

Managing Chalara dieback of ash in North West England



Britain's trees are facing threats from many new pests and diseases, including Chalara dieback of ash, a disease caused by the fungus *Hymenoscyphus fraxineus*.

By working together we can manage its impact. This leaflet provides some practical advice on managing Chalara's impacts on biodiversity and the landscape, protecting economic returns from timber production, safeguarding the public, compliance with legislation, identifying trees which show resistance to the disease, and increasing the resilience of our woodlands. It focuses on how we manage the decline of ash in the landscape and woodlands, and is intended for use by local and highway authorities, private tree and woodland owners, and tree-care contractors.



All of us who care for trees can help to safeguard the long-term future of our trees and woodlands by following the advice in this leaflet.

Advice on the Forestry Commission website at www.forestry.gov.uk/chalara outlines how to manage ash trees now that Chalara is present. Most of the advice is applicable to a wide range of circumstances, but some will need local adaptation. This leaflet should therefore be read in conjunction with the advice at the above website and at www.forestry.gov.uk/biosecurity.

You can also help by watching for and reporting possible Chalara symptoms for investigation, especially in new areas, by using the Tree Alert reporting tool at www.forestry.gov.uk/treedalert. Maps at www.forestry.gov.uk/chalara show where the disease has already been confirmed.



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Cover image: Ash Tree, Edward Wilson/Silviculture Research International 2014. All other images courtesy of Forestry Commission.

North West England

Chalara dieback of ash:

Key information

Chalara will eventually cause significant losses of ash trees, and has already caused widespread damage in continental Europe.

What to expect

- Young trees often die quickly.
- Coppice regrowth can die quickly, from new infection or infected stools.
- Some large trees might tolerate infection for some time, whilst others decline rapidly and become prone to other threats.
- Individual trees might survive infection for a number of years with limited crown damage.

How Chalara is spread

H. fraxineus spores are dispersed from small, fruiting bodies which develop on the stalks of infected leaf litter during late spring and summer of the year after leaf fall. It is mainly spread by the wind and weather events, but spores can also be moved on leafy material, by vehicles and footwear. Whilst there are practical limits, good biosecurity measures make good forestry practice and basic precautions should include:

- cleaning machinery, tools and vehicles before moving them from site to site;
- not moving leafy brash (branches etc) over long distances; and

- cleaning footwear and outerwear regularly to ensure they are visually free from leaves and soil.

Moving timber

There are no restrictions on moving ash timber within England, Wales and Scotland unless a Statutory Plant Health Notice has been served. However, good practice should include removing obvious twigs, leaves and leaf litter before moving it, and stacking logs on bearers to help avoid soil and leaf litter being picked up during loading.

Planting alternative species

It is important that we start to consider changing the composition and structure of our woodlands as soon as possible to improve their long term resilience. Planting a diversity of tree species can help make woodlands more resilient to pests, diseases and climate change. A small proportion of ash might be tolerant of Chalara, so we recommend retaining trees with no symptoms. Ash trees might decline over many years, giving time to establish new trees to minimise the inevitable impact.

Choices of alternative species will depend on factors such as soil, climate, management objectives and any conservation designations. The species selection tool at www.forestry.gov.uk/esc can help you to choose the best fitted species.

Alongside seed from the current area of provenance, we also recommend including seed from origins of between 2 and 5 degrees south to provide resilience to a warming climate.

In ecologically important woodlands we recommend the advice at <http://jncc.defra.gov.uk/page-6322>.

For advice on managing woodlands in a changing climate, see www.forestry.gov.uk/climatechangeengland.

TOP TIP!

When selecting trees for planting, you should consider their potential impact on the environment and their ability to adapt to climatic change. Choose the supplying nursery and stock carefully, remembering that you may specify British-grown stock to avoid the risk of accidentally importing pests and diseases from abroad.

Trees, woods and forests are precious assets that offer extensive social, economic and environmental benefits. The range of tree species in our urban forests and woodlands need to change so that they are more resilient to current and future threats from climate change as well as pests and diseases.

Together, we play a vital role in protecting, improving and expanding our forests, woods and urban forests for the people who enjoy them, the businesses which depend on them, and the wildlife which flourishes in them. We are working alongside a wide range of public, private and third-sector partners to achieve these goals.



Distribution of ash in the North West

Merseyside and Cheshire have approximately 7% woodland cover, and ash trees comprise about 6% of it. Much of the new woodland created over the past 20 years includes ash.

Greater Manchester has about one million ash trees in woodlands, streets and parks. It regenerates freely in the area, and groups of self-seeded young ash trees are common on roadside verges and in woodlands.

CAUTION!

There are other pests and diseases in the North West, including *Phytophthora austrocedri* in juniper trees, Dothistroma needle blight (also known as red band needle blight) in pine trees, and, especially, *Ramorum* disease in several plant species, but especially larch trees. These diseases can be spread in mud, soil and plant material, so adopting biosecurity measures is sensible practice, especially for those who travel to multiple sites over a wide area. Guidance is available at www.forestry.gov.uk/biosecurity.

Further information about other pests and diseases is available at www.forestry.gov.uk/pestsanddiseases.

Most of the area's woodland plantings over the past 15 years contain ash.

Lancashire has about 6.5% woodland cover, of which 12% is ash. Of special note are the ash-dominated ancient woodlands, the best-known being in Arnsdale and Silverdale AONB. Ash is also common in non-woodland situations, with approximately 92,000 trees in hedges, verges and fields, partly because of its ability to readily regenerate.

Cumbria has approximately 2500ha of ash woodland, and 550,000 ash trees. Thirty-four

Cumbrian SSSIs include upland mixed ash woodland, with ash a key component of the woods on Morecambe Bay limestone, the Lake District uplands in Borrowdale, and the Furness Fells. Dozens of threatened insect, plant, fungus and lichen species are associated with these ash woods, including several moths that directly depend on ash. Mature ash is intrinsic to the Lake District's network of farms and small field systems, including many ancient pollards with a history of management going back hundreds of years.

Distribution of Chalara in North West England

A small number of cases of Chalara were discovered in 2012 and 2013 in young, recently planted ash trees which had been traced from infected consignments in nurseries. In all cases the infected plants were destroyed.

Chalara was then detected in the wider environment in 2014, when a cluster of cases were confirmed in established woodlands, hedgerows and road verges across much of Lancashire and across into Greater Manchester (in the northern districts of Bolton, Bury and Rochdale), the Yorkshire Dales National Park, and south east Cumbria.

Further spread of low-level symptoms, initially in young ash, is expected across the region. Up-to-date maps showing where Chalara has been confirmed are available at www.forestry.gov.uk/chalara.

Biosecurity: Dealing with leaves and other tree debris

Where possible you should take sensible biosecurity, or plant hygiene, precautions to avoid fruiting bodies and spores being transmitted via infected leaves.

Different areas will have different levels of infection, and the following notes can help you decide what to do with leaves and debris depending on whether you are in a high-infection or low-infection area.

By early 2015, the high-infection areas were Norfolk, Suffolk, Essex and Kent. However, this situation will inevitably change, and we recommend readers in Bedfordshire, Cambridgeshire, Hertfordshire, Sussex,

FOR ALL SITES...

- Plan to fell or prune infected trees after leaf fall.
- Clean vehicle tyres, chippers, chainsaws, tools, boots and clothing after working on infected trees, particularly before moving to new areas.

Surrey, Northumberland, County Durham, Tyneside, Lancashire, Yorkshire Dales and Greater Manchester also now follow the guidance for high-infection areas.

Infected trees WITHIN a high-infection area

- Take reasonable biosecurity measures to prevent the movement of infected non timber ash material (such as leaf litter) from high-infection into low-infection areas.
- In urban areas, or to protect valuable specimens, compost leaf litter on site. If that is not practicable, collect it as usual during the course of grounds maintenance or highway works and take it to a composting site within the high-infection area. (*This does not apply to gully emptyings and dedicated street sweepings.*)
- Chip and compost brushwood containing leaf litter on site, or chip it and take it to a composting area within the high-infection area.
- Site composting areas as close as possible to the source of the material.

Infected trees OUTSIDE a high-infection area

- If possible, retain and compost on site any leaf litter and chipped brushwood containing leaf litter.
- In urban areas, or to protect valuable specimens where it is not possible to contain leaf litter on site, collect it as usual during the course of grounds maintenance or routine highway works, and take it to a composting site. (*This does not apply to gully emptying and dedicated street sweepings.*)
- Do not move ash leaf litter or chipped brushwood containing leaf litter any further than is absolutely necessary.
- Site compost heaps as far as possible from uninfected ash trees.

Woodland Ash Management

The principles of national guidance are to:

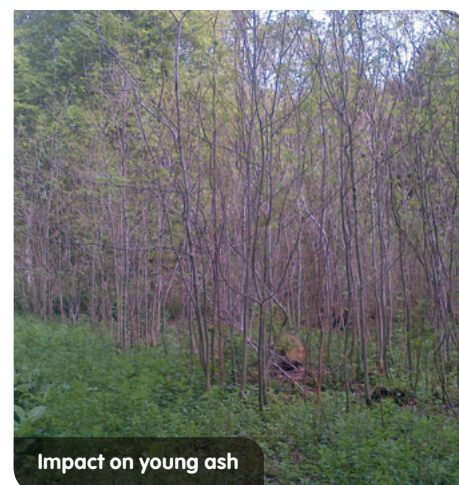
- maintain the values and benefits of ash woodlands and iconic trees;
- secure an economic return where timber production is a key objective;
- maintain as much genetic diversity as possible with the aim of ensuring ash presence in the long term;
- minimise impacts on associated species and biodiversity;
- minimise the rate of spread of Chalara; and

- help manage the decline of ash in the landscape and woodlands.

When modifying woodland management plans to take account of Chalara, you should consider:

- any increased demand for timber and woodfuel;
- impacts of climate change;
- conservation requirements for woodland ecosystems; and
- possible threats from other pests and diseases

If the site is covered by an active grant agreement, speak to the Forestry Commission before taking action, or to Natural England if the site is designated, or in, an Environmental Stewardship Scheme.



Impact on young ash

Taking action in woodland

In high-infection areas

DO NOT:

- Rush to fell because Chalara is present;
- Remove recently planted ash trees with no symptoms – you might remove some disease tolerant ones; or
- Kill ash coppice stools showing no symptoms.

DO:

- Monitor and retain trees of all ages and sizes showing signs of Chalara tolerance;
- Encourage natural regeneration of other species;
- Consider planting suitable alternative native species soon after felling. Countryside Stewardship Grants for restoring infected ash woodlands are available – www.forestry.gov.uk/countrysidestewardship;
- Thin woodlands as usual to encourage canopy development and, in mixed stands, favour retention of species other than ash; and
- Select trees for thinning which show disease symptoms. This should be done while they are in full leaf to ensure that uninfected trees are not selected.

In low-infection areas

DO NOT:

- Rush to fell because Chalara is present; or
- Feel forced to change planned ash coppicing cycles: stools will either tolerate Chalara or be killed by it, whatever size they are.

DO:

- Continue planned work, and consider modifying coppice management as in high-infection areas;
- Thin woodland as usual in high forest to maintain tree vigour and a full canopy;
- Select trees for thinning that show symptoms of Chalara. This should be done while in full leaf to ensure that uninfected trees are not selected; and
- Remove recently planted or naturally seeded trees if small numbers are infected. Burn or bury on site.

Pollarding

Continue with regular pollarding activity, but avoid pollarding all trees in the same year. Avoid starting the restoration cutting of ancient pollards not currently in management unless there is a risk that they will fall apart.

Further guidance for coppiced areas in high-infection areas:

- Avoid carrying out a traditional coppice operation where ash forms more than 30% of the canopy; the loss of a proportion of these stools can be expected if licensed ash coppicing is agreed as the correct management prescription.
- Continue planned work, or consider cutting areas containing other species first.
- Retain as many ash trees in the canopy as practicable to encourage seed production.
- Where creation of temporary open space is not critical, leave about 50-70% cover by maintaining some canopy of ash and other species, and retaining standards and maidens.

Urban & peri-urban Ash Management

It is possible that ash trees could be retained longer in large urban areas if infected leaves are frequently cleared from hard surfaces, reducing the means by which the disease can spread. Infected ash trees in towns and cities should be managed in line with national guidance, which aims to:

- aid the identification of trees which might show tolerance or other ability to recover;
- maintain the values and benefits associated with ash trees;
- reduce the rate of spread of Chalara;
- maintain as much genetic diversity in ash trees as possible, to encourage continued long-term presence of ash;
- minimise the impacts on associated species and wider biodiversity; and
- allow more time for replacement tree species to grow, to give a more gradual transition of dominant landscape species.

Ash trees should be retained wherever possible. Where there are no over-riding management or safety objectives, works on infected ash trees should be limited to those necessary to meet the above objectives.

Deadwood in infected trees can present a safety risk, but unnecessary pruning or felling should be avoided. A balanced approach should be taken to safety management – more advice is available at:

www.forestry.gov.uk/safetreemanagement

Where public access exists close to infected trees, use site notices to let people know about attempts being made to minimise the spread of the disease and encourage them to support the biosecurity measures in place.

www.forestry.gov.uk/biosecurity-visitoradvice



Wilting on natural regeneration



Dieback effects on leaves



Classic winter stem lesion

Taking action in urban and peri-urban areas

Ash protected by Tree Preservation Orders and Conservation Areas

Owners in these situations should contact their Council for advice. Applications for consent to prune or fell protected trees will require consideration of the tree's potential resilience to Chalara, and its biodiversity value as the ash population declines.

NOTE! Mere potential for a tree to become infected will not be a significant consideration when dealing with applications to prune or fell protected trees.

Ash trees on development sites

As part of surveys to support planning applications, trees should be categorised using the criteria shown in **Table 1 of British Standard 5837:2012**. This will identify their quality and value, and inform decisions about retention or removal. A Forestry Commission Felling Licence might be needed if the felling is not explicitly covered by an extant Planning Permission.

Current guidance is to retain ash trees in the hope that Chalara-tolerant individuals exist.

Where planting is required, or if a previously planted ash dies, an alternative species will be needed. (Currently a prohibition on moving ash plants is in force, but even if it were lifted, ash planting could not be recommended.)

REMEMBER...

Although deadwood can present a hazard, it is also a vital ecological asset. Many species require deadwood for the whole or part of their life cycles, and those species are in turn part of the food chain for many other species.

Ash trees next to highways and railways

Safety considerations will be at the discretion of the highways authority or Network Rail, and will take priority in the management of trees close to roads and railways.

The frequency and timing of monitoring regimes might need to be modified in infected areas. Privately owned trees next to highways and railways might impact on the relevant authorities' responsibilities to ensure users' safety.

Felling trees alongside highways and railways might require a Forestry Commission Felling Licence – www.forestry.gov.uk/england-fellinglicences.

Ash trees in parks, public open spaces and heritage sites

Safety considerations will be at the discretion of the local authority. The frequency and timing of monitoring regimes might need to be modified within infected areas.

Ash trees on private property

Owners should check that their tree surgeons follow this guide and any additional advice from their local council tree officer.

Owners can help to minimise local spread by removing ash litter in the autumn, and burning, burying or composting it to break the fungus's lifecycle.

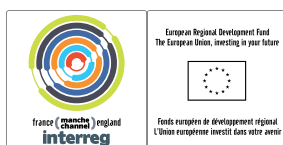
Felling trees on private property might require a Forestry Commission Felling Licence – www.forestry.gov.uk/england-fellinglicences.

Ancient, veteran and heritage trees

Leaf litter around ancient, veteran or valuable ash trees, and around adjacent ash trees, should be disposed of by burning, burying or composting.

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Partner



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