



Ash Dieback Action Plan

July 2018

Table of Contents

1. Summary	3
2. About Ash Dieback.....	4
3. Ash in Leicestershire	6
4. Ash Dieback in Leicestershire	7
5. Potential Financial Impacts of Ash Dieback	9
6. Action Plan	10
7. Risks and Issues	14
8. Governance.....	18
9. Dependencies	18
10. Links to Other Strategies and Policies	18
Appendix 1: Ash Dieback – Indicative Cost Estimates.....	20

1. Summary

- 1.1. In line with the best practice approach advocated by Defra and the Tree Council, Leicestershire County Council have developed this action plan to outline how we plan to manage the anticipated risks and issues associated with the spread of ash dieback across the county.
- 1.2. This action plan has been prepared to help ensure that the necessary work streams are put in place to ensure that the county is ready and adequately resourced both to respond to the effects of the disease and to minimise long term adverse impacts through promoting resilience. During the next 5 to 15 years the disease is likely to become prevalent across the county and we should use this time wisely.
- 1.3. Based on experience from other northern European countries, it is prudent to assume that ash dieback may result in the loss of between 75% and 90% of ash trees in Leicestershire. However, the levels of decline and mortality that will result are matters of considerable uncertainty.
- 1.4. The Tree Management Strategy (approved by Cabinet on 8 March 2011) identifies a standard for the management of the tree resource under the stewardship of the County Council. The Strategy has been evaluated and is considered to be fit for purpose for the management of ash dieback and will therefore be used as the basis of the approach.
- 1.5. In line with the Tree Management Strategy, the County Council will take a risk based approach to the management of ash dieback. The emphasis will be on maintaining the highest levels of health and safety for the public while aiming to minimise the impacts on landscape, ecology and the environment. High risk areas are considered to be highways, schools, country parks, and other areas where the public has access.
- 1.6. At present, the disease appears to only be prevalent in immature ash stock in Leicestershire which presents a low risk in terms of health and safety. Current tree inspection procedures for LCC trees (and those in private ownership impacting the highway) provide for annual routine inspections by accredited operational staff (e.g. highways inspectors) and specialist inspections by qualified tree inspectors every 3 years. Additionally tree inspectors provide ongoing advice to operational staff to ensure one off / emergency situations are dealt with appropriately.
- 1.7. Examples of key areas of work covered by the action plan include:
 - a) Policy and Strategy
 - Ensure ash dieback actions are included in relevant team plans and performance and development reviews (PDRs)

- Carry out an audit of the relevant policies and processes that may need to be reviewed in light of ash dieback
- b) Communication
- Development of a comprehensive communications and engagement plan
- c) Training
- Investigate training requirements and produce a training plan
- d) Operational
- Develop a matrix for the assessment, reporting and management of infected trees
 - Investigate opportunities for the development of a free/low cost tree replacement scheme
- e) Commercial Opportunities
- Produce an outline business case for commercial opportunities linked to the spread of ash dieback (e.g. tree inspection / management service, production of wood chip for biomass boilers etc)

2. About Ash Dieback

- 2.1. Ash dieback, sometimes known as 'Chalara', affects ash and other *Fraxinus* species of trees and is caused by a fungal pathogen.
- 2.2. The fungus, *Hymenoscyphus fraxineus* (anamorph - *Chalara fraxinea*), arrived from Asia into Europe during the 1990's and has spread rapidly. Although the first official record in Britain was only as recently as 2012, anecdotal evidence now suggests it may have arrived here over a decade earlier.
- 2.3. This invasive fungus causes a range of symptoms from leaf and branch dieback to death of *Fraxinus excelsior* (Ash) trees and other *Fraxinus* species. Once infected, a high proportion of trees will die. A few ash trees may survive the infection because of genetic factors which give them tolerance of, or resistance to, the disease but the percentage of the UK's ash trees that are likely to be resistant to the fungus is unknown (as at the middle of 2018). Evidence from mainland Europe suggested that only 10% of trees were found to be moderately resistant to the disease, with 1-2% having high levels of resistance.
- 2.4. The rate of decline of any individual tree varies with age, young trees dying quickly and mature trees declining more slowly. As an example, the photographs show the change in one tree in Devon over a one year period (photographs taken 06/07/16 and 07/07/17 respectively). The pictures

show a 10 -15% decline in the canopy in a single year and anecdotal reports from areas of the UK currently infected by ash dieback support this as a typical rate of decline. However, some individual trees (depending on their health and condition) could decline much more rapidly.



- 2.5. Related to the concern about ash dieback, Defra's Chief Scientific Adviser established an expert group in 2012 which reported that evidence from the continent suggested that trees with ash dieback older than 10 years and less than 40 years old will die in 3-5 years, particularly if they are also infected with other pathogens such as honey fungus, and likely more rapidly if they are already debilitated¹.



¹ <https://www.forestry.gov.uk/forestry/inf-d-8zss7u>

- 2.6. Infection mostly occurs through sexually produced ascospores landing on leaves or twigs but can also occur at the base of trunks (the root collar) and through root infection. Each spore has the potential to grow within, and colonise, parts of the ash tree. The windborne ascospores are produced from fruiting bodies (small white mushrooms) on the central stem (the rachis) of last year's fallen ash leaves.
- 2.7. As it grows, the fungus causes the conducting vessels of the infected tree, the phloem² and xylem³, to produce gums and tyloses⁴ in an attempt to restrict the growth of the fungus. These gums and tyloses block the vessels and prevent the movement of water and nutrients up and down the tree. This causes the leaves to wilt and eventually, this lack of water and nutrient movement will cause the branches of the tree to die back. This die back of the branches can allow the invasion of secondary pathogens (e.g. honey fungus), cause the tree to become unstable, shed branches and eventually succumb to the disease.
- 2.8. Where root collar infection occurs, the affected trees may become infected by another pathogen such as honey fungus. This can cause the tree to become unstable and dangerous over a relatively short period of time without any obvious dieback symptoms in the canopy. This makes identifying 'dangerous' ash trees considerably harder. Basal infection has been seen extensively across Europe but seems to occur mainly in areas of denser ash populations such as woodlands.
- 2.9. For more detailed information on the biology of ash dieback see: <https://www.forestry.gov.uk/fr/INFD-9KCHLT>

3. Ash in Leicestershire

- 3.1. There are no exact figures as to the number of ash trees in Leicestershire. However, it is estimated that there are over 500,000 ash trees in Leicestershire of which:
- 6,020 are recorded as being located on adopted highway verges
 - 1,546 are recorded as being located on school sites
 - 468 are recorded as being located on other LCC sites
 - 5,500 are estimated (non-recorded) as being located in LCC woodlands adjacent to areas of public use
 - 120,000+ are estimated as being in private ownership within falling distance of the highway
 - 83% of recorded ash trees are 6 metres plus in height

² Phloem vessels transport nutrients from the leaves to the rest of the plant.

³ Xylem vessels transport water from the roots to the leaves.

⁴ Tyloses are balloon like outgrowths in the conducting vessels.

- 600 ash trees are currently identified as veteran (or near veteran) trees. Veteran trees have cultural, historical, landscape and nature conservation value because of their age, size, or condition
 - It is possible that there may be 6,000 over mature ash trees in Leicestershire (i.e. trees that are no longer growing).
- 3.2. Leicestershire County Council is responsible for the inspection and maintenance of all trees on land it owns and manages, including the adopted highway. LCC is also responsible, as highway authority, for the safety of all road users and as such, has measures in place which identifies hazardous trees in private ownership adjacent to the highway. Such measures include procedures to contact tree owners and ensure that the necessary remedial work is undertaken.

4. Ash Dieback in Leicestershire

- 4.1. Currently, ash dieback is present throughout Leicestershire and is particularly evident on young trees, new shoots (e.g. trimmed hedgerows) and in young plantations. Sample survey areas on main routes throughout Leicestershire and on selected school sites have been identified and inspections of mature trees taken place. These inspections have been undertaken in mid to late summer when the symptoms of the disease are likely to be most evident. These inspections will continue during the summer months each year to monitor the development of symptoms on mature trees.
- 4.2. At present there is very little evidence of the disease affecting mature trees which is a pattern reported in many areas of the country. This suggests that young growth, particularly close to ground level where the fungus over-winters (i.e. on discarded leaf stalks) is highly susceptible whereas young shoots in the canopy of mature trees are affected less. This may indicate a degree of resistance in our mature trees but may also reflect that fungal spores are currently being distributed close to ground level, with consequent infection of young shoots on younger stock.
- 4.3. Ash dieback was first identified in Leicestershire in 2012 within newly planted landscape plots at the Park and Ride car park in Birstall. The disease is thought to have been brought to the site on infected nursery stock.
- 4.4. The Tree Management Strategy recognises the tree resource under the stewardship of the County Council and identifies a standard for its management. This standard includes the frequency and level of specialist tree inspections based on the extent of risk posed to site users. The strategy criteria remain the same regardless of the particular disease/disorder affecting the condition of the tree and consequently there

is no need to amend the strategy to accommodate ash dieback. However, there will potentially be a need to increase resources to achieve the inspection targets specified in the strategy.

- 4.5. The County Council's approach to ash dieback should accord with the Tree Management Strategy and as with other trees on its sites, inspection and maintenance regimes should be based on levels of site usage and the associated risk posed.
- 4.6. As previously mentioned, it is difficult to predict at this stage how ash dieback will affect the mature ash population within Leicestershire. The levels of mortality and the extent of crown die-back may be less or similar to those experienced in continental Europe. As with any defective tree, any action specified should be based on the minimum work required to remove the identified hazard to the highway or site user. Trees in low risk areas should, where possible be left to conserve their ecological and landscape value. In high risk areas however, where a progressive decline is noted, it may be prudent to consider the removal of the tree and appropriate replacement planting.
- 4.7. The potential loss of trees in Leicestershire and the adverse effect on the county's landscape is a significant consideration. It is essential that a robust replanting programme forms a major part of the authority's approach to managing ash dieback. Although the authority currently runs a suite of schemes to encourage landowners to plant trees, a much wider ranging approach with significantly increased targets is required. A range of suitable native and naturalised tree species, appropriate to the planting location should be made available to encourage early replacement planting to mitigate ash dieback.
- 4.8. As part of this action plan, the County Council will approach suppliers of nursery stock to ensure that appropriate quantities of suitable stock are available. In order to maintain bio-security and ecological integrity, such stock will be specified as originating from British provenance seed which has been germinated and grown in Britain for the full extent of the tree's life
- 4.9. Trials have been established in East Anglia to measure resistance to ash dieback from young ash stock which has been grown from a range of seed provenances collected from throughout the British Isles. The purpose of the trials is to identify provenances which exhibit high levels of resistance to ash dieback. Additionally, mature ash trees throughout Britain exhibiting resistance will also be identified through normal inspection procedures. When suitably resistant sources have been identified, it is anticipated that the nursery industry will eventually be able to start producing resistant ash stock through appropriate propagation techniques.

5. Potential Financial Impacts of Ash Dieback

- 5.1. Ash dieback has been identified in the Medium Term Financial Strategy as a future potential financial development/pressure.
- 5.2. The financial implications of the spread of ash dieback will be more fully understood as individual business cases are produced as part of the implementation of this Ash Dieback Action Plan.
- 5.3. Current knowledge suggests that there is little immediate resource requirement. As individual business cases are produced appropriate funding profiles and resources will be identified in conjunction with Corporate Resources.
- 5.4. Appendix 1 contains some initial, and very indicative, cost projections with regard to the management of ash dieback over a 15 year period. The costs cover the areas of:
 - Adopted highway verges
 - Schools
 - Other LCC sites
- 5.5. The current projections do not include information on providing ash dieback related tree management services to private landowners as further work is required in this area as detailed in Section 6 below.
- 5.6. With regard to the re-planting of trees there is the potential of external funding from a scheme run by the Woodland Trust to help in this area. Further work is required to investigate this possibility as detailed in Section 6 below.

6. Action Plan

Policy & Strategy

Ref	Task	Lead Discipline	Delivery Date	Others Involved
A1	Develop a performance reporting process / schedule.	Environment	September 18	
A2	Ensure that ash dieback actions are included in relevant team plans and performance and development reviews (PDRs)	Board members	September 18 (and ongoing)	
A3	Ensure that additional costs associated with ash dieback are coded to specific ash dieback budget code	Board members	July 18	Finance
A4a	Carry out an audit of the relevant highways and other policies and processes that may need to be reviewed in light of ash dieback e.g. process for reporting tree issues, road closures policy, etc. This needs to be aligned with the BAU risk based approach being implemented by Highways	Highways Delivery	December 18	Countryside Services
A4b	Agree and sign off policy changes	Highways Delivery	t.b.c.	Countryside Services
A4c	Resource profiling – model the potential resource implications of proposed policy / process changes	Highways Delivery	t.b.c.	Countryside Services

Communication

Ref	Task	Lead Discipline	Delivery Date	Others Involved
A5a	Produce and deliver a comprehensive communication & engagement plan – both internal and external (including information targeted at private landowners; general public, district councils, parish councils; schools / academies, Woodland Trust, National Forest, Tree Council, DEFRA, and voluntary groups). This plan must also link into other relevant local and national initiatives	Communications	July 18	Board Members Appropriate External Bodies Trading Standards
A5b	Produce ash dieback FAQ's and publish on the LCC website	Communications	t.b.c.	Countryside Services Environment Highways Delivery Trading Standards
A5c	Design advertising materials targeted at private landowners to provide them with information about the disease and how to recognise it, their legal responsibilities, and, if appropriate, our service offering and how to contact us about our service offering	Communications	t.b.c.	Commercial Services Environment Countryside Services
A6	Alert Trading Standards to any reports of rogue tree contractors linked to ash dieback and work together to resolve/ minimise issues as appropriate	Communications	ongoing	Trading Standards Environment Countryside Services

Training

Ref	Task	Lead Discipline	Delivery Date	Others Involved
A7a	Investigate training requirements & produce a training plan – including who is to be trained in what e.g. highway inspectors, tree wardens, volunteers, etc.	Learning and Development	September 18	Highways Delivery
A7b	Follow up basic tree inspection training with ash dieback training for highways inspectors	Highways Delivery	t.b.c.	Countryside Services
A7c	Investigate what training materials are available from external bodies such as the Woodland Trust	Learning and Development	September 18 (and ongoing)	
A8	Liaise with further education colleges on the provision of suitable arboriculture courses	Learning and Development	t.b.c	
A9	Trading standards officers to provide awareness raising session for tree inspectors regarding the remit of the trading standards section and the likely types of offences that may occur linked to ash dieback	Trading Standards	t.b.c.	Countryside Services

Operational

Ref	Task	Lead Discipline	Delivery Date	Others Involved
A10	Develop a matrix for the assessment, reporting and management of infected trees	Countryside Services	September 18	Tree Officers Tree Inspectors Highways Delivery Insurance
A11	Produce ash dieback survey / inspection plan	Countryside	July 2018	Highways Delivery

Ref	Task	Lead Discipline	Delivery Date	Others Involved
	outlining methodology, frequency and reporting. Include consideration of innovative surveying methods e.g. photography, video and whether statistical significance can / should be achieved.	Services		
A12	Sample surveys to be repeated on an annual basis. Sample areas to be reviewed and expanded as and when appropriate.	Countryside Services	Ongoing, annual	
A13a	Investigate opportunities for the development of a tree replacement scheme to provide free / low cost trees to landowners to mitigate tree loss due to ash dieback	Countryside Services Environment	December 2018	
A13b	Subject to business case, implement new free / low cost tree scheme	Countryside Services Environment	April 2019	
A14	Develop a tree purchasing standard to ensure high levels of biosecurity / provenance in trees purchased by LCC	Environment	December 2018	Commissioning Support Unit
A15	Investigate the implementation of a voluntary Register of Ash trees that are perceived as being important so as to protect any resistant ash trees. (Note: this is not legally enforceable)	Ecology	October 2018	
A16a	Monitor developments in techniques for testing / identifying individual trees that are resistant to ash dieback	Environment	Ongoing	Countryside Services
A16b	As / when testing techniques become available, identify individual trees in LCC ownership that are resistant to ash dieback	Countryside Services	t.b.c.	

Commercial Opportunities

Ref	Task	Lead Discipline	Delivery Date	Others Involved
A17a	Produce an outline business case (OBC) for commercial opportunities linked to the spread of ash dieback (e.g. tree inspection / management service, production of wood chip for biomass boilers etc.)	Commercial Services	September 2018	Countryside Services Facilities Management Highways Delivery Legal Services
A17b	Depending on the outcome of the OBC, produce full business case(s) for identified opportunities	Commercial Services	t.b.c.	Legal Services

7. Risks and Issues

a. Risks

The owner for all the risks is the Ash Dieback Project Board with responsibility delegated to the representative of the agreed Lead Discipline

Ref.	Detail	Mitigation	Lead Discipline	Impact	Likelihood	Risk Rating
R1	Health and safety risk to life, services and transport networks caused by diseased	Inspection and management of ash trees in line with policies in the Tree	Highways Delivery	5	3	15 Red

Ref.	Detail	Mitigation	Lead Discipline	Impact	Likelihood	Risk Rating
	trees falling down / shedding branches	Management Strategy				
R2	Threats to the local landscape character, land use or biodiversity in terms of changes in the landscape characteristics of Leicestershire	Leave standing dead wood in place where the health and safety risks are considered to be acceptable based on current best practice and minimum legal requirements. Tree planting / replanting scheme.	Environment	3	4	12 Amber
R3	Reputational risk to LCC of ash dieback not being appropriately managed in Leicestershire	Preparation and delivery of ash dieback action plan	Project Board	5	2	10 Amber
R4	Climate impacts in terms of reduced ecosystem services; Increased pollution or flooding as a result of ash tree decline; Reduced shading and cooling in hot weather	Tree planting / replanting scheme.	Environment	3	4	12 Amber
R5	Lack of accurate data on ash stocks and their condition	Ongoing inspection of ash trees in line with policies in the Tree Management Strategy	Countryside Services	3	2	6 Green
R6	Insufficient resource with the relevant skills in specialist tree inspection and management , collection of tree data, etc. (identification, removal and replacement)	Assessment of required resources Training	Countryside Services	4	3	12 Amber
R7	Disjointed approach to the management of Ash Dieback	The Project Board will ensure that all ash dieback management processes and related systems are	Project Board	4	3	12 Amber

Ref.	Detail	Mitigation	Lead Discipline	Impact	Likelihood	Risk Rating
		<p>joined up with all other relevant inter and cross departmental processes and systems to ensure that this action plan is implemented in a consistent and joined up fashion.</p> <p>Opportunities for information sharing and collaboration with external partners (e.g. districts, National Forest etc) around the management of ash dieback will be explored where advantageous to do so.</p>				
R8	Lack of communication with non-LCC landowners about the extent and impact of ash dieback e.g. advice on tree legislation with reference to things such as Tree Preservation Orders and Felling Licences	Preparation of comprehensive communications plan.	Communications	3	2	6 Green
R9	Lack of or insufficient service offered to local landowners in the identification, removal and replacement of infected ash trees	Preparation of business case for commercial opportunities	Countryside Services	2	3	6 Green
R10	Insufficient resource to implement the action plan e.g. lack of funding to replace non-woodland trees, carry out sufficient survey work etc.	Funding is provisionally earmarked within the Council's Future developments. As plans develop the financial implications will become	Finance	5	2	10 Amber

Ref.	Detail	Mitigation	Lead Discipline	Impact	Likelihood	Risk Rating
		clearer and appropriate funding levels will be defined and explicitly identified through the MTFS refresh process. Training				
R11	Risk that landowners will refuse / be unable to meet costs of undertaking works to affected trees. Legal costs to reclaim costs may be prohibitively high.	Tolerate	Highways Delivery	4	3	12 Amber

b. Issues

Ref.	Detail	Resolution	Lead Discipline	Resolution Date	Progress
I1	Lack of national information regarding Chalara and potential spread and infectious potential in the non-woodland ash population	Keep up to date with national position and latest research	Countryside Services	ongoing	
I2	Rogue traders falsely using ash dieback as a reason to persuade residents to undertake unnecessary / inappropriate works to trees	Communications plan Cross departmental working	Trading Standards	ongoing	

8. Governance

- 8.1. The ongoing development and delivery of the Ash Dieback Action Plan will be monitored by the Ash Dieback Board which will in turn report progress to the Environment Strategy Delivery Board. Delivery of the Environment Strategy is overseen by chief officers sitting as the Corporate Management Team (CMT).

9. Dependencies

- 9.1. The service is currently investigating the need for increased tree inspections to deal with a current backlog. The outcome of this will have an impact on the frequency and approach to inspections.
- 9.2. In order to ensure that there is a consistent and joined up approach to tree inspection and the reporting of any issues it is essential that joined up processes and systems are put in place.
- 9.3. The Highways service is currently going through a process of defining a risk based approach to highways maintenance activities. This work will need to be aligned to the work undertaken on producing a risk matrix as detailed in Section 6 above.

10. Links to Other Strategies and Policies

- 10.1. This ash dieback action plan supports the following aims within the LCC Environment Strategy:
- Conserve and enhance the character, diversity and local distinctiveness of Leicestershire landscapes and towns, and provide opportunities for public access and enjoyment of green spaces
 - Protect people from harm caused by climate change and the deteriorating condition of the environment and climate change
 - Demonstrate and promote environmental good practice to show community leadership
- 10.2. Ash dieback presents both a threat and an opportunity to the Council's Environment Strategy. It threatens the council's ambition to protect and enhance the environment of Leicestershire and to support biodiversity improvements. But it also presents an opportunity for the council to take action which will improve the biodiversity value of its own land and that of the wider county and to create, protect and enhance sustainable green infrastructure. It also provides an opportunity for the council to respond to the impacts of climate change, protect people from harm caused by climate change and the deteriorating condition of

the environment as well as protecting the local distinctiveness of the Leicestershire landscape.

- 10.3. As previously discussed, the Tree Management Strategy (approved by Cabinet on 8 March 2011) identifies a standard for the management of the tree resource under the stewardship of the County Council. The Strategy has been evaluated and is considered to be fit for purpose for the management of ash dieback and will therefore be used as the basis of the approach.

Appendix 1: Ash Dieback – Indicative Cost Estimates

Adopted Highway Verges

Felling Costs

Anticipated cost is between £1.875m - £2.625m

Anticipated annual cost spread over 15 years is £125k - £175k p.a.

Replanting Costs

The cost of replacing felled trees is approx. £225k - £300k

Annual cost over 15 years is between £15k - £20k p.a.

Additional Inspection Costs

£30k p.a.

Anticipated total annual cost over 15 years is between £170k & £225k

Schools

Felling Costs

Anticipated cost is between £525k - £675k

Anticipated annual cost spread over 15 years is £35k - £45k p.a.

Replanting Costs

The cost of replacing felled trees is between £45k - £75k

Annual cost over 15 years is approximately £5K

Additional Inspection Costs

£15k p.a.

Anticipated annual cost over 15 years is between £55k & £65k

Other LCC sites

Felling Costs

Anticipated cost is between £1.875m - £2.625m

Anticipated annual cost over 15 years is between £125k - £175k p.a.

Replanting Costs

The cost of replacing felled trees is between £225k - £300k

Annual cost over 15 years is between £15k - £20k

Additional Inspection Costs –

£15k p.a.

Anticipated annual cost over 15 years is between £155k - £210k

Summary

	Adopted Highway	Schools	Other LCC Sites	Total
Total Cost over 15 year period	£2.55m - £3.375m	£825k - £975K	£2.325m - £3.150m	£5.7m -£7.5m
Annual Costs	£170k - £225k	£55k - £65k	£155k - £210k	£380k - £500k

This page is intentionally left blank