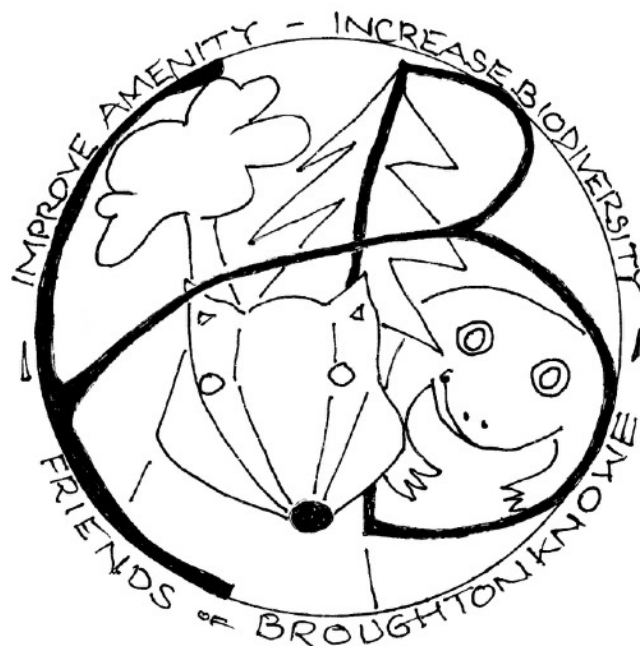


Friends of Broughtonknowe (FoB)

Broughtonknowe Wood - Feasibility Study for Woodland Management Options.

25 October 2023



Executive Summary



The Broughtonknowe Wood considered in this study is presently on the market in 3 lots. Lot 1, the majority of the woodland extending to 45.88 Hectares / 113.37 Acres. Lot 2 a further 9.13 Hectares / 22.56 Acres of woodland to the North of the access road. Lot 3 consists of fabricated storage building and an adjoining sizeable wooden hut, the area of land extending to 0.74 Hectares / 1.73 Acres also supports radio mast and a mix of tree species. In total this represents 55.35 Hectares / 136.77 Acres of land comprising areas of mature conifers, substantial plantings of maturing native hardwoods and a significant area of open grass / heathland with 3 established ponds. (For Goldcrest sales descriptors see Appendix 1).

There is a small car park at the Southern end of the wood adjacent to the A701. The present owner extends welcoming access to the local community and has created a number of tracks and paths. The Friends of Broughtonknowe (FoB) with a grant from the local windfarm, has recently completed an extended path network creating a 1500m circular route on hardcore surface. This can be extended to 3000m (2 miles) using additional less improved paths.

A track suitable for vehicular use runs from the car park to the the Northern boundary passing the ponds, a spur leaves this heading to the sheds. A similar track follows the Western boundary. Although principally for management access these provide further walking routes for visitors.

Apart from water supply infrastructure there are otherwise few constraints on management with work access available using the aforementioned tracks. The existing public use of the woods, their proximity to a number of local communities and the presence of a diverse range of native species means there are lots of opportunities for enhancing both nature conservation and public activity in the woods.

The diffuse community that visit the woodland is focussed on the village of Broughton. A recent public meeting in Broughton was overwhelmingly in support of community ownership, many in the village seeing access to the woods as part of the village lifestyle for recreational time, at present particularly dog walking. To facilitate greater community involvement in the woodland the Friends of Broughtonknowe (FoB) was established in 2020 and has since raised funding for substantial infrastructural work to enhance the visitor experience. (For a summary of the spend of the SSE wind-farm grant see Appendix 2).

Furthermore the Broughton community has a track record in managing community assets, a significant number of villagers investing in the community shop and supporting local enterprise.

Irrespective of any commercial gain from the woodland growing stock the total area of the purchased land can reliably provide:

- Good quality access to the natural environment, enhanced by the creation of additional paths;
- Significant opportunities for enhancing nature conservation by managing in favour of native species;
- Community development opportunities through volunteering, wildlife identification and monitoring, woodland crafts and other educational uses.
- Modest income generating opportunities through the sale of timber and forest products such as firewood.

This feasibility study recommends community purchase of the three lots offered for sale and the employment of a community forester / ranger to develop active involvement of the community in the management of the woods; both directly in the physical activity of, for example small tree felling and path maintenance work, and in planning and fundraising for project development.

The initial focus will be in preparing plans to expand the proportion of native woodland species, gradually felling out some of the mature conifers (a practice previously being carried out by the present owner). Alongside this will be continuing improvement of public access trails, provision and maintenance of benches and picnic tables, and development of meeting and educational spaces.

Business plans will hopefully be able to follow similar guidelines to those developed by the present owner with regard to timber extraction and sale of forest products.

Economic feasibility of these projects (and any new additional ones) will be achieved with a combination of government grants, lottery funding and independent trust funding, backed up by some income from the sale of forest products and contributions from the community. The new management will have the capacity to make community ownership of the woods a sustainable enterprise and will be supported by working in partnership with other organisations such as The Borders Forest Trust, Plant Life, Bug Life and other conservation organisations.

Forestry:

Economics:

A common way of selling timber is to negotiate an out-turn price (£ per tonne) for each category of log with a timber harvesting agent. The agent is responsible for hiring and managing harvesting contractors and selling each category of log on to different sawmills and other buyers. The agent is then invoiced by the woodland owner for the weight of each category that goes over the sawmill weighbridge. Having an out-turn value is a means of estimating the standing value of the trees as there are no additional costs in harvesting the wood incurred by the owner, except for some supervisory checks.

An alternative means of selling timber to a harvesting agent is to carefully measure the trees in the area to be thinned or felled and sell that as a single, standing volume. This would be a 'standing sale' rather than an 'out-turn sale'.

Silvicultural systems:

All forest management in the UK must comply with the requirements of the UK Forestry Standard (UKFS); there are various silvicultural systems which can deliver this. All forest operations must comply with specific guidance on e.g. watercourses, archeology, and protected species.

1. Clear-fell systems

The simplest system is plant and clearfell without thinning. This practice is widely used for Spruce crops on wet and exposed sites where thinning might induce windblow, however it delays income until final harvest and provides no opportunity for crop improvement.

Clear-felling with thinning systems can be used for sites that are more wind-firm and with soils that can support forest machinery. Thinning starts at 20 - 30 years (depending on species and growth rate) after planting, and is carried out on a regular cycle (e.g. every 7 years) until clearfell at maturity. Thinning helps get more out of the crop, reducing the volume being lost in deadwood and increases the proportion of saw-logs at final felling, as growth is concentrated in better individual trees if poorly formed trees are removed during thinning operations.

Clearfell systems result in boom and bust cash flows for the forest owner, with a significant amount of the harvesting income being spent on establishing the next crop. First and second thinnings may only be financially viable if there is a strong market for small-roundwood.

Clearfelling creates a dramatic change in the forest environment, but it can create an opportunity to start again with a 'clean slate' and replant with species that will better meet ongoing objectives for the woodland, particularly if the woodland is vulnerable to windblow and when felling a few trees to start a process of transforming the woodland will initiate catastrophic windblow.

2. Continuous cover systems

Alternatives to clear-fell systems are known as low impact silviculture (LIS) or continuous cover forestry (CCF). These seek to create a permanently irregular forest structure by felling individual or small groups of trees, with natural regeneration favoured over planting. They typically limit clearance to no more than 0.5ha of woodland in coupes or stripes and rely on thinning through the life of the crop to produce wind-firm trees with crowns well developed to produce seed. CCF systems favour shade tolerant species that can regenerate in the shade of their parents and they rely on good deer control. Systems that do not use coupes and stripes employ a system of thinning so that during any one intervention a full range of species, and size of tree are removed. Generally these systems require more monitoring and management input, they also require contractors who can embrace the care required to identify the right trees to take out and cause minimal damage to the remaining trees and regeneration.

'Natural reserves'

'Natural reserves' is a term used to refer to areas that are minimally managed; no trees are harvested and nature can do its own thing. The only input might be the control of what species of tree regenerate into the area. Deadwood accumulation is a key conservation contribution of natural reserves. Riparian areas and wet flushes where forest machines would damage the soils, that are already the focus for native woodland species and where high humidity supports a diversity of fungi are obvious areas to identify as 'natural reserves'. Natural reserves can also refer to individual mature trees, such as oak, beech and ash that have wide branching habits, crown deadwood, holes and rot pockets. From a conservation and visual amenity perspective these trees can add significant value and their management can include removing conifer regeneration from around them so they do not decline due to over-shading, and the identification of replacements so that there is a continuity of ancient trees within the woods.

'Deadwood'

Deadwood can seem untidy, but both standing dead trees and fallen dead wood, both big and small can contribute significantly to a diverse ecosystem, providing habitat for fungi that in turn are fed on by invertebrates, which in turn are then food for birds, etc. In healthy native woodland ecosystems as much as 40% of the above ground biomass might be deadwood. In timber plantations this proportion might be from 5% to 15%.

Forestry at Broughtonknowe:

The regime preferred by the present owner is one of low impact silviculture i.e. a continuous cover system (CCS). This has worked particularly well in producing a very pleasing aesthetic which is a major component of the present amenity value of the woodland. The programme is ongoing some areas having only had an initial thinning while others are thinned to a point where natural regeneration of rowan, ash and sycamore is beginning to take place. The success of this regime belongs in no small part to the forester employed (Billy Swan). He works on his own carefully selecting and felling. The neatly piled lengths of timber are regularly removed by a separately employed forwarder who stacks the timber before transportation to the local saw mill or other purchasers.

This is not a profit making enterprise, although one would be welcome if the market allowed, the objective being to cover the necessary overheads.

Assuming the transfer of the present thinning licence the desired future policy would be to continue this regime, preferably employing the same forester, who has an empathy with the woodland. There might be a future need for Larch management to mitigate any spread of *Phytophthora* infestation, at present the woodland is free of this condition.

Ash die-back on the other hand is well established in the woodland. The present owner, using the services of the same forester, currently manages Ash by felling and logging before selling for firewood. It would seem sensible to continue this policy.

The deciduous plantings (other than ash) are currently treated as 'natural reserves' and future management should be to encourage the development of an appropriate understorey so enhancing the associated biodiversity.

Any 'deadwood' is left to naturally decay throughout the woodland. In the coniferous plantings this is mainly the brash from forestry, in the deciduous areas it is fallen branches and leaves.

Longer term management planning will use the tendered survey data e.g. soil type / habitat classification to direct specific regeneration / replanting policy; forest composition and age / maturity data to direct thinning / felling strategy.

The economic feasibility of the regime will have to be under constant review.

Wildlife:

There are three distinct habitats in the Broughtonknowe woodlands:

1. The Woodland itself

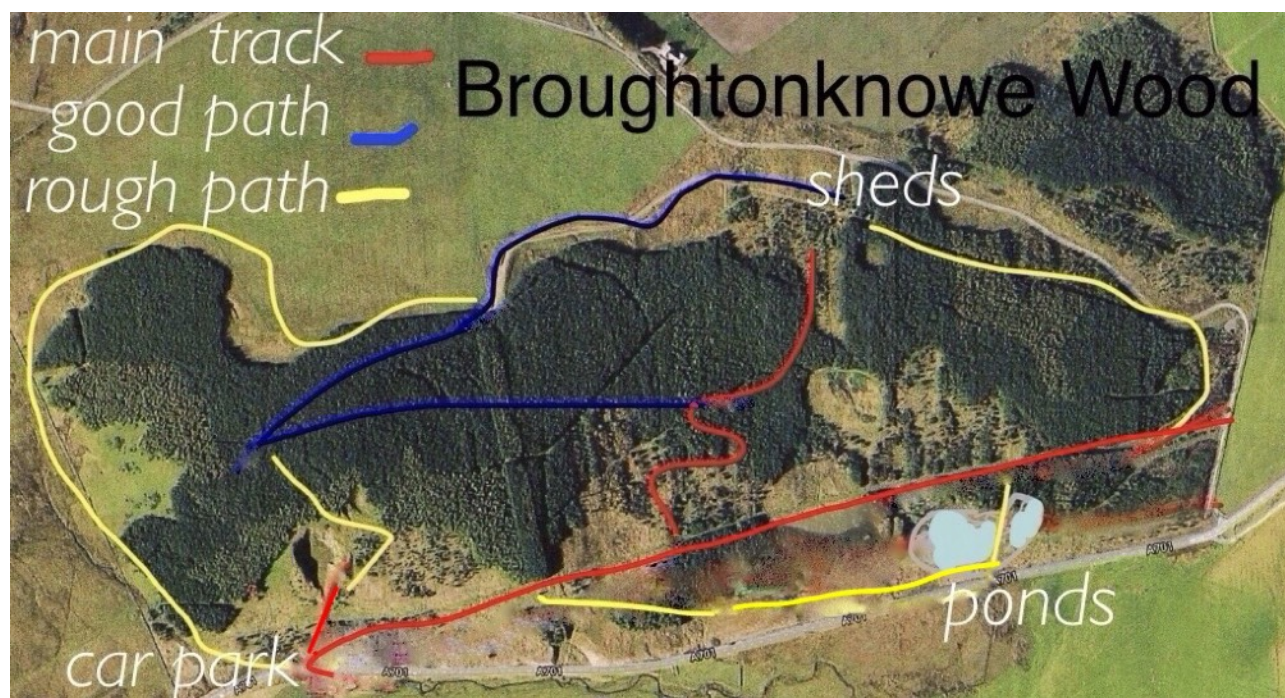
This may be subdivided into a mature conifer plantation of principally Sitka Spruce with substantial areas of Norway fir, Grand fir, larch and scatterings of Douglas fir. In addition there are now well established plantings of native deciduous hardwoods predominantly Ash, Rowan, Aspen and Alder. All the woodland except the young trees around the ponds date from the same general planting scheme of 1988 (although some areas failed and were subsequently replanted). The overall concept of a wood that was approximately 40% conifer, 20% broadleaf and the remainder open ground was the vision of the previous owner David Balfour Scott.

2. Ponds

Four ponds have been excavated at different times along the low lying Eastern boundary of the woodland. The two largest lie adjacent to one another and are connected by a narrow overflow channel. They are on a clay base and were extensively enlarged about twenty years ago. Two new ponds were added in 2022 by the Friends of Broughtonknowe (FoB) as part of a significant amenity / biodiversity project funded by SSE Clyde windfarm.

3. Grassland and Paths

The land having been previously farmed as marginal grazing retains some remnants of open grassland and marshy meadow. Various paths run around and through the whole estate, see the map below.



FLORA & FAUNA

Survey work by FoB since 2020 has built up the following inventories:

The various habitats support a diverse flora:

Grassland & Woodland Wildflowers: In approximate order of appearance. Coltsfoot, Lesser Celandine, Dandelion, Dog Violet, Primrose, Wood Anemone, Creeping Buttercup, Meadow Buttercup, Mountain Pansy, Germander Speedwell, Tormentill, Cow Parsley, Pig Nut, Hogweed, Forget-me-not, Bitter Vetch, Common Vetchling, Thyme-leaved Speedwell, Heath Bedstraw, Lady's Bedstraw, Thyme, White Clover, Red Clover, Bird's Foot Trefoil, Ribwort Plantain, Bush Vetch, Lesser Stitchwort, Selfheal, Foxglove, Cleavers, Creeping Thistle, Stinging Nettle, Dock, Sorrel, Rose Bay Willowherb, Greater Willowherb, Cat's Ear Yarrowl, Harebell, Sneezewort, Autumn Hawksbit.

Wet habitat Wildflowers: Cuckoo Flower, Marsh Marigold, Lesser Spearwort, Marsh Cinquefoill, Ragged Robin, Marsh Thistle, Meadowsweet, Valerian.

Garden Escapes: Welsh Poppy, Fox and Cubs, Jacob's Ladder, Lady's Mantle, Figwort.

Planted Native Trees: Alder, Aspen, Beech, Birch, Bird Cherry, Black Poplar, Cherry (Gean), Crab Apple, Field Maple, Hazel, Holly, Sessile Oak, Scots Pine, Sycamore, Whitebeam, Willow species.

A complete flora survey was conducted in 2021 by Luke Gaskell as part of a National database survey.

Broughtonknowe is home to many breeding and migrant birds:

Breeding Birds: Blackbird, Blue Tit, Bullfinch, Buzzard, Chaffinch, Coal Tit, Goldcrest, Great Tit, Grey Wagtail, Jackdaw, Jay, Little Grebe, Long-tailed Tit, Magpie, Mallard, Mistle Thrush, Moorhen, Pheasant, Pied Wagtail, Robin, Song Thrush, Tawny Owl, Tree Creeper, Wood Pigeon, Wren.

Migrant Breeding Birds: Chiffchaff, Blackcap, Swallow, Willow Warbler.

Regular and Occasional Visitors: Barn Owl, Carrion Crow, Crossbill, Great Spotted Woodpecker, Grey Heron, House Sparrow, Kestrel, Meadow Pipit, Raven, Reed Bunting, Siskin, Sparrow Hawk, Starling.

Migrant Regular and Occasional Visitors: Cuckoo, Fieldfare, Redwing, Stonechat, Wheatear, Woodcock.

Mammals in the woodland include:

Badger, Brown Hare, Common Shrew, Field Mouse, Fox, Grey Squirrel, Mole, Rabbit, Roe Deer, Short-tailed Field Vole, Stoat.

Amphibians:

Though rarely seen throughout the year, in late March you will find yourself tripping over Broughtonknowe's frogs and toads as they return to the pond to breed. In addition to the common frogs and the toads, there are also palmate newts. The frogs and toads number in the thousands and must represent a very significant breeding stock of these species.

Broughtonknowe's more frequently observed insects:

Butterflies: Peacock, Small Tortoiseshell, Orange-tip, Green Veined White, Small White, Meadow Brown, Red Admiral, Ringlet, Common Blue, Small Heath, Dark Green Fritillary, Small Pearl-bordered Fritillary, Small Skipper, Small Copper.

Day-flying Moths: Antler Moth, Chimney Sweeper, Cinnabar, Five Spot Burnet, Latticed Heath, Red-shouldered Footman.

Night-flying Moths: Beautiful Golden Y, Burnished Brass, Dark Arches, Flame Shoulder, Gold Spangle, Green Carpet, Large Yellow Underwing, Lempke's Gold Spot, Lesser Yellow Underwing, Light Emerald, Silver-ground Carpet and many more.*

Dragonflies and Damselflies: Azure Damselfly, Common Blue Damselfly, Common Hawker, Emerald Damselfly, Large Red Damselfly.

Bees and Wasps: Common Carder Bumblebee, Garden Bumblebee, Red-tailed Bumblebee, Tree Bumblebee, Tree Wasp, White-tailed Bumblebee.

* A comprehensive moth survey was carried out in 2015 by John Wooliams as part of a national database survey.

Fungi and Lichen:

In approximate order of appearance in the autumn, you can find the following fungi in various locations throughout the woodland habitats:

Larch Bolete, Common Puffball, False Chanterelle, Tawny Funnel, Plumbs and Custard, Fly Agaric, Spruce Milkcap, Sulphur Tuft, Fragile Brittlegill, Primrose Brittlegill, Cep, Twig Parachute, Common Bonnet, Lilac Bonnet, Orange Bonnet, Wrinkled Club, Yellow Club, Shaggy Scaleycap, Jellybabies, Butter Waxcap, The Blusher, Scaly Wood Mushroom, Cortinarius, Orange Cup (Peel), Pale Brittlemstem, The Miller, Liberty Cap, Wood Mushroom, Field Mushroom, Gooseberry Brittlegill, Crystal Brain Fungus, Tar Spot, Clouded Funnel (Agaric), Candlesnuff Fungus

Lichens do no damage to the trees just growing on them as 'epiphytes'. Common types at Broughtonknowe are species of Evernia, Parmelia and Usnea.

Biodiversity:

In an attempt to quantify present and changing biodiversity two species groups have been monitored since 2020: Bombus (bumblebees) and Lepidoptera (butterflies).

Both surveys involved walking the same fixed transect route encompassing the different Broughtonknowe habitat types. In the case of bumblebees this is done twice monthly between March and October. Butterfly data is collected when conditions are suitable i.e. sunny and relatively still. Counts are recorded for species type (including different castes for the bees - queen, worker, drone). This procedure follows guidelines laid down by the Bumblebee Conservation Trust. The recorded data is submitted to a National database.

Both studies show trends of increasing species diversity. The butterfly data confirms that Broughtonknowe supports significant breeding populations of a number of species in particular the Ringlet. The range of species present supports the need for careful management, particularly of the grassland / meadow habitats.

Bumblebees: present (/) absent (x).

Species	2020	2021	2022	2023
White-tail	/	/	/	/
Garden	/	/	/	/
Common carder	x	/	/	/
Tree	x	x	/	/
Red-tail	x	x	/	/
Field cuckoo	x	x	/	/
Gypsy cockoo	x	x	/	/
Bilberry	x	x	x	/

Butterflies: present (/) absent (x) max counts.

Species	2021		2022		2023	
	13/7		9/7		11/6	5/7 2/9
Peacock	/		/		/	11
Red Admiral	/	1	/		/	9
Small tortoiseshell	/		/		/	
Orange-tip	/		/		/	
Green-veined white	/		/		/	
Small pearl-bordered fritillary	/		x		/	20
Dark green fritillary	/	2	/	4	/	
Meadow brown	/	6	/	18	/	10
Small heath	/	4	/	2	/	5 15
Ringlet	/	125	/	65	/	20
Common blue	/		/	1	/	1
Small skipper	x		/		/	10
Small white	/		/		/	
Small copper	x		/		/	

Ongoing Management for Wildlife:

This all represents a considerable biodiversity, some of which being of significant conservation status. The spring appearance of hundreds of amphibians at the ponds has already been mentioned as representing a significant breeding population of these species and any pond management proposals must consider their continuing status.

Several of the butterfly species present are also worthy of conservation status. The Small Pearl-bordered Fritillary is very locally distributed in the South of Scotland, this summer saw a sizeable population on the Southern grassland at Broughtonknowe. The Broughtonknowe grasslands in particular should be managed to ensure the continuing presence of the relevant butterfly / caterpillar food plants.

The woodland, being relatively young, is lacking in breeding opportunities for hole nesting species (Blue Tit, Great Tit, Coal Tit). The provision of a considerable number of nest boxes by FoB has gone some way to remedying this situation, but more provision will enable populations to further increase towards the present carrying capacity of the woodland. Nesting provision has also been made for Kestrels and Barn Owls. Ongoing management will hopefully encourage these species to become resident in the woodland.

As the deciduous woodland matures and an understorey is encouraged to develop it is hoped the diversity of breeding birds will continue to increase. Chiffchaff, Willow Warbler and Blackcap represent pleasing summer migrant breeding birds whose numbers will hopefully continue to increase with ongoing appropriate management.

Increased dog walking by the community could prove counter productive to sensitive wildlife species such as Brown Hares, Roe Deer and nesting birds at the ponds (Little Grebe, Moorhen, Mallard). The ongoing provision of an extensive path network will enable visitors to enjoy the woodland without causing undue habitat disturbance - but owners must be encouraged to keep dogs under control. The provision of a hide and feeders will hopefully ensure a meaningful experience for visitors / families hoping for wildlife encounters.

It would be a significant achievement if ongoing management could lead to the establishment of a breeding population of Red Squirrels, four have been recorded in the last year. To this end there has been a Grey Squirrel control programme as part of the Borders Red Squirrel project. This requires to be an ongoing programme.

It would also be nice if the woodland management programme could lead to the establishment of threatened species such as the Hedgehog, that occur locally but at present not in the woodland. Another species that could be accommodated is the water vole, but this would require an introduction management regime (something hopefully for the future).

Natural regeneration of an appropriate woodland flora can be encouraged by subtle appropriate plantings. Bluebells, Primroses and Wood Anemones have already been introduced by FoB as part of the windfarm funded biodiversity programme. There is scope here for ongoing community involvement if carefully managed. Some appropriate tree planting may also be necessary as a result of clearing diseased Ash.

KEY SPECIES MANAGEMENT STRATEGIES: (in addition to forestry policy)

WOODLAND HABITATS:

1. Birds

Species	Status	Abundance	Management	Priority
Blue tit	Resident	Common	Nest box provision.	Ongoing
Great tit	Resident	Common	Nest box provision.	Ongoing
Barn owl	Nesting attempted	Regular visitor	2 barn owl boxes installed.	Monitor
Tawny owl	Resident	2 pairs	Locate nest sites and protect.	High
Kestrel	Regular visitor	Singles	1 kestrel box installed.	Monitor
Treecreeper	Resident	Several pairs	Locate nest sites and protect.	High
Blackcap	Summer migrant	Abundant	Minimise disturbance of nesting habitat.	High
Chiffchaff	Summer migrant	Abundant	Minimise disturbance of nesting habitat.	High
Willow warbler	Summer migrant	Abundant	Minimise disturbance of nesting habitat.	High

2. Mammals

Species	Status	Abundance	Management	Priority
Red squirrel	Attempted breeding?	Very low	Monitor presence, improve habitat.	High
Grey squirrel	Resident	Low	Control if numbers increase.	Ongoing
Brown hare	Resident	Low	Reduce dog walker interference.	Ongoing
Roe deer	Resident	Low	Control if numbers increase.	Ongoing
Badger	Resident	1 set	Prevent unnecessary disturbance.	Ongoing
Bat, pipistrelle	Evident	Unknown	Install bat boxes and monitor.	Start now

3. Fungi

Species	Status	Abundance	Management	Priority
Many	Throughout	Frequent to less common	ID and record to establish database.	Ongoing

AQUATIC HABITATS:

1. Pond life

Species	Status	Abundance	Management	Priority
Little grebe	Summer visitor	1 pair	Minimise habitat disturbance.	High
Frogs & Toads	Resident	Common	Awareness of vulnerability around ponds.	High
Dragonflies & Damselflies	Resident	species specific	Monitor / record. Improve marginal and pond plant diversity.	Ongoing

2. Marshland

Species	Status	Abundance	Management	Priority
Flora	Native species	species specific	ID and record to establish database.	Necessary

GRASSLAND HABITATS:

1. Butterflies (management in addition to ongoing Monitor / Record)

Avoid winter disturbance during hibernation - particularly Peacock and Red admirals in woodland fringe.

Species	Status	Abundance	Management	Priority
Peacock	Resident	Seasonally abundant	Protect larval food plant - nettles.	Ongoing
Sm tortoiseshell	Resident	Seasonally abundant	Protect larval food plant - nettles.	Ongoing
Red admiral	Resident	Seasonally abundant	Protect larval food plant - nettles.	Ongoing
Orange-tip	Resident	Seasonally abundant	Protect larval food plant - crucifers. *	Necessary
Meadow brown	Resident	Seasonally frequent	Protect larval food plant - grasses.	Monitor
Small heath	Resident	Seasonally frequent	Protect larval food plant - grasses.	Monitor
Small skipper	Resident	Uncommon	Protect larval food plant - grasses.	Monitor
Small copper	Resident	Uncommon	Protect larval food plant - sorrels.	Monitor
Dk-green fritillary	Resident	Uncommon	Protect larval food plant - dog violets.	Necessary
Sm pearl-bordered fritillary	Resident	Uncommon	Protect larval food plant - dog violets and marsh violets.	Necessary

* Cuckoo flower & Garlic mustard.

2. Day-flying Moths

Species	Status	Abundance	Management	Priority
5 spot burnet	Resident	Uncommon	Protect areas of larval food plant. *	High
Cinnabar	Resident	Uncommon	No removal of Ragwort - larval food plant.	Ongoing
Latticed heath	Resident	Widespread	Maintain grassland.	Low
Chimney sweeper	Resident	Widespread	Maintain grassland.	Low

* Bird's foot trefoil species.

3. Other moth species

Species	Status	Abundance	Management	Priority
Many	Resident	Species specific	Moth trapping to monitor & record and establish a database.	Ongoing

4. Bumblebees

Species	Status	Abundance	Management	Priority
Various	Resident & visitors	Frequent to rare	Monitor & record to establish database.	Ongoing

5. Mammals

Species	Status	Abundance	Management	Priority
Mole	Resident	Throughout	Distribution survey work required.	Future study
Field mouse	Resident	Throughout	Distribution survey work required.	Future study
Vole species	Resident	Throughout	Distribution survey work required.	Future study
Stoat / Ermine	Resident	Low density	Distribution survey work required.	Future study

Community Activities

Green Ash Chair making is a wonderful facility already established in the woodland. It truly embraces the ethos of working with forest materials, creating a feeling of wellbeing and a stunning end product to take away. Peter Young's 'Green Ash Chairs' is based in the quarry where from spring to autumn Peter has a large yurt alongside his workshop. He is kindly willing to make the yurt available for other activities - so far mainly meetings.

Other woodland hubs that could lend themselves to community activities include the hide and various picnic tables - at the ponds, the sheds and a sheltered hollow in the centre of the woodland. Each lends itself to different community opportunities.

The infrastructure is present all that remains is to organise the courses / events!

A possible community programme could be:

Spring:

March - 'get to know your amphibians' - frogs and toads at the ponds. Try pond dipping.

April - spring wildflower ID.

May - spring woodland artwork workshop.

Summer:

June - creative foraging workshop.

July - woodland photography.

August - summer ID - wildflowers, butterflies and bumblebees.

Autumn:

September - more foraging - berries & fungi.

October - autumn photography. Photo comp / calendar possibilities.

November - autumn artwork opportunities.

Winter:

December - using forest products for some creative winter gifts and wreath making.

January - more seasonal photography and art work opportunities.

February - winter wildlife projects - owl pellet analysis, using a trail cam, etc.

It would also be nice to build into this programme one or two open days, Peter willing these could be hosted at the yurt in the quarry and involve some refreshment (maybe home produced such as elderflower cordial, etc), a review of some of our activities (photography, art work) and perhaps a walk.

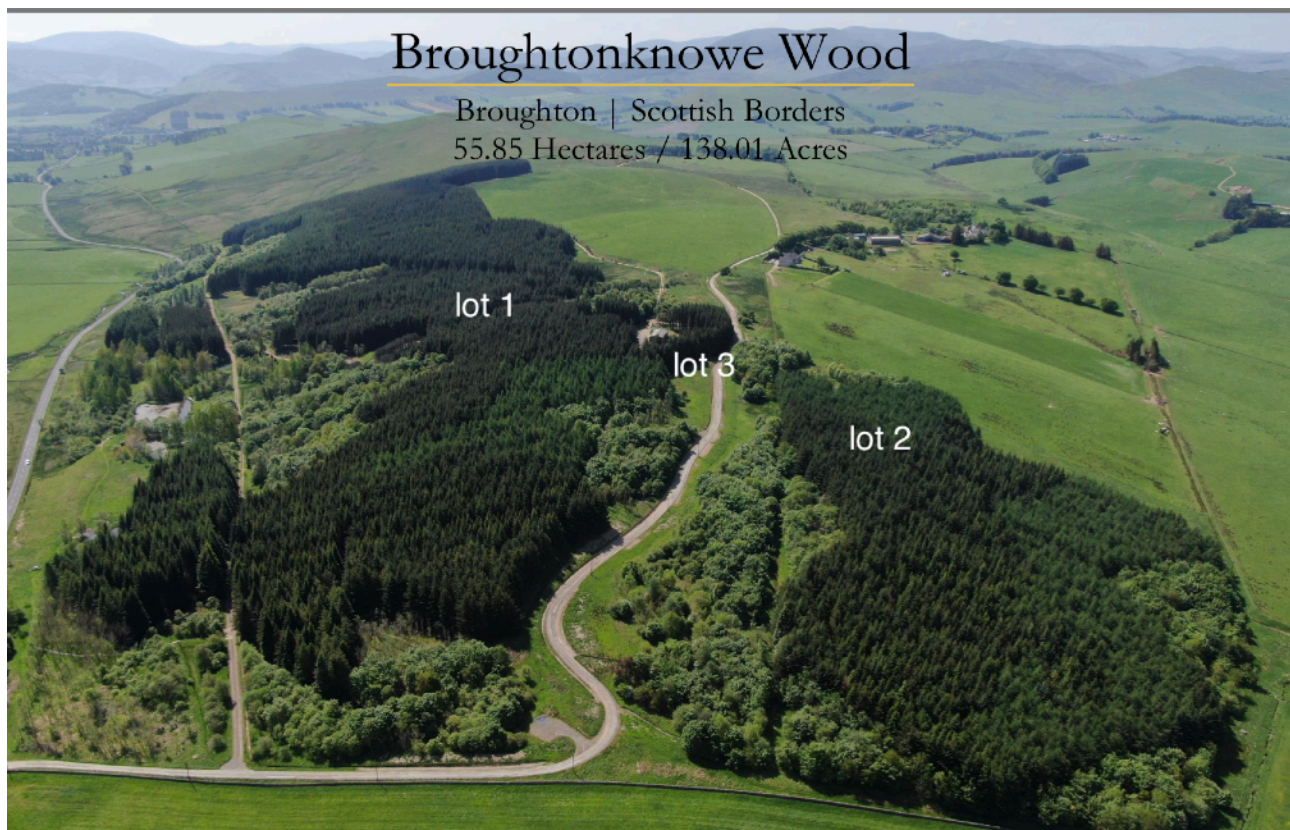
In addition scouts, schools and other groups can be readily accommodated.

Local scouts already use the fire pit area by the sheds for shelter making and sausage sizzles.

The hide and ponds provide the best opportunities for educational activities such as pond dipping and any forest school activities.

FoB will continue a programme of infrastructure maintenance; cutting grass, path and bench maintenance and any basic forestry work involving diseased timber, fallen branches, etc.

APPENDIX 1. Goldcrest Sale Descriptors



Lot 1 – Broughtonknowe Wood – 45.79 Hectares / 113.15 Acres - Offers Over £715,000

The sale of Broughtonknowe Wood is a most unusual opportunity. It is rare that such an attractive, interesting and well-maintained mixed woodland comes to the open market. The wood has a valuable commercial element, wonderfully complemented with a plethora of mixed habitats, adding a strong desirable amenity angle.

It was planted in the late 1980s with a mix of commercial softwoods and areas of diverse hardwoods. The current and previous enlightened owners greatly enhanced the property with the formation of paths through the conifer crops plus the creation of four ponds. Selective thinning of some of the crops and regular brashing of many of the trees has created straight stemmed clean timber, allowing more light to the forest floor.

The majority of conifers comprise Sitka spruce with some Norway spruce and larch. The thinned and brashed crops are easily walked through. Thinning has been carefully carried out by hand with limited use of heavy machinery.

It is a joy to see a commercial crop so well managed. The unthinned crops are carrying large volumes of maturing timber and it's anticipated that substantial revenue will be generated by felling in the next five+ years.

The broadleaf trees comprise mixed areas of ash, aspen, sycamore, rowan, beech with smaller proportions of oak, holly, willow and alder. Again, a fully considered and appropriate management regime is evident throughout.

A bird hide overlooking one of the ponds was constructed to observe wildlife at close quarters.

At the southern end of the woodland is a disused quarry. A lease provides for a tenant to use the quarry to carry out wood working courses from a semi permanent yurt. Further details available from GOLDCREST Land & Forestry Group.

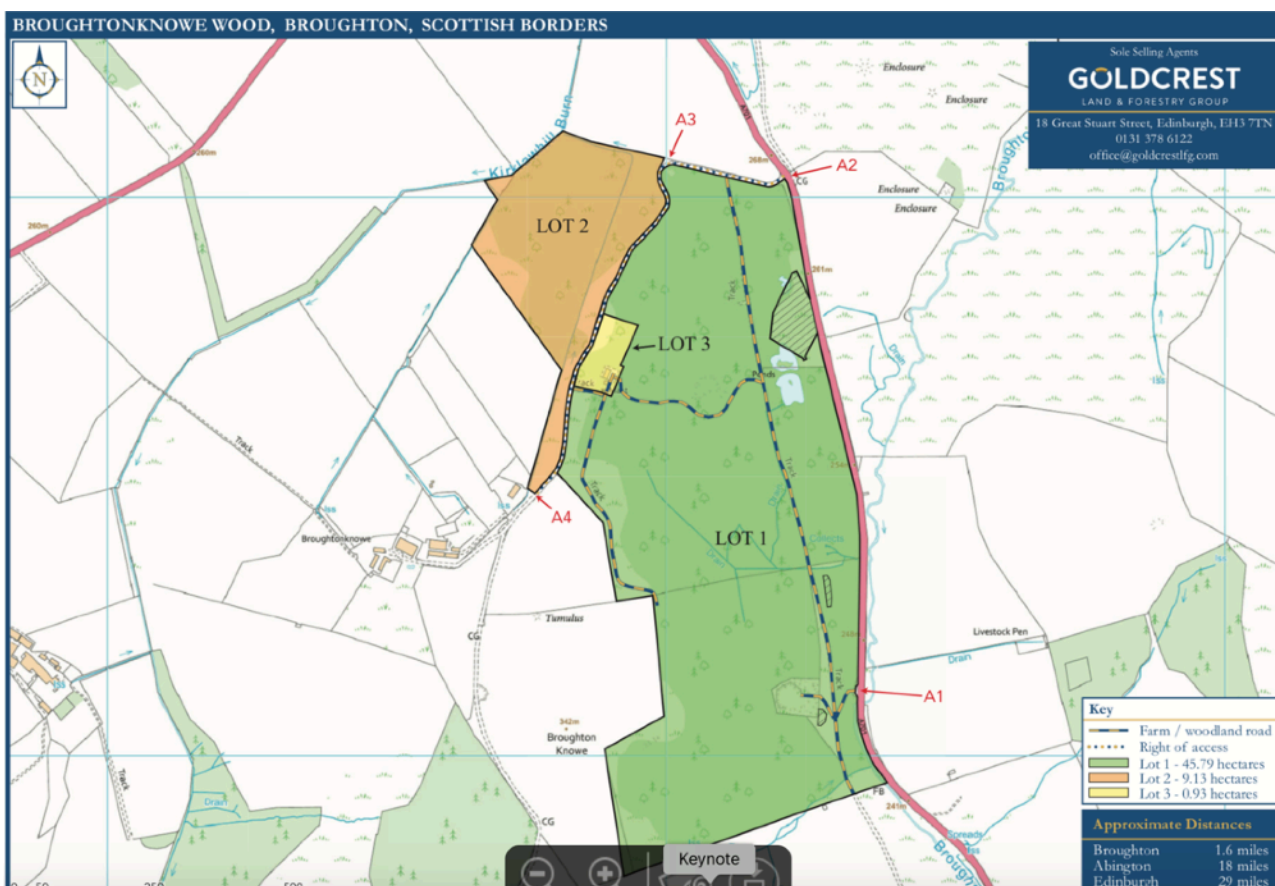
A current thinning licence and a recently created compartment plan and schedule is available from the Selling Agent.

Lot 2 – Broughtonknowe North – 9.13 Hectares/ 22.56 Acres – Offers Over £130,000

Lot 2 comprises a compact area of commercial conifers with attractive areas of mixed broadleaves. Previously the softwoods which comprises a mixture of Sitka, Norway spruce and larch have been line thinned. The crops were planted in the late 1980s and are approaching maturity. Harvesting is estimated to be 5 years away. The Lot sits on gently sloping, good quality ground. A recently created compartment plan and schedule is available from GOLDCREST Land and Forestry Group.

Lot 3 – General Purpose Building & Mast – 0.93 Hectares / 2.30 Acres – Offers Over £30,000

Half way along the access road A3-A4 a track bears off to the east and leads up to a parking area in front of the 20m x 10m, four bay, general purpose building. It is constructed of a steel portal frame, concrete floor and entrance apron. The sides and roof comprise profile box sheeting. A large up and over entrance door and side personnel door provides access. The building has mains electricity, is well lit and a rainwater collection system is connected to the building. A composting toilet is located at the rear of the building. Beside the GP building, is a small, chipboard, storage shed, occasionally occupied by the Scouts on an informal arrangement. Close to the Scouts shed is a radio mast that is tenanted by Telefonica O2. The lease is due to expire 30th June 2023 with renewal discussions ongoing. Details available form GOLDCREST Land & Forestry Group. To the north of the buildings is a small area of maturing spruce and larch.



APPENDIX 2. A Report on the Wind-farm spend

SUMMARY

The stated aims of the Friends of Broughtonknowe (FoB) penned in 2020 were 'improve amenity and increase biodiversity' in the woodland. We applied for funding to SSE CLYDE WIND-FARM and received a generous grant of £16,500 to enable work to progress toward these two objectives.

After tender, extensive path, drainage and pond work was empathetically undertaken by Alex Douglas, a local contractor. He was also contracted to upgrade the car parking provision.

Further path work, with boardwalks, and picnic facilities were completed by community volunteers and benches were installed at a number of scenic vantage points. In total the path work added over 1000m of hardcore surface to the existing path network producing a 'good surface' circular walking route starting and finishing at the car park.

A notice board was added in the car park to inform of developments and seasonal changes to the visitor experience.

A new wildlife pond was created and another considerably enlarged creating a total of four of these amenity and wildlife features. In addition FoB added a wildlife viewing hide at one of the ponds.

Community wildflower planting events were aimed to rectify the lack of a diverse flora in the woodland understorey and around the ponds. These are long term projects, but a number of species are now established; wood anemone, primrose and bluebells in the woodland; marsh marigold, yellow-flag iris and lesser spearwort at the ponds. In addition ox-eye daisies, knapweed and campion now have a generally increasing distribution. Hawthorn, blackthorn, honeysuckle and hazel have been planted in the woodland and significantly at the ponds.

The infrastructure is now all in place for a future long term community management programme.

AUDIT

The path work, benches and new picnic facilities are immediately obvious amenity upgrades which have resulted in an improved visitor experience. A situation reflected in the number of people following 'Friends of Broughtonknowe' on Facebook which has increased from 150 to approaching 300 since the work commenced.

Auditing increasing biodiversity is more challenging. Obvious indicators are the widespread occupation of the 50+ nest boxes FoB installed and the constant attendance of a diversity of birds at the feeders. (The regular community donation of bird seed and peanuts being very much appreciated). Other species are being monitored to provide evidence of any changing status e.g. butterflies and bumblebees; both have shown an increase in numbers recorded and species present.

BUSINESS AND FINANCIAL PLANNING

A BRIEF HISTORY OF THE WOODLAND:

Broughtonknowe Wood is in the Scottish Borders about a mile north of Broughton on the A701. It extends to some 135 acres and was planted in the late 1980s with a mixture of native hardwoods and commercial softwoods. It was the vision of the late Major David Balfour-Scott who conceived the idea of a woodland with commercial potential softened by amenity and the beauty of native species. Once planted the wood immediately won awards for its forward thinking vision. Since 2001 Christopher Lambton and Julie Morrice have owned the wood. As the commercial softwoods have begun to reach maturity Christopher has managed the woodland with an 'irregular forestry' regime, the idea being that the trees are never clear-felled and that the forest exists in perpetuity while being subtly restructured from within. With the encouragement of the owners, Friends of Broughtonknowe (FoB) was set up in 2021 to bring together like minded people aiming to improve the woodland amenity and increase its biodiversity. With the help of a grant from the Clyde Wind-farm a number of new paths have been added, a new pond has been dug and another significantly enlarged, a number of board walks and mini bridges have been constructed over tricky terrain and new benches have been built at scenic vantage points along the various routes.

SURVEY WORK re PROPOSED COMMUNITY BUYOUT OF BROUGHTONKNOWE

With a view to constructing a business plan for long term management of the woodland at Broughtonknowe the following survey work is necessary.

MANAGEMENT PLANNING DATA REQUIREMENTS:

- Soil type analysis, hydrology report & habitat type classification.
- Woodland 'health check' with particular reference to Ash and Larch.
- Distribution and quantification of diseased Ash in the woodland.
- Potential Ash management regime(s).
- Distribution of Larch in the woodland.
- Larch management regime(s).
- Short term (5 years) management strategy for the whole woodland forestry.
- Longer term (10 years) management strategy for the whole woodland forestry.
- Quantification of realistic community involvement opportunities within the woodland.
- Quantification of educational opportunities within the woodland.
- Infrastructure maintenance regime - short term plan (the next 5 years).
- Infrastructure maintenance / upgrade regime - long term plan (10 years +).
- Management for wildlife strategies.

BUSINESS / FINANCIAL PLANNING DATA REQUIREMENTS:

- A quantification of income opportunities from ongoing forestry practices.
- A quantification of any income opportunities from an Ash removal regime.
- A quantification of income opportunities from Larch management (assuming removal may eventually be necessary).
- What are the financial implications of running a community involvement programme in the woodland?
- Financial planning for developing educational opportunities in the woodland.
- Costing of immediate infrastructure maintenance (5 year plan).
- Costing of long term infrastructure maintenance and upgrade (10 year plan).
- Costing of management for wildlife within the woodland. Short term / long term. i.e. habitat improvement(s) and restoration, alien species control and pest control issues, deer management.
Possible reintroduction programme(s) e.g. water voles, hedgehogs.

A PROPOSED MANAGEMENT PLAN:

Balfour-Scott's original planting and Christopher Lambton's management has produced the aesthetic we all appreciate and are trying to protect.

I would like to see a continuation of Christopher's management model - maybe with some community embellishments. An outline of how this might work:

1. Continue the 'irregular forestry' regime deployed by Christopher and executed by Billy Swan. Billy is a forester craftsman and we should take full advantage of his skills. He could be offered a post of 'forest manager'. The sale of harvested timber should be geared to covering his salary.
2. Managing Ash die back: Again Christopher has developed a programme that works i.e. a gradual felling of infected trees followed by cutting them up for logs. Selling these locally for firewood, as Christopher does, must be priced to cover any overheads. Community involvement can be used here in various ways. At least one FoB follower has a chain-saw qualification and has expressed a willingness to volunteer in the woodland. This would mean Billy could be left to concentrate on forestry. Logging the felled Ash and distribution to buyers (using Christopher's contacts) could also be the realm of volunteer work using those willing to help who have trailer towing capability.
3. Replanting: Contrary to the present 'green' mantra of tree planting to offset one's (or others) carbon footprints I would suggest that for a while we let natural regeneration take place. The conifer plantations have only just been opened up and there is already evidence of a more natural understorey developing, that includes tree species (Rowan, Birch, Sycamore / Maple and Ash). Furthermore removing the diseased Ash has given more space for other previously planted species to develop fully, species that thrive on more available light - in our case Oak. Alder and Aspen are also naturally regenerating strongly. There may be a case for some more commercial conifer planting in the future if a long term commercial output is deemed necessary.

4. Maintenance of car park, paths, benches and picnic tables: I would like to think that FoB have already demonstrated that volunteer activities can provide and maintain these amenities. Some expenses are inevitably accrued but can be readily budgeted for. A small fund or income stream would be necessary. I would suggest an annual 'membership' charge could cover this - and probably also fund the continuing provision and maintenance of nest boxes and bird feeders.

5. Woodland activities programme: We already have a successful working model in the presence of 'Green Ash Chairs' based in the quarry. Teaching this traditional woodland craft would lend itself to expansion to a wider public if there was some form of subsidy. (lottery / windfarm grants?). An extension of Peter's present programme could be courses on mental wellbeing and the therapeutic effects of a general woodland experience - forest bathing!

Other woodland activities that lend themselves to development include:

- a) Continuing and developing our association with the Cubs / Scouts (and other youth groups).
- b) Wildlife ID walks (wildflowers, butterflies / bumblebees and fungi). We have community expertise in these areas.
- c) Moth trapping and ID. We have already successfully used external volunteer input to run such activities.
- d) Pond dipping - we have great ponds and this activity is particularly enjoyed by youngsters. We have already had a volunteer approach to run such events.
- e) Foraging events: these would be novel and maybe require external input but we have the natural resources! (Two FoB members are already making Elderflower cordial - this knowledge could easily be disseminated - and maybe extended to producing other beverages and potions!).

6. Community Woodland Events:

- a) Occasional 'open days' at the yurt.
- b) Open-air children's cinema. Worth trialling if we have some brave enough volunteers!
- c) Christmas tree & logs sale. We would have to buy in a stock of trees (we don't have suitable conifers) but it would be worth a trial. Logs can be our own felled Ash.

7. Management for wildlife:

Much of this is in place due to the input from spending our wind-farm grant. To a large extent it would now be a maintenance programme of the various plantings and the nest box installations. There is still a need for new boxes - particularly for bats, which we have not accommodated as yet. (I am in possession of a donation of 20 bat and bird boxes, the present community volunteer commitment can install these).

We may at times need help with wildlife survey work to monitor how our regime is impacting on the biodiversity in the various habitats.

Our present volunteer led groundwork regime can maintain the various habitat enhancement plantings (wildflowers, shrubs and a small quantity of native tree saplings donated by Borders Forest Trust and planted by FoB volunteers).

The financial implications of this continuing work are minimal.

It may be possible eventually to accommodate the introduction of new species e.g. Water Voles.

Pest / inappropriate species control:

There will be an occasional need to reduce the number of resident deer (at present Roe and the occasional Sika). Grey Squirrels must be controlled if we are to accommodate Reds. We are involved with the Borders Red Squirrel Conservation programme.

Aspects of control are presently carried out by licensed volunteer input.