.

Monitoring:
Track deer and beaver impacts to guide management.



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