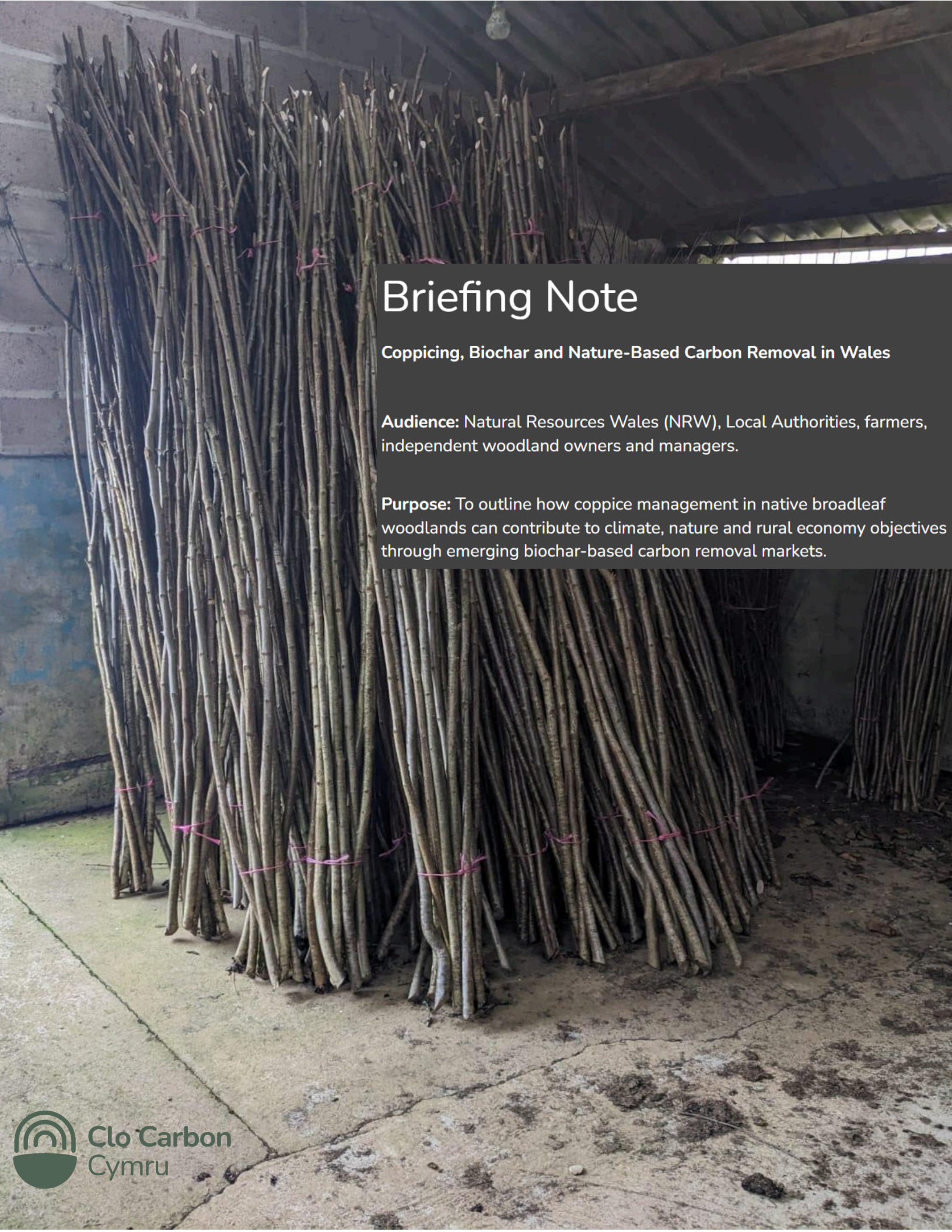

# Briefing Note

**Coppicing, Biochar and Nature-Based Carbon Removal in Wales**

**Audience:** Natural Resources Wales (NRW), Local Authorities, farmers, independent woodland owners and managers.

**Purpose:** To outline how coppice management in native broadleaf woodlands can contribute to climate, nature and rural economy objectives through emerging biochar-based carbon removal markets.

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## Key Messages

- Coppicing has long been perceived as economically marginal, but this reflects historic valuation models rather than a lack of productivity.
- New high-integrity, nature-based carbon removal markets based on biochar change how coppice outputs can be valued.
- Coppice systems are well suited to supplying sustainable biomass for biochar while maintaining biodiversity and woodland continuity.
- This approach aligns closely with Welsh policy objectives on climate mitigation, nature recovery and sustainable land management.

## Background

Coppicing is a traditional form of woodland management in which trees are cut on short rotations and regenerate from the stool. Across much of Wales, native broadleaf woodlands were historically managed in this way. Coppicing declined during the twentieth century as markets for firewood, charcoal and small timber disappeared, labour became scarce, and forestry policy shifted towards long-rotation conifer production.

As a result, many former coppice woodlands are now under-managed. While these woods often retain high ecological value, they are frequently seen as offering limited economic return, which can discourage active management and long-term investment.

## What Has Changed?

Recent developments in **high-integrity, nature-based carbon removal** offer a new way to value coppice management. In particular, **biochar** — a stable form of carbon produced by heating biomass in low-oxygen conditions — allows carbon captured by trees to be stored for centuries rather than rapidly returning to the atmosphere.

Coppice woodlands produce regular supplies of small-diameter material that are well suited to biochar production. Material that has historically been difficult to market can now be converted into:

- **Durable carbon storage**, verified through recognised certification standards;
- **A measurable climate mitigation outcome**, rather than an assumed benefit;
- **A potential income stream**, linked to carbon markets rather than timber volume alone.

This does not turn coppicing into a high-yield industrial system, but it does make its value visible and accessible within modern policy and accounting frameworks.

## Why Coppicing Matters for Wales

Coppice management offers several advantages that are particularly relevant in the Welsh context:

- It supports **structural diversity and biodiversity** in native broadleaf woodlands;
- It avoids large-scale clear-felling and maintains **continuous woodland cover**;
- It is compatible with **small woodlands, farm woods and mixed land use**;
- It can be delivered at **local or community scale**, supporting rural enterprise.

When linked to biochar production, coppicing can contribute to climate mitigation while reinforcing — rather than undermining — nature recovery and landscape character.

## Addressing Common Concerns

- **Permanence:** Biochar stores carbon more securely than standing biomass alone, reducing the risk of reversal.
- **Additionality:** Reinstating coppice in neglected woodlands represents new management activity, not displacement.
- **Sustainability:** Coppice systems regenerate naturally and can provide ongoing biomass without woodland conversion.

Coppicing will not be appropriate everywhere, but where conditions are suitable it offers a low-risk, policy-aligned option for active woodland management.

## Implications for Policy and Practice

For NRW and local authorities, coppicing linked to biochar-based carbon removal provides a practical tool for delivering the Sustainable Management of Natural Resources, climate resilience and nature recovery objectives.

For farmers and woodland owners, it offers a route to bring under-managed woodlands back into productive use without converting them to plantations or relying solely on grants.

## Conclusion

Coppicing should no longer be understood as a marginal or outdated practice. With the emergence of biochar-based carbon removal markets, it can play a meaningful role in Wales's response to the climate and nature emergencies, while supporting resilient rural economies and long-term woodland stewardship.