

Addendum 1

Ash Dieback Disease

March 2020

Ash Dieback (ADB) – formerly called Chalara - is a disease of ash trees caused by a fungus called *Hymenoscyphus fraxineus*. The disease causes leaf loss, crown dieback and bark lesions in affected trees. Young trees can be killed by the fungus relatively quickly. Older trees can be weakened by the disease to the point where they can succumb more readily to attacks by other pests or pathogens such as honey fungus (see page 6).

Ash trees suffering with ADB have been found widely across Europe since trees were first reported dying in large numbers in Poland in 1992. These have included woodland trees, trees in urban areas such as parks and gardens, and also young trees in nurseries.

ADB was first confirmed in the UK in Buckinghamshire in February 2012 when it was found infecting young trees imported from a Dutch nursery. Subsequently other infections were discovered that were traced to infection through imported young trees. But in October 2012, a small number of cases in established woodland, away from recently planted nursery stock, were confirmed in Norfolk and Suffolk. Further finds in trees in the wider environment have since been confirmed across the UK, but the disease remains concentrated in the east and south-east of England.

Over the last 15 years we have seen decline in ash trees from a number of other causes that include *Inonotus hispidus* (a fungus that decays trunk and branches – see page 6, insect defoliators, pigeon damage (page 7) and ash bud moth. However we are now starting to see areas where trees are looking poor because of infection or with ADB. For example, at the Marriotts Way at Whitwell, crown dieback in several large groups of ash is up to 75% - i.e. only 25% of the crown is healthy.

NCC's current tree inspection regime (as dictated by the Tree Safety Management Policy) is still fit for purpose regarding the inspection of infected trees; however the County Council's Arboriculture and Woodland Team have also received funding to carry out proactive inspections of high risk areas such as major roads and promoted trails to address the potential safety, financial and resource impact of large numbers of trees dying simultaneously.

This addendum is intended to describe the symptoms of the disease, inform the best time to identify it and to confirm the procedure when infected trees are found. This procedure will apply until any future proactive management is put into place.

For identification of ash trees please see [Woodland Trust](#) website

More information on ash dieback and managing the disease can be found on the [Forest Research](#) and [Arboricultural Association](#) websites

The Tree Council has published detailed guidance in its [Ash Dieback Action Plan Toolkit](#) for councils and other public authorities which manage trees.

Norfolk County Council's Procedure for trees showing symptoms of Ash Dieback (ADB)

See Photos on Page 3 that show examples of percentage dieback of ash trees

We need to ensure that inspections for ADB are carried out when ash trees are in leaf, which limits the inspection window to the months of June, July and August. This may mean that you need to carry out an ADDITIONAL inspection for ADB if this is not when your level 1 inspections are due to be carried out.

Trees with symptoms of ADB that have 0-50% dieback

Trees with lower percentages of dieback may be able to respond initially to the disease by producing epicormic branches, although they may need deadwood removal if over public or high use areas.

Procedure

- Take photos of infected trees in the summer. Take photos from several specific reference points (e.g. north, south, east, west) to allow for future comparisons. File photos for reference.
- Take photos from the same places the following summer to determine how the crown has changed
- If there are dead branches more than 60mm (thickness of your wrist) and there is a potential "target", use Form B to refer the trees to the Arboriculture and Woodland Officers for a Professional Tree Inspection as per the standard procedure in the tree policy.

Trees with symptoms of ADB that have 50-75% dieback

Trees with lower percentages of dieback may be able to respond initially to the disease by producing epicormic branches, although they may need deadwood removal if over public or high use areas.

Procedure

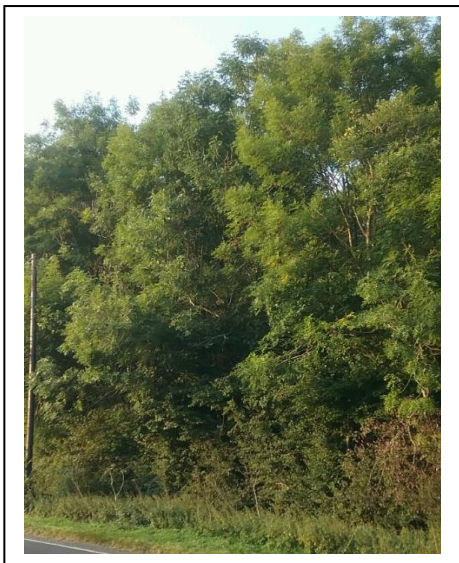
- Take photos of infected trees in the summer. File these for reference.
- Take photos from the same place the following summer to determine how the crown has changed
- Carry out a full inspection of the trunk and branches for other defects, especially fungal fruiting bodies or cavities on the trunk, at the base and on the branches
- If any defects are found on the tree and there is a potential "target", a further inspection is required. Use Form B to refer the trees to the Arboriculture and Woodland Officers for a Professional Tree Inspection as per the standard procedure in the tree policy.

Trees with symptoms of ADB that are more than 75% crown dieback

We consider that these are unlikely to recover. Trees with dieback due to ADB may be more at risk to other pests and diseases.

- If a Level 1 tree inspector finds trees with 75% crown dieback or upper crown dieback they need to refer the trees to the Arboriculture and Woodland Officers for a Professional Tree Inspection as per the standard procedure in the tree policy.
- If the tree is considered to be an imminent danger, follow the procedure detailed in Section 2.5iii of the Tree Policy.

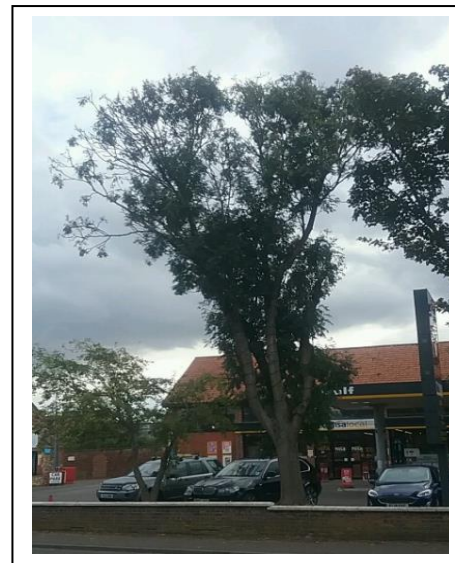
Photos of percentage dieback



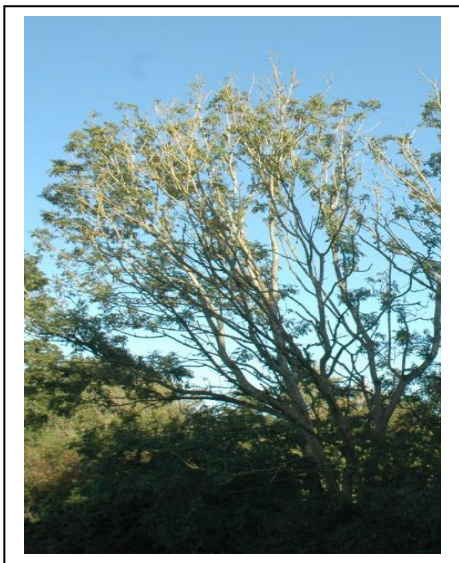
0% dieback



0-25% dieback



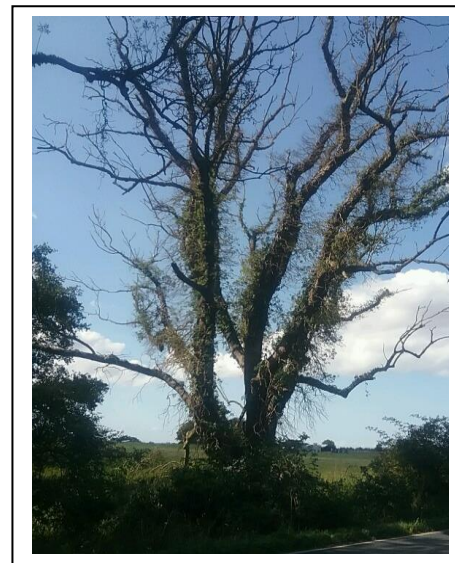
25-50% dieback



50-75% dieback



75-100% dieback



100% dieback

Mature trees showing typical symptoms of ash dieback



Wilting leaves



ABOVE - Mature tree showing approx. 10% dieback on right hand side

Younger tree showing similar dieback symptoms (approx 25% dieback)



Other defects common on ash trees

There are other diseases that may produce symptoms on ash that may look similar to ADB. If any tree is showing signs of 75% dieback or more it should still be reported on Form B.



Fruiting bodies of *Inonotus hispidus*
ABOVE - fresh

LEFT - old blackened fruiting bodies that are frequently seen on ash trunks and branches – these fungi are often seen near woodpecker holes (below left). Areas of indented bark or wounds may be sites where the fungus has been present and caused decay. Branches and trunks often break when decayed by this fungus





LEFT - Fruiting bodies of honey fungus are found at the base of infected trees. This disease is likely to be able to take advantage of trees weakened by ash dieback and may cause them to die



When ash trees get honey fungus, one of the symptoms when the mushrooms are not present is a white sheet (called mycelium) under the bark. Honey fungus can cause trees to die and fall over.



Also look for fungal fruiting bodies at the base of ash trees similar to this. These can also make trees decline and show signs of dieback



Ash tree showing pigeon damage to leaves at the top of tree, which could, at a distance, be mistaken for ADB



In the autumn and winter there may be clumps of ash keys (seeds) seen on ash trees which may look like dead leaves from a distance. It is normal to see these and they are NOT a sign of ADB