Ash Die-back Management Plan

Introduction

Ash dieback (ADB) *Hymenoscyphus fraxineus*, (formerly *Chalara fraxinea*), will likely lead to the gradual death of most ash trees within Cheltenham borough and indeed the country. The scale of death will be greater than the impact of Dutch elm disease in the 1970s. There is no way to reduce the rate of spread of infection and the demise of these native (and exotic species) of ash trees. The council can only react to this die-back.

Evidence from northern European countries shows that around 10% of ash trees have a moderate resilience to ADB, and that only 1-2% of ash trees show a high level of tolerance. The rate of decline of infected ash trees is not possible to predict and will be influenced by factors such as soil type, moisture levels and topography. Evidence from elsewhere shows that some trees will decline and dieback much more quickly than others. Some trees die within a year whilst others take several years.

As Ash trees decline and die, the risk to persons and property increases due to the trees' structural integrity becoming compromised due to the decay of their supporting roots as well as the shedding of limbs and branch work from the crown. The rate of loss of such structural integrity is unpredictable but is significantly hastened by secondary infection of trees by colonisation of other decay pathogens such as honey fungus.

This management plan is designed to be an opertaional working document to plan for this event so that:

1) Adequate resources are set aside to effectively manage this scenario into the future,
2) public health threats as a result of the increased risk of dead and dying trees through dead/dying tree removal/pruning, are minimised,
3) A plan for a tree natural regeneration and/or replanting to minimise the loss of the amenity and ecosystem services provided by these trees.

The anticipated loss of the overwhelming majority of ash trees will impact:

1) Cheltenham Borough Council parks, gardens and open spaces, cemeteries, carparks, allotments and woodlands as well as council tenant individual property gardens,
2) Gloucestershire Highways where ash trees exist on highway verge,
3) Gloucestershire County Council and other agencies such as Network Rail, Severn Trent and other statutory undertakers,
4) Individual property owners where ash trees exist within domestic gardens, together with
5) Farmers and other landowners/managers.

Ash tree distribution within the Borough

It is not possible to give precise numbers of ash trees on land either controlled by public authorities across Cheltenham. There are 420 significant trees and groups of ash trees under routine inspection by Cheltenham Borough Council's Tree team. Some of these groups of trees are large (10,000+) and dense and there is a considered variable but generally low adjacent target. Whilst such a group is recorded as one tree, in reality there may actually be several hundred/thousand ash trees of varying size and maturity.

Cheltenham Borough Council assets: Most ash trees managed by the Borough Council exist in peri-urban and rural situations such as open spaces and woodlands. These areas often take the form of formal avenues of ash trees such as in Sandy Lane Playing Fields and Chargrove Lane Open Space. However, there are many copses and spinneys of ash of varying sizes within public open space as well as ash trees in their surrounding hedge lines. Spaces such as Pittville golf course, the Honeybourne Line, nature reserves and the many suburban parks around Cheltenham are regularly used by members of the public and contain many ash trees. The frequency of use of these areas usually depends on the proximity of adjacent dwellings.

Benhall Woods and Leckhampton Hill in particular have an estimated high percentage population of mixed-maturity and size ash trees within several large areas. Leckhampton Hill has a frequent and dense visitor population principally made up of dog walkers, ramblers and mountain bike users. Traditionally, these users stick to the principal paths and routes, the Cotswold Way and access from carparks to the top of the Hill.

It is likely that the appearance and character of these areas will change dramatically following the decline of their ash populations.

There is a relatively low ash tree population within formal parks and gardens such as Pittville Lawn, Imperial Gardens, Sandford Park managed by the borough council.

Whilst the majority of ash trees on Council land (excluding woodland) are under a routine and cyclical safety inspection regime by qualified trees officers, there are large areas of Borough land (eg Leckhampton Hill) where no formal system of inspection exists due to the nature and size of the area. A management plan for such areas is in place and this is supplemented by informal assessments by the councils Green Spaces team often informed by the very active friends group, Friends of Leckhamton Hill and Charlton Kings Common (FOLK) or via more social media contact. By its nature, this response is reactive.

However, in other parks, gardens and open spaces, a pro-active approach is adopted. All records of formal and routine tree safety inspections are retained for insurance purposes.

Other statutory undertakers within Cheltenham: Different levels and frequencies of tree inspection are undertaken by other statutory undertakers, for example Gloucestershire County Council depending on the considered risk and resource allocation. Gloucestershire Highways have already commenced a programme of ash removal by roadside verges throughout the county.

Privately owned trees: There is no reason to assume that the percentage of ash trees of the total number of trees is likely to be different in Cheltenham than elsewhere. It is the second most common species of tree throughout the country and the most frequent hedgerow tree. This is likely

to be as a result of its seeds ability to readily germinate as well as its ability to quickly grow in hostile and difficult environments.

The level of active privately owned tree safety assessments is thought to be very variable. Experience appears to suggest that few householders undertake any formal safety assessments of their trees.

It is anticipated that the level of formal safety inspection of trees on farm and other land by owners is also variable, but generally is considered as being low. As such, the potential risk of tree failure onto persons or property appears significant.

Current extent of Ash dieback of the controlled population within Cheltenham Borough Councils assets

A random sample of ash trees at various locations within the Borough was made in 2019 and 2020. A survey of the extent of dieback was recorded with 4 stages of dieback:

1) 100% of the crown remains (i.e. tree not infected),
2) 75% of crown remains i.e. infected and up to 25% of the crown has died back (-Stage 1)
3) 50% of crown remains i.e. infected and up to half the crown is dead (-Stage2)
4) 25% of crown remains i.e. infected and up to 75% of the crown is dead (-Stage 3)
5) 0%-i.e. tree is virtually or totally dead (-Stage 4).

These surveys were undertaken during mid-September when the full extent of dieback is apparent but before leaves have naturally fallen.

Survey results

The table below summarises the last sample assessment of the councils Ash tree population.

Remaining crown%	2019 Number of trees surveyed (+ %)	2020 Number of trees surveyed (+%)	2019 Leckhampton Hill (Tree Groups)	2020 Leckhampton Hill (Tree Groups)
100	129 (69%)	115 (62%)	0 (0%)	0
75	39 (21%)	51 (27%)	4	0
50	17 (9%)	18 (10%)	10	13
25	1 (0.5%)	2 (1%)	1	2
Dead	0	0	0	0
Total	186 (100%)	186	15	15

Assuming this random sample of surveyed ash trees is representative of the total a number of important points can be made:

1) Most ash trees (excluding Leckhampton Hill) did not show signs of ash die back.
2) No trees had yet actually died as a result of dieback.
3) Approx. 2/3 of trees had at least 75% of their crown remaining and 10% of trees have up to 50% of their crowns intact.
4) Worst affected trees were on Leckhampton Hill have only 25% or less of their crowns intact.
5) Excluding Leckhampton Hill, the rate of deterioration of the ash tree crowns was slow.

6) The severity of contamination of ash dieback on Leckhampton Hill was considerably worse than other surveyed areas.
7) The rate of deterioration of ash crowns on Leckhampton Hill is faster than elsewhere.

Observation, appear to show significant contamination of trees and associated deterioration on Leckhampton Hill which reflects the picture of roadside and other rural ash trees in the south of England. Non empirical evidence suggests that the same lower-degree of intensity of ADB is being experienced in other urban areas in the south of Britain.

Again, observation appears to show that dead trees do not readily fail prior to significant deterioration of structurally supporting roots. However, the mechanism for felling of advanced decay trees will likely require vehicular machinery (unless tree work contractors can identify other methods of self-preservation).

Further, smaller surveys were undertaken in 2021 and 2022. However, such surveys have not demonstrated they are adding value to the overall management of the Ash tree population assets of the council. The approach therefore is the ongoing observations outlined earlier in this management plan supported by the record of works (to address ash die-back) being recorded.

The felling of ash trees has primarily been adjacent to (or within 10 metres of) the busiest foot paths along Leckhampton Hill and within falling distance of Cirencester Rd.

Managing the Risk

There are a range of factors which are taken into account in the management of risk, these are summarised below. It should be emphasised that risk arising in respect of trees is not static and therefore the role of observations and assessments are key. With this in mind, it is important that the council adopts a dynamic approach to managing risk and should this management plan need to be updated to respond to issues arising from observations and assessments then this will be undertaken.

Health and Safety

1) Death or injury from falling debris onto members of public or professionals working on such ash trees,
2) Risk to statutory functions and service delivery such as retaining safe schools, public open space and highways,
3) Risk of damage to private and public property as a result of falling ash.

Potential economic impacts

1) Increased liability in cases of death or injury,
2) Increased expenditure from direct and indirect costs eg additional spend addressing ADB could have impact on expenditure elsewhere within the organisation,
3) Increased tree work contractor prices as a result of market competition for a limited pool of skilled tree contractors,
4) Increased direct/indirect costs due to increased flood and soil erosion risk resulting from removed ash trees,
5) Financial costs of replanting needed to retain ecosystem services, provided by ash eg flood, urban shading, carbon storage, bio-diversity. The may be achieved at low/no cost through

self-seeded regeneration of trees. This is thought to include a high proportion of the sycamore (*Acer pseudoplatanus*) Norway maple (*Acer platanoides*) and hawthorn (*Crataegus monogyna*) species.

6) Increased liability from tree failure as a result of risks to adjacent land and other third party property.

Reputational damage

1) Potential for disruption as a result of ash dieback management (eg closure parts of parks/open spaces/woodlands/housing forecourts, roads etc during tree felling/surgery works.
2) Political and reputational damage following negative press (for whatever reason) and the consequent public outrage and anxiety.
3) Potentially strained relationships with private owners as tree maintenance costs increase.

Negative Environmental Impacts

1) Visual landscape changes and consequent reduced amenity,
2) Loss to eco-system services such as a reduction in air quality, increased flooding, biodiversity losses, increased noise, reduced screening.
3) Reduced carbon storage and sequestration.
4) Reduced biodiversity from the decline of species largely or wholly dependent on ash.

Because of the economic, reputational and environmental risks outlined above, ash dieback is included within the Councils Corporate Risk Register.

Time associated costs

There is a time resource demand as a result of:

1) Identifying populations of ash and weighting the risk to persons and property,
2) Identifying the most appropriate trees requiring remedial work,
3) Organising and generating work orders to fell/prune trees,
4) Liaising with fellow officers in the Green Spaces and housing teams and other relevant services beyond as well as Gloucestershire Highways, statutory undertakers, “friends of” groups etc.
5) Significant volumes of site visits and follow up work re trees in council house property gardens (where there is a high proportion of ash trees).
6) Liaison on matters relating to ash die-back with WTOG (Wessex Trees Officer Group).

Actions required to address the above

1) Stakeholders: appropriate Cheltenham borough council staff, Gloucestershire highways, UBICO managers, “Friends of” groups, ward and county councillors should all be made aware of the ADB plan for Cheltenham Borough Council controlled trees.
2) Public awareness of ash die-back and the associated risk will be made via the council’s website. There are a number of existing publications available to help this.

3) An ash tree related budgetary increase has been made available. This is kept under review and will be informed by ongoing observations and assessments. Should central government grants become available, the council will apply.
4) A tree surgery contractor who has specialist industrial tree felling machinery (timber harvester) and experience has been identified via the council's procurement contracts, to make provision should larger areas of felling be required.
5) Where possible, dead trees will be left standing so as to reduce costs and reap maximum ecological reward. As such the decision of which trees to be felled will be made on a case by case basis.
6) Records of felling locations and associated details are retained.
7) Trees in "high target" locations will be prioritised for felling over trees in other areas.