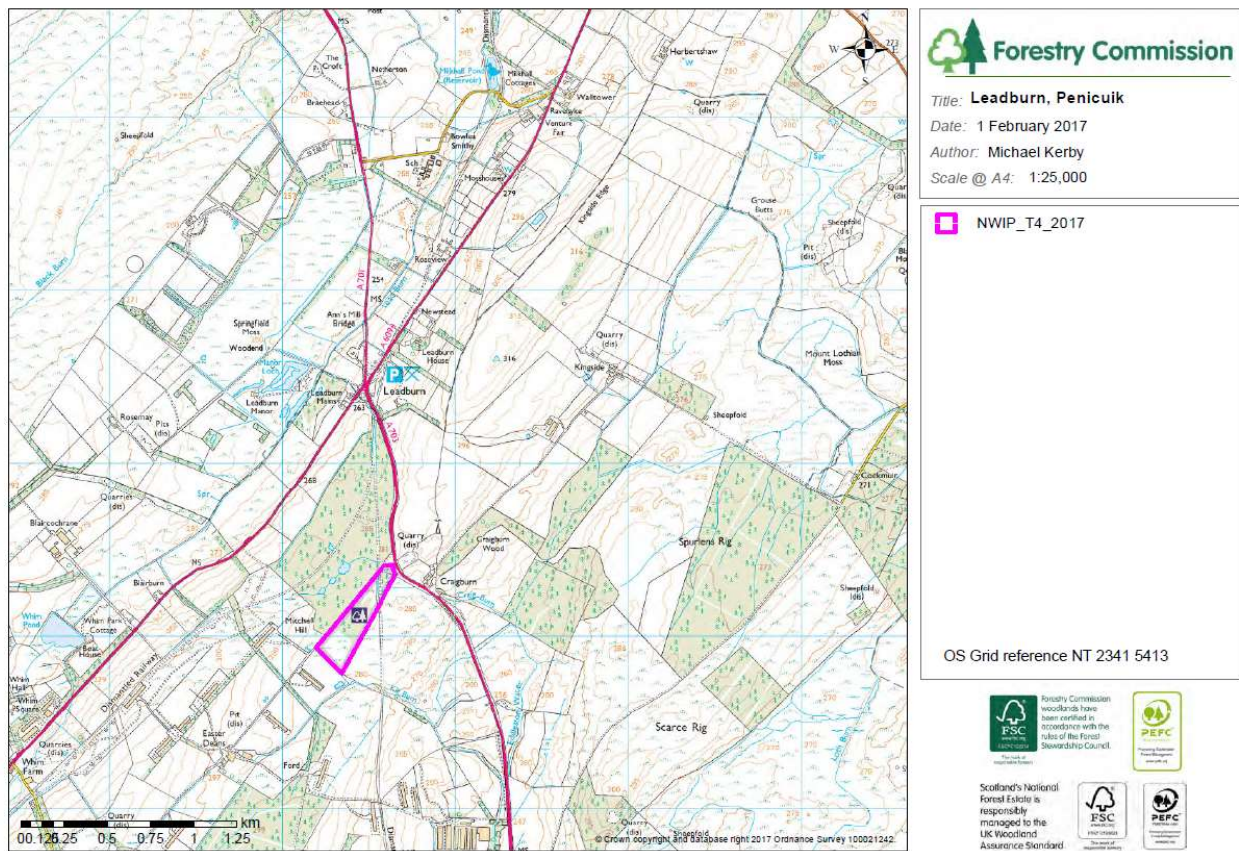


Leadburn Wood Extension
FLCW Proposals



Introduction

The land offered for sale by the Forestry Commission under CATS comprises 9.32 hectares of mixed conifers. The location is Easter Deans, Leadburn, Eddleston EH46 7BG.



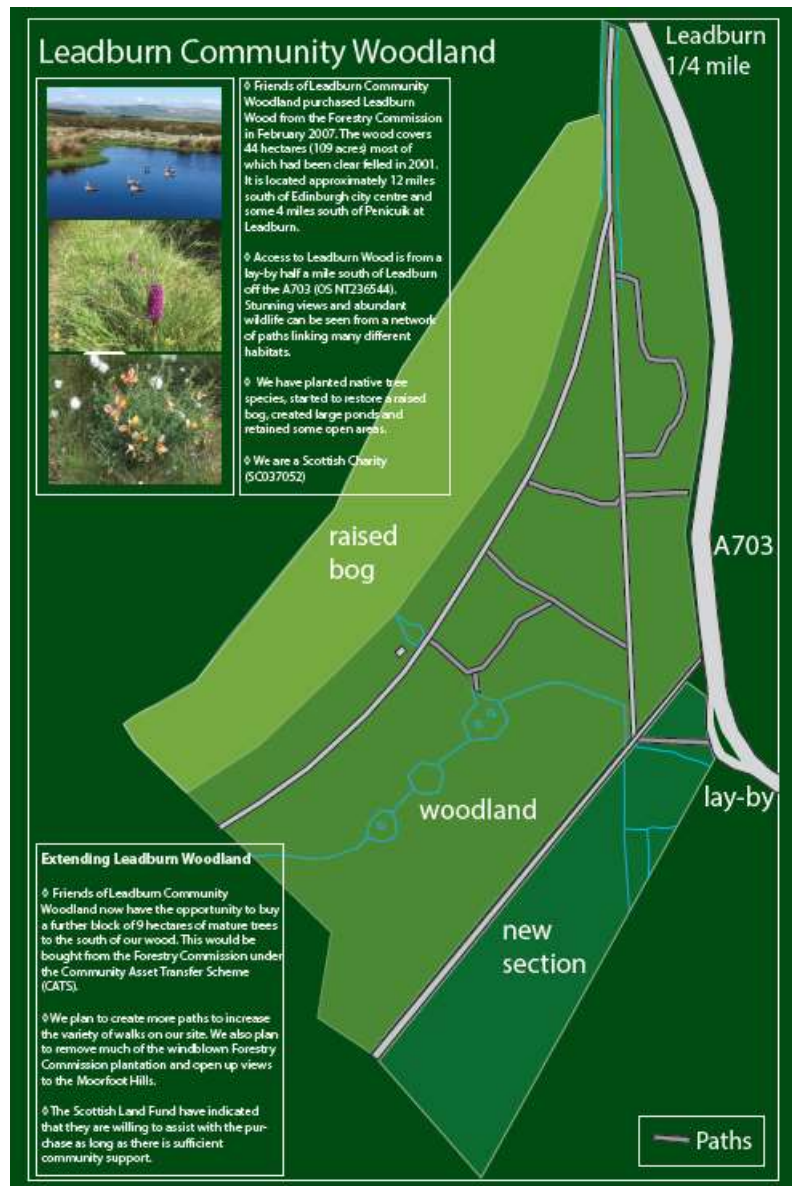
The block for sale runs along a north-east to south-west axis. It is bounded on the north-west edge by a rough road and is crossed by the track of a disused railway line that runs north to south. The area east of the site is a damp area of bog vegetation which is sometimes used as rough grazing. The land to the south west of the site is a commercial chicken farm.

Part of this land comprised experimental plots used by the Northern Research Station of the Forestry Commission (FC). The block used to be part of a larger block of FC woodland. The other block is to the north and comprises just over 44 hectares. Most of that block was clear felled in 2001/2 and was bought by the charity Friends of Leadburn Community Woodland (FLCW) in February 2007.

FLCW have established a varied and easily accessible site that is appreciated by the local community. Access is from a lay-by with flat and hard tracks on the old railway lines. We have planted trees and shrubs of mainly native species and have created four ponds together with new paths. We have installed some seating and have been restoring part of our site as a raised bog. This work has improved the site for wildlife.

The FLCW proposal is to use the extra woodland to increase the variety of walks available to our visitors and to open up views to the south by removing many of the existing conifers. The cleared area is to be restored as a raised bog. An internal FC report by Anderson (2013) recommended that the benefits of raised bog restoration on this site would be substantial.

The schematic map shows the relative positions of the two sites.



Description of Site

The aerial photograph on the header page was taken in June 2011 (Google maps). There has been some wind blow damage since then, but this still gives a fair impression of the present state of the woodland. The vegetation consists largely of mature conifers, especially Lodgepole Pine and Sitka Spruce.

Most of the site has significant depths of peat. Indeed, one of the purposes of the FC research was to identify conifer species for potential commercial use on areas of damp peat. More recent research suggests that it is undesirable to use such land for forestry. The main reason is that peat acts as a useful carbon store while it is wet. Tree growth leads to the peat drying out with a subsequent loss of carbon to the atmosphere.

Recent FC guidance (2015) suggests that land which has peat depths of more than 50 cm should not be used for forestry. Where such land has been used for forestry in the past, it should not be replanted after the tree crop has been harvested. The FC does allow minimal planting along the boundaries of such sites for scenic or wildlife reasons.

FLCW asked Tweed Forum to carry out a survey of peat depths on the FC block; their report was A. McDonald (2017). Measurements were taken on a 50m grid and a GPS used to record the locations. This allowed the surveyor to produce a contour map of the depths. The average peat depth over the 38 points was 365cm and the maximum was 630cm. The only part of the block that had depths of less than 50cm was that near to the lay-by. The conclusion was that the land was not really suitable for forestry.

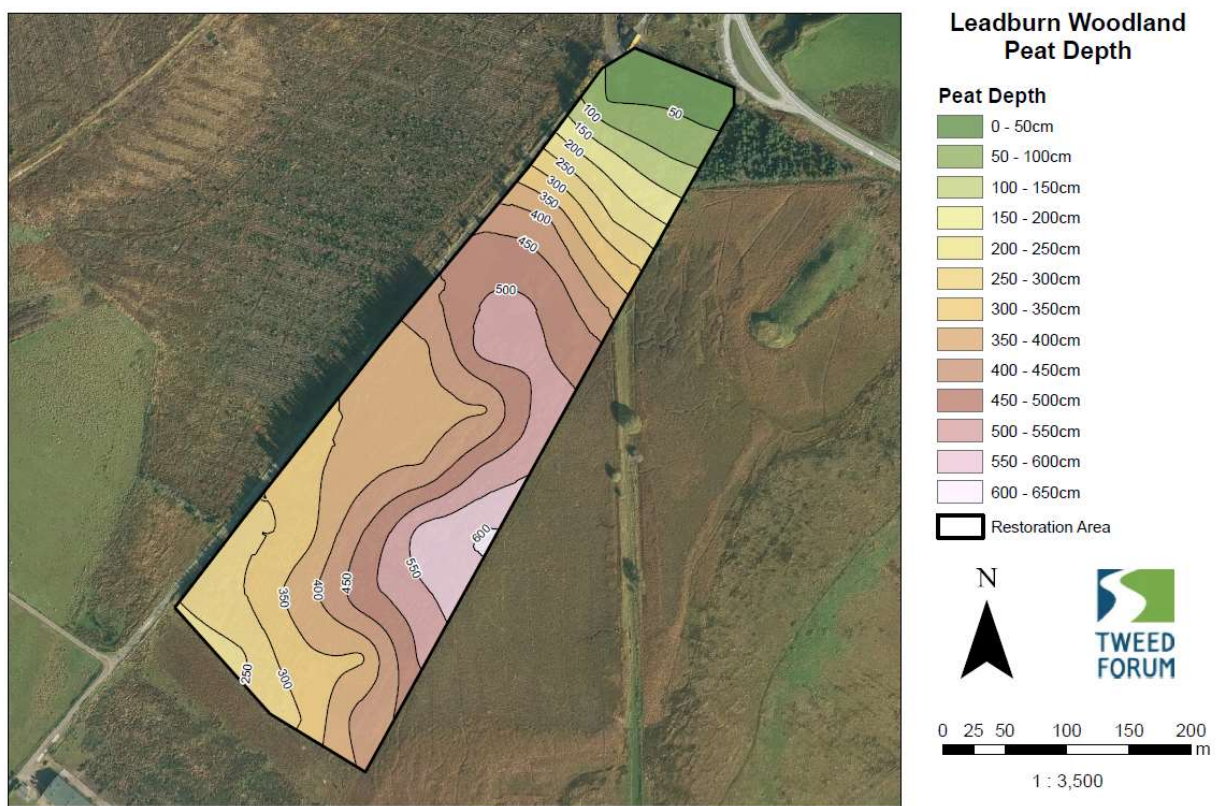
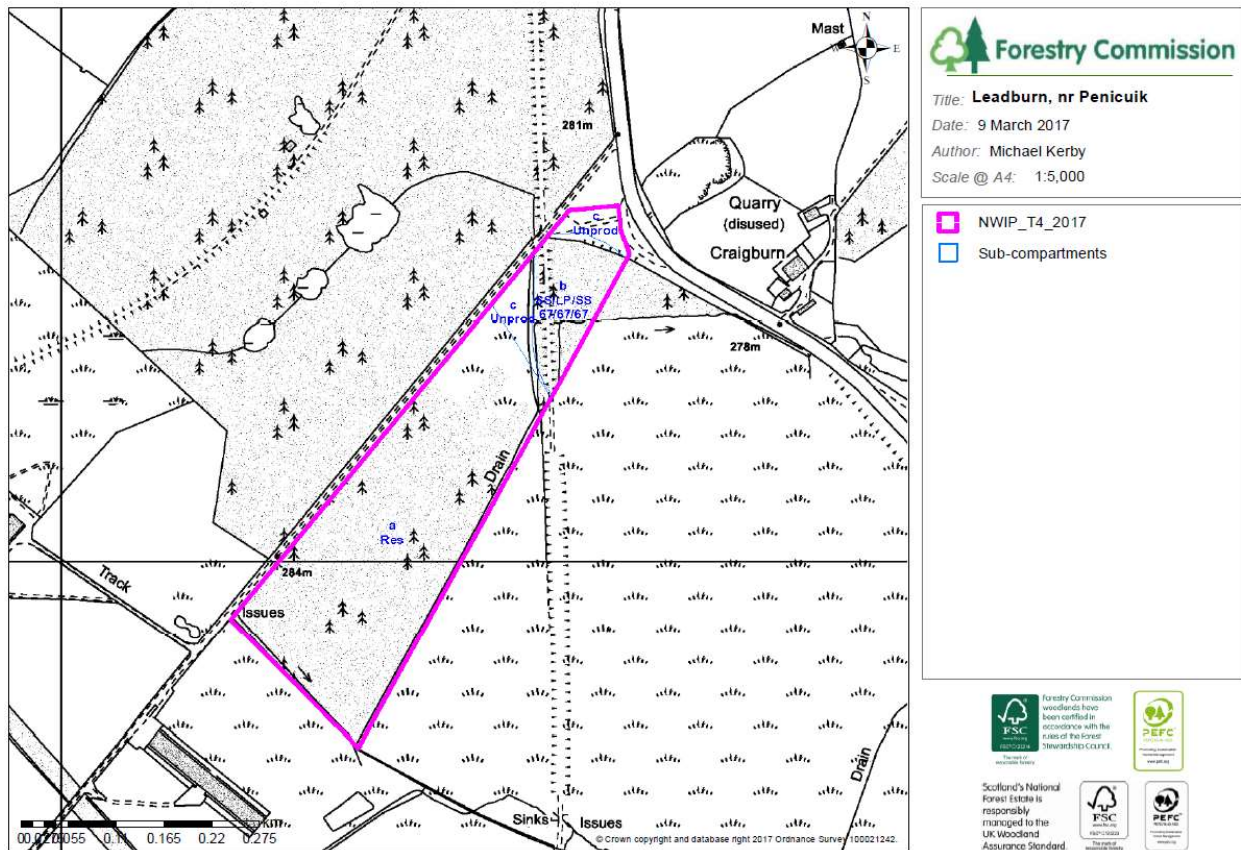


Figure 4: Estimated peat depth based on 50m x 50m peat depth survey, August 2017.

FLCW Management Proposals



Tweed Forum recommended that all of the conifers be felled. The area to the north with only shallow peat could be planted with bog woodland tree species. They suggested that the rest of the block should be “surface smoothing” where the trees are felled into the furrows and then tracked over by the excavator.

FLCW consider that this is too drastic a remedy for what is intended as an extension to the existing community woodland. We propose an intermediate management plan. This divides the block into seven zones. Our proposed management for the zones will be considered going from north-east to south-west. The map shows the approximate boundaries of zones 2, 4 and 6.

Zone 1) Unplanted area close to lay-by. We propose planting a few bog woodland species on the southern edge of this, as suggested by Tweed Forum.

Zone 2) Rest of area east of the railway line. This is wet and has a lot of wind blown timber. There is a burn that runs due east half way along the railway line section. This provides the main drainage from the community woodland as well as some drainage for the FC block. FLCW wish this to remain open to prevent water-logging of our main site. We propose to leave this woodland as it is with the possible exception of the creation of a path along the east side.



Zone 3) Railway line and its margins. This has a number of shrubs and deciduous tree species which we would like to retain. There are a few fallen conifers on the west side which we propose to trim. A few standing conifers would be felled to open views to the west, but the rest would be retained.

Zone 4) Unplanted section west of the railway line. This zone is species rich with typical bog vegetation such as sphagnum moss and bog asphodel. This is a known site for a priority butterfly species, the Large Heath. Care should be taken to avoid damage to this site. The land here is damp and relatively flat so minimal ditch and drain blocking should be sufficient.

There are drainage channels along the edges of this section which feed into the burn in zone 3. The ditches which cross this zone feed into the drainage channels. We propose that the ends of these ditches should be blocked to maintain a high water table but think that these ditches should not be actively filled in (e.g. by heavy machinery) to avoid damage to the near-pristine bog vegetation.

Zone 5) Conifers on peat deeper than roughly 350cm. This zone is around half the area of the block. There is some windblow damage along the western edge of the zone. The remaining trees should be felled. Some timber should be of commercial value so could be removed from the site and sold to

offset some of the costs of the felling and bog restoration. The rest can be used to level some of the ditches as suggested by Tweed Forum or be converted into chippings. Chippings are useful for path creation and maintenance either here or on the rest of the community woodland.

Zone 6) Conifers on peat shallower than roughly 350cm. These would be retained and a walk created through this section. These trees would also act as a partial screen of the chicken farm sheds. There is some interest amongst foresters in retaining a few of the experimental plots; this is because of their historical importance.

Zone 7) Small open area along the southern edge of the block. We propose planting bog woodland species here. In the long term, these could provide a replacement screen.

These proposals aim to retain some of the woodland for community use while protecting the deeper peat levels from damage through dessication. They will also open views to the south which will enhance our existing woodland.

Cost of Proposals

There will be an initial capital cost for the felling of trees in zone 5. This will include the cost of a felling licence (£250) and the cost of surface smoothing. Tweed Forum estimate this as £2000 to £5000 per hectare, so up to £25000 in total. If Peatland Action funding is made available next year, Tweed Forum have expressed an interest in tendering for the work; they have a lot of experience in carrying out work of this sort.

If funding is not available, then bog restoration will need to be carried out as FLCW finances permit. Thus the initial clearance in zone 5 is likely to be only half of that specified under zone 5 above. The smaller cleared area would be adjacent to zone 4.

There will also be capital costs associated with any tree planting and path creation. These are expected to be less than £1000 in total and can be phased in.

There will be a need for ongoing maintenance. The main task will be the removal of conifer regeneration from the restored bog area. This will have to be carried out for at least ten years. The costs of this should not be too great because we are usually able to use volunteer labour for this work.

Ability to Complete Project

FLCW have managed our own woodland of 44 hectares for 11 years. Most of the work on our site has been carried out by volunteer labour. We have sometimes had assistance with larger projects such as tree planting, but most of the work and subsequent maintenance has been carried out by our own volunteers. We have also spent many days every year on the management of the site and on the removal of conifer regeneration.

Our site includes an area of 17 hectares which we started to restore to raised bog in 2009. Tree removal is essential here, so we have spent at least 15 man-days on this work every year since then. We have often had help from groups such as Lothians Conservation Volunteers on the raised bog.

Finance for a lot of our work has come from grant applications, so we have some experience in carrying out the requirements of funding bodies. Some of this work has involved the use of outside contractors. Examples of work arising from grants:

- Original site purchase – Scottish Land Fund.
- Original site purchase – European Community Scottish Borders Leader+.
- Raised bog restoration – Scottish Natural Heritage.
- Path improvements and finger posts – Awards for All.
- Pond creation – WREN (Scottish Landfill Communities Fund).
- Path maintenance on the railway lines – Land Manager Options.
- Tree Planting – Various bodies.

In addition, we raise funds by selling conifer regeneration as Christmas trees during December. In both of the last two years we have raised more than £3000. This allows us to meet our additional management expenses.

More information about our work is available on our web site.

FLCW should have sufficient experience and finance to complete our proposals.

References

R. Anderson (2013) Russell Anderson's report on Leadburn Block.
Visited on 4th and 11th December 2013.

Forestry Commission Scotland (2015) Deciding future management options for afforested deep peatland.

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<http://onlineborders.org.uk/community/leadburnwood>

A. McDonald (2017) Leadburn Woodland Peatland Assessment.
Report for FLCW by Tweed Forum.