

Cotswolds and Vale Ash Dieback Forum

Key principles and species selection to mitigate the impact of ash dieback

Ash is a dominant tree in the landscape of the Cotswolds and Vale of Gloucester, particularly on the calcareous soils where it can be up 70% of tree cover. Ash is not only an important woodland tree, but is also important in the wider landscape as roadside trees, trees in fields, hedgerow trees and trees in parks, gardens and urban open space; often as trees that provide strong landscape features either singly or in small groups. To a great extent, ash filled the gap left by Dutch Elm Disease.

It is feared that a high proportion of ash trees could be lost to ash dieback over time. This note provides guidance on the approach to take and which tree species to consider. The aim is to ensure a resilient landscape which can cope with current and future threats while remaining attractive, functional and rich in wildlife.

There is no one tree that can replace ash. It is important to plant a variety of tree species following the principle of *'right tree, right place for the right reason'* to fill the void that loss of ash will create. It will also provide resilience in the face of climate change and other tree diseases that threaten the landscape.

Key principles to follow

1. Act now to minimise the landscape impact of ash tree loss. Start promoting new trees and taking better care of existing trees.
2. Grow the right tree in the right place for the right reason and give them aftercare
3. Plant trees away from existing ash trees but in close proximity to maintain ecological and landscape value.
4. Use the 2 for 1 formula, planting 2 trees for a large tree and 1 tree for a medium tree or small tree.
5. Promote natural regeneration if possible by selecting and tagging trees in hedgerows.
6. Encourage a diverse range of trees species to develop a resilient landscape
7. When choosing species consider local factors such as what trees are characteristic of the area, soil type, management requirements etc.
8. For wildlife, landscape, timber and woodfuel, choose native species or where appropriate, those species well established in the area such as sycamore. In towns, villages and urban areas native cultivars or exotics species may be more appropriate.
9. To increase resilience to climate change plant up 25% of trees of more southern origin¹.
10. Only plant trees grown in Britain by reputable nurseries and ideally UKSG certified²

¹ Woodland creation and tree planting in the Cotswolds AONB – Tree Species and Provenance
<https://www.cotswoldsaonb.org.uk/wp-content/uploads/2017/07/Position-Statement-on-Tree-Species-and-Provenance-June-2017.pdf>

Choosing Provenance in Broadleaved trees, Forestry Commission 2006.
[http://www.forestry.gov.uk/pdf/fcin082.pdf/\\$FILE/fcin082.pdf](http://www.forestry.gov.uk/pdf/fcin082.pdf/$FILE/fcin082.pdf)

² <https://www.woodlandtrust.org.uk/about-us/woodland-creation/seeds/>

Which native trees are most similar to ash?

Ash trees have a big impact on soil quality because their leaves are nutrient and base rich and decompose rapidly. Alder and lime leaves have similar qualities as, to a lesser extent, do sycamore, field maple and aspen.

Many of the generalist animal species that feed on ash can also be found on oak and beech along with sycamore, birch and hazel. However, for specialist insects, mosses and lichens, elm is the best substitute followed by sycamore, aspen, oak and hazel.

No one species alone can substitute ash. However the following is a list of species suitable for the replacement of ash outside woodlands in the Cotswolds and Vale.

Tree species for replacing ash trees outside woods

	Cotswolds	Vale	Comments
Group 1 large trees			
Pedunculate Oak	●	●	Widespread
Beech	●		Scarp crest, High Wold and Dip-slope
Small leaved lime	●	●	Present in some Cotswold ANSW sites but largely selected 'out' in favour of beech, ash and oak in scarp woodland
Large leaved lime	●	●	
Elm (disease resistant)	●	●	Once widespread.
Black poplar	●	●	Vale, valley bottoms, damp sites. Many lost, particularly females due to 'woolly' seeds.
Group 2 small trees			
Field maple	●	●	
Hawthorn	●	●	
Hazel	●	●	
Wych elm	●	●	
Whitebeam	●	●	
Group 3 'occasional' species where appropriate			
Sycamore	●	●	Avoid planting in proximity of ANSW, Grasslands and horses
Hornbeam	●	●	
Common Walnut	●	●	Ash like in appearance.
Alder	●	●	Damp sites
Apple (on M25 rootstock)	●	●	Where evidence of former orchard sites. Use local varieties.
Plum - particularly Pershore Purple and Blaisdon		●	
Damson		●	
Crab Apple	●	●	
Perry pear		●	

Some native cultivars and exotics may be appropriate for urban locations to fit with streetscape, existing trees, cope with pollution etc.

Encouraging new tree diversity

The easiest way to establish trees that are suitable to the locality is to identify existing saplings and allow them to grow naturally. These will often mature quickly and require less work than planting. For example identify in hedges and tag them to make sure they are not lost to the hedge cutter.

If there is no natural regeneration, planting will be necessary. Whips are cheaper and easier to establish. Make sure they have protection from rabbits, deer and livestock. In hedges plant in gaps or create small root-free holes in which to plant.

Structural diversity is also important, so consider planting smaller trees to accompany the large species.

Locally sourced seed and whips are recommended. Whilst it is likely that there is enough genetic variability within local tree populations to cope with climate change, the Forestry Commission recommends the inclusion of trees of a species from between 2° and 5° of latitude south. For the Cotswolds and Vale this includes Cornwall as well as northern France.

Great Britain is divided into 23 Regions of Provenance³. The Cotswolds and Vale is split between two; 403 and 404, roughly along the A40 from Cheltenham to Oxford. The Forestry Commission recommends $\frac{1}{3}$ of trees for planting new woodland should be from selected seed sources from the same Region of Provenance as the site to be planted (403 and 404 for the Cotswolds), $\frac{1}{3}$ from the region to the south (404 and 305) and $\frac{1}{3}$ from northern France, to increase resilience to climate change. Great care is required if considering importing seed or tree stock. However, the Cotswolds and Vale are fortunate in that stock from South Devon and Cornwall is southern provenance.

³ The Forestry Commission defines tree provenance as the geographic locality of a stand of trees from where the seed was collected³. Origin is the geographic locality within the natural range of a species where the parent seed source or its wild ancestors grew. Provenance and origin have long been used in forestry to select trees to match the site location, for timber quality and productivity etc.