

**Name: Craggach Woods**

**Place:** Kirkhill, Inverness.

**Headline:** A 40 ha privately-owned woodland managed by the owners as a productive native broadleaf woodland, including on site timber conversion.

**Keywords:** Owner-managed, timber production, timber micro-business, high biodiversity.

#### **What is the context?**

We bought two conifer plantations in 1992 and 2005 beside our house; the first by pro-actively approaching the (private sectors) owners; the second by expressing interest in one block of a larger sale area. These comprise Long Established Plantation Origin (LEPO) woodland of 8 ha and 32 ha extent, suitable for lowland mixed broadleaf woodland.

#### **What was the initial aim?**

The smaller wood was initially bought with the aim of conversion to native broadleaf woodland for conservation purposes. However after 5 years, we changed our objective towards productive native woodland managed under a business model where the owners undertake management and conversion of harvested timber. The second wood was bought so that the overall area became sufficient to support one future full-time job equivalent.

#### **What actually happened and what has been achieved**

**The first 8 ha. wood:** 6ha.were felled and restocked with native broadleaves (NBL), in a way that tried to replicate a mixed native wood. The later change to productive woodland was enabled by widespread natural regeneration of birch and rowan to produce 4,000 stems/ha. The restocked area has been re-spaced and thinned. It now comprises birch and ash (Yield Class 10) and free growing oak (YC8) with an understory of hazel and rowan and a woodland edge with the full range of woody shrubs.

**The second 32ha. wood:** 14ha has been felled and re-stocked with NBL. There is a density in excess of 4,000 stems/ha. through planting and natural regeneration. 4.5 ha of birch regeneration has replaced failed DF and has been re-spaced and thinned to produce a future crop of birch with good to excellent form. A further 6ha. of 1995 DF has been thinned and is being transformed into a Continuous Cover Forestry (CCF) stand.

In summary, 32 ha of conifer plantation has been brought into productive native broadleaved management through planting and natural regeneration. The purchase and restocking costs of the woodland have now been covered by timber sales and grants.

**Harvesting and processing:** Part of a substantial grant from the SRDP gave us training and certification as Forest Machinery Operators. This training helped us develop a system for harvesting both thinnings and a small number of mature beech and sycamore, using low impact machinery. Timber from the second clearfell was milled by us on our bandsaw and used to build an equipment shed which houses our mill, tractor, winch, timber trailer/crane and simple firewood processing equipment.

**Biodiversity management:** In addition to planting a diversity of native trees, we have cleared streamsidings within areas of Douglas fir. We organised surveys of freshwater snails and higher and lower plants and propagated and translocated native woodland ground flora to expand the woodland plant communities. Management has achieved a profound enhancement of biological diversity.

**Deer management:**

Intensive deer management has been undertaken by us. The high initial deer density required a cull of around 15 /yr but now the wood keeps in good condition with a cull of about 6 /yr. This has enabled good natural regeneration of trees and ground flora.

**Community benefit:** The wood attracts walkers and riders to its tracks. The wood has been used for educational activities such as a PAWS workshop and the local Primary School Eco project. A range of specialist groups including staff of Forestry Commission Scotland (FCS), Trees for Life and the Woodland Trust have visited.

**Ongoing challenges:**

The high deer density in our area makes deer control a substantial burden. The increasing productivity of the recently established stands makes the imperative of good thinning and pruning a challenge for the ageing owners.

**What is the evidence for these outcomes?**

- About 32 of the 40 ha are now established native woodland; and 12 ha have been re-spaced and first-thinned. Four ha comprise oaks in free growth at 20 years.
- Current thinnings provide approximately 15 tons of fuel wood p/a for sale and about 7 tons of firewood p/a for ourselves. We have supplied a local furniture maker with about 3 cubic metres of sawn sycamore and have approximately 3 cubic metres of sawn birch/beechn/sycamore drying. About 5 tons of larch logs are in hand for milling.
- The current fuel wood and timber sales broadly cover our running costs. We heat our house fully with our own wood fuel.
- Native woodland indicator species are spreading from refugia into restored areas.

A gradual increase in income is anticipated as the wood produces more timber. It is expected that in about 40 years a full time job equivalent will be possible through the production of about 200 tons/per annum of timber under a CCF system. This should yield 50 cubic metres of sawn and dried hardwood and about 100 tons of processed and delivered hardwood firewood. Our attempt to create a biodiverse native woodland that is also productive - in other words a commercial native woodland – has received credibility both through receipt of a Scottish Finest Woods for native woodland, and by becoming a demonstration site on a FCS productive broadleaf silviculture course run by Jens Haufe.

**What were the factors that contributed to these outcomes?**

- An interest in native woodlands and a strong desire to close the current dichotomy between commercial and conservation woodlands was critical for motivation.
- The good fortune to live by woodlands that were available for sale. Living beside the wood made coping with the workload possible and enables early awareness of any issues. Living adjacent to the implement shed and sawn timber store greatly enhances security.
- The ability to use our own capital to cover the financial 'gap' between the purchase of woodland and receipt of income from timber sales. The availability of forestry grants (WGS & SRDP).
- Enough remnants of woodland plant and animal communities were present in the wood to aid the rapid development of biodiversity.

**How replicable is this experience; what is its potential as an element of a better approach to forestry?**

Small scale local woodland ownership is highly replicable, provided small local woodlands, large enough in area to be capable of productive management, become available for sale. Prospective owners also need to have the initial capital to start the process.

It has potential as an element of a better approach to forestry because:

- high quality processed timber is available locally and the profits tend to be recycled within the locality.

- small woodlands managed in a way different to the bulk of the forest industry contribute resilience to adverse pressures on the rural economy.
- well-managed broadleaf woodland is generally attractive to the public and enhances the image of forestry.
- diverse native woodland can be expected to have a high degree of resilience in the face of environmental pressures.

**Key Messages:**

- Living on a rich 40 ha woodland site and managing it can lead to a living income, if the owner undertakes most of the work. Small native woods producing high value timber are commercially viable. This only works if woods are large enough to sustain a steady output of quality timber.
- Woods can be bought locally from private forestry interests, if would-be owners are active in fostering purchases.
- High value native broadleaf timber can be produced commercially within the context of a high level of biological and structural diversity.
- Such woods produce resilience; both biologically and for the rural economy.
- They also deliver positive local educational, health and amenity benefits.

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