

# Managing and Planning Future Responses to Ash Die-back.

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# What the disease is, in a simple way.



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- Usually called Chalara. Now *Hymenoscyphus fraxineus*.
  - A fungal disease that is spread by airborne spores.
  - It kills the leaves and young twigs of infected trees.
  - It only infects ash trees.

# Tiny mushrooms on the leaf stem.



Fruiting bodies on fallen blacked leaf stalks, visible June to October

- Infected leaves fall and fruit bodies are produced in late summer to early autumn.
- They produce millions of microscopic spores.
- Spores have blown across the English Channel.
- Removing leaves in urban areas will slow the spread.

# Symptoms



# How long has it been migrating across Europe?

- Accidentally introduced to Poland before 1992?
- Widespread die-back of ash in Eastern Europe identified as being caused by Chalara in 2002.
- In fact not a species of Chalara but *Hymenoscyphus fraxineus*, previously an unknown species endemic in China.

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- First case in UK confirmed in a nursery in 2012.
- FERA scientists discover infected woodland trees not connected to imported plants in October 2012.
- 641 sites = an increase of 300% in fourteen months 2014.
- First infections in North Salford and North Manchester in late summer 2016.

# What damage does it do once established?

- Initially the young leaves and stems die.
- The tree gradually becomes weaker and weaker due to lack of food.



# How long does it take to kill a mature tree?

- Certainly a few years – unlike a young tree, a mature tree will have lots of energy reserves and lots of resilience.
- Maybe big old trees wont die?
- It's important to remember that we don't yet know how this will eventually pan out.



# How soon a tree would need to be removed?

- As part of your strategy you need to draw up a criteria based on a balanced risk assessment.
- Small trees in woodlands should pose no danger to anyone, so it would be a pointless expense to remove them.
- Mature trees in more used areas – what is the target?
- ~~Define your targets in order of~~ priority — play grounds, schools, main roads, minor roads, houses etc, etc.
- The earliest problem may be falling dead branches.
- A killed ash tree would have to be left (neglected) for a long time before the entire tree falls over.
- Even though it remains alive for years, a severely weakened mature tree may become infected by a wood / root decay fungal pathogen such as Honey Fungus.



However, Ted Green and Jill Butler say that they are not seeing any dead ash trees and no-one is reporting any.



# How many trees are resistant?

- Maybe – 5% of ash trees are genetically resistant to the disease.
- Resistant-in biology this means that they can / will become infected but should survive or recover.

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- Resistance is not the same as immune.
- 5% doesn't sound like a lot but it should be enough for prolific seeders like ash to recover and not die-out as a woodland tree.
- 5% isn't a lot for our urban trees – it will be bad.

# Use examples of what happened in Denmark.

- The disease came on very quickly and killed a reputed 85-90% of all ash trees.
- Some urban trees have seemed to stage a (partial) recovery.
- However, with no likely cure and no way to control it, there can be few grounds for optimism in the UK so we need to be prepared.

# How many ash trees do we have in vulnerable locations in Manchester?

Highway trees = 4,500 @ £450 = £2,025,000

Parkland trees = 4,500 @ £250 = £1,125,000

Woodland trees = 4,500 @ £150 = £675,000

~~Stump grinding street trees and reinstatement of the pavement~~ = 4,000 @ £285 = £1,140,000

It also is reasonable to expect 10% of the total costs of removing trees to go towards replanting.

A new highway tree @ £380

A new park tree (or a tree planted in grass) @ £250.

# What advice is there to help Local Authorities to plan?



## THE ASH DIEBACK ACTION PLAN TOOLKIT

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# In your plan...

1. Make a Plan. You will need this so...
2. A Senior Officer can take it to the Elected Members to alert and convince them of what is coming.
3. This will be a big financial Project, so...
4. Form a team.

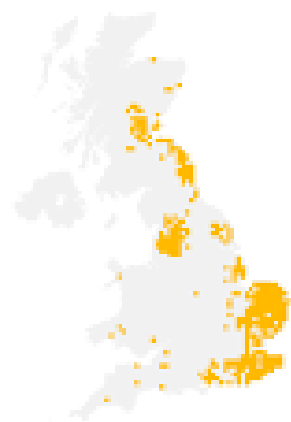
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5. Financial experts with experience of large projects, Landscape Architects to lead on the practical side, Arbs must be onboard because only they will understand the risk assessment and biology of the trees.
6. Survey and plot all of your trees on a GIS – you will find this a vital resource.
7. Advertise – put the project out to tender – big contractors.

# In your plan cont...

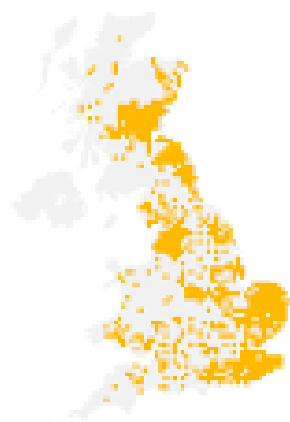
- Before you start cutting down any trees get your own publicity out. Go on Local Radio and TV. Do a piece for the local paper. Hold local meetings. You aren't doing anything wrong but you will need to tell people this. Talk about the new trees you are going to plant.

Confirmed ash dieback infection sites since first detection in 2012

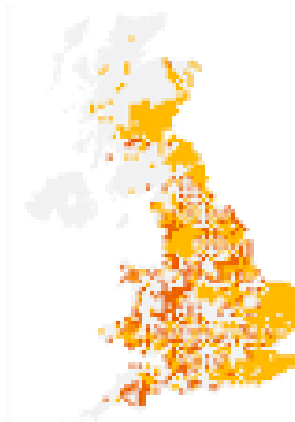
Guardian graphic. Source: Forestry Commission



By end of 2014



By end of 2015



New cases in 2016



## Don't Panic.

- The experts all agree that there is nothing to be gained by felling trees as some sort of pre-emptive strike.
- This would be doing the disease's work for it and could accidentally remove one of the 5% of resistant trees so it won't get the chance to pass on its resistant genes.
- We must all hold our nerve and see how the epidemic unfolds.