

Future Proofing Our Woodlands

The effects of climate change:

Higher temperatures - summer drought/winter waterlogging/increases in severe storm events.

Increase in number and range of pests and diseases, e.g.:

Oak – SOD and AOD

Ash – Chalara fraxinea

Beech – Phytophthora ramorum/kernoviae

Sycamore – Phytophthora acerina

Birch – Bronze Birch Borer (*Agrilus anxius*)

Currently just 5 tree species make up a little under 80% of our broadleaved woodland:

Oak – 32%

Ash – 14%

Beech – 14%

Sycamore – 11%

Birch – 6%

NE/FC advice for beech woods:

‘Increase the age structure of high forest to reduce susceptibility of beech populations to damage from drought and storms’.

Accept a greater mix of native species, such as ash and oak within the canopy of beech woods.

RN will contribute to resilience by providing cycles of new genetic diversity.

Options for management of Gledhow Valley Beech Plantation

We have ascertained that there is a need to increase the species diversity and that this can be achieved through the recruitment of natural regeneration, together with enrichment planting of appropriate species.

It is agreed that doing nothing is not an option, Change will take place anyway, but will be uncontrolled, increasing risk potential and restricting future species diversity.

Four options for management were discussed:

1. Focus on risk management only and allow stand to over-mature and regenerate naturally. This will meet our statutory duty of care, but will result in sporadic recruitment of largely beech regeneration, lacking the control of well managed intervention. It will also require a commitment to fund all reactive safety work
2. Low intervention single tree selection. This will allow identified trees to be felled or have their crowns dismantled (leaving standing dead wood), providing small openings in the beech canopy that will facilitate natural regeneration. As the canopy openings will be relatively small (size of a single tree canopy), the light reaching the woodland floor will be modest and largely confined to the centre of the opening. Recruitment of regeneration will be mostly beech.
3. Higher intervention group felling. The felling/dismantling of groups of trees (three, four, five) will allow larger canopy openings. This will facilitate the recruitment of a wider variety of tree species through natural regeneration. It will also allow enrichment planting, using more light demanding species such as oak or sweet chestnut.
4. Thin whole stand by 25% to 50%. Removal of 1 in four trees will facilitate largely beech regeneration. Removal of up to half the standing stock will aid recruitment of a wider variety of species through natural regeneration and allow enrichment planting.

Option 2. may attract Woodlands rust funding and will provide a good start to restructuring the beech stand without major change in the first instance. It allows flexibility in future management, without closing down other options. In the absence of WT funding, however, it will incur substantial costs.

Option 3 is my favoured approach, as it provides sufficient light for enrichment planting and the retained standing deadwood will provide excellent vertical habitat. The retained mature beech, will deteriorate over time and contribute to the habitat. It is, however, a costly approach.

A way of making option 3 less costly, is to offer a standing sale to thin the whole of the woodland evenly by 25% and invite quotes from reputable contractors.