

Trees for Crofts and Smallholdings: case Study

Trees and hedgerows have been an integral part of crofts & smallholdings for centuries, and in recent years scientific studies have proven the diverse range of benefits that trees provide to land, crops, and livestock. So where would be best for crofters and smallholders to plant trees on their land? The below examples use a real croft to demonstrate where tree planting could help your business and property, and what to look for when designing your woodland creation.

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Woodland Creation:

Previously a wet and boggy field along a burn edge that was prone to liver fluke, this area was planted with a woodland creation in order to create a riparian buffer, provide shelter, protect against soil erosion and flooding, & provide a reserve of timber for the owner. During the woodland creation process, drainage was improved and new fences installed as part of a capital items option, improving stock security and reducing waterlogging of the neighbouring fields. Winter shelter was also greatly improved.

The outer sides of this block have been planted with native broadleaves, softening the visual impact of this block on the landscape and screening the internal block of commercial conifers in future years when harvesting takes place.

The inner commercial conifers have now been thinned, which provided a source of woodchip bedding for cattle on the croft, as well as early timber income from sales of thinned timber before full harvesting is carried out in later years.



Shelterbelts:

This shelterbelt has been planted in a rough North to South orientation, in order to protect crops and livestock from the prevailing westerly winds this site experiences. A field drain runs down the centre of this shelterbelt, with trees planted to a 20 metre total width. A mixture of species has been used, with native hardwoods such as hawthorn and cherry surrounding an inner planting area of Norway Spruce, larch and ash.

Wind speeds across the field bordering this shelterbelt are greatly reduced, with wind-based soil erosion dramatically reduced. A reduction in snow drifting around the shed in winter is also seen, as well as an improvement in herd health during winter months due to the improved shelter provided. The angled diagonal design also assists in the movement and herding of sheep around the croft, simplifying stock-gathering and saving time & effort for the crofter by creating a natural bottleneck for guiding stock to the field gates.

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Hedgerow:

A traditional hedge was planted consisting of mostly hawthorn, with occasional blackthorn and guelder rose planted as part of the mixture. This hedgerow provides a clear boundary along the croft march, dividing fields and improving livestock security. When the hedge is fully established, it will also provide shelter from the wind for lambing and calving. The hedge has been deer fenced, providing protection for grassland and forage crops.

Screening:

By planting a row of Sitka Spruce trees along the western face of the shed, the crofter has sheltered his shed from the worst of the prevailing westerly winter winds. When planted in the right place, shelterbelts around buildings have been shown to reduce winter heating costs by lowering the amount of heat lost from exposure to cold winds and driving rain/snow.

This row of trees also screens the shed from roadside view, improving privacy by limiting croft visibility from public roads & neighbouring dwellings. This can also sometimes improve security by avoiding unwanted attention from passing traffic.



Field Drain Planting:

A shallow field drain divides these two fields, with a narrow margin of rough ground. The crofter has planted sporadic broadleaved trees (predominantly alder and willow, with ash trees on drier ground), along this drain, which has provided shelter and shade benefits to livestock, as well as stabilising the soil of the drain banking and limiting soil erosion during floods. The trees can also be used as a source of firewood in future years.

In-Field Mature Standard Trees:

The individual tree shelters visible in the photo (right) show trees planted in a scatter pattern within a rough ground to develop into mature standard trees. These are typically large oak or ash trees, planted to provide shade and shelter within grazing areas, and require protection in early years if they are to establish within a field with livestock. If cattle are to share fields with trees, more sturdy tree protection will be required than the shown tubes.



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Fruit Trees and Orchards:

Often overlooked, fruit trees including apples, plums, cherries, and pears can provide significant crop yields from relatively small areas of ground. Planted around field margins as a diversified shelterbelt, or grown as a stand-alone crop in their own right, fruit trees have a huge number of benefits. In addition to the obvious fruit produced which can be sold directly from the croft, from local markets or to wholesalers, there is also the option to also produce value-added goods in the forms of jams, chutneys and preserves. The early flowers of fruit trees can also act as magnets for pollinators, further helping other crops around the croft.

Whilst there are a number of hardy cultivars which have been developed to tolerate frost or drought etc, fruit trees do generally require more attention and care than other trees, and do not suit excessively exposed or frosty sites.



Woodland Grazing:

Woodland grazing has been gradually seeing an increase in popularity in recent years as crofters and smallholders look towards ways to reduce their carbon emissions. By keeping livestock amongst woodlands using the correct grazing regimes and stocking densities, carbon sequestration can be increased due to the regeneration of the understorey and the creation of seed beds.

This photo (left) shows the use of woodland grazing with pigs to control bracken and rhododendron within a stand of native broadleaved woodlands (in this case birch woodland). More effective and less ecologically damaging than chemical treatments of bracken, the pigs have disturbed the soil and rooted up much of the bracken and rhododendron areas which had previously been dominating the understorey of this woodland. Once the pigs have been moved to another area, the understorey will be allowed to regenerate with birch, holly, and other tree seeds already present within the soil but previously unable to germinate under the thick cover of bracken and rhododendron which had been smothering this woodland.

Helpful Links:

<https://forestry.gov.scot/publications/963-preparing-woodland-creation-application-guidance/download>

<https://forestry.gov.scot/publications/278-the-creation-of-small-woodlands-on-farms-complete-document/viewdocument>