From:	Susan Carey, Cabinet Member for Environment Simon Jones, Corporate Director, Growth, Environment and Transport Rebecca Spore, Director of Infrastructure, Strategic and Corporate Services
To:	Environment and Transport Cabinet Committee – 18 January 2022
Subject:	Ash Dieback in Kent
Decision No:	N/A
Classification:	Unrestricted
Electoral Division:	All Divisions

Summary: This report provides an update on Ash Dieback in Kent and describes the evolving local response and the outbreak's environmental and economic impacts. It further identifies trends and risks, as well as policy, staffing, financial and other resource implications for Kent County Council and its partners. The extent of the challenge is illustrated by the fact that 53.96% of Ash trees are now exhibiting Ash Dieback symptoms across the Kent survey sites, an average increase of 16.7% since 2020. The County Council's leadership and science-based approach to this risk have evidenced some success in slowing the rate of infection in Kent and has enabled a proportionate and cost-effective response to tree safety interventions. This evidence-led strategy has been recognised as best-practice and assimilated into national guidance

Recommendation(s):
The Cabinet Committee is asked to:

- Note the significant threat Ash Dieback poses to the environment and economy of Kent.
- Acknowledge the local and national leadership role of the County Council in its response to the pathogen and the resultant environmental and financial benefits that have accrued from the science-led response; and
- Endorse the planning, monitoring and response contingencies outlined within this report.

1. Purpose

1.1 It was agreed by the Environment, Highways and Waste Cabinet Committee on 10th January 2012 that the Committee will continue to receive regular updates on Ash Dieback. The last update was reported to the Environment & Transport Cabinet Committee on 29th November 2019.

1.2 This is the fourth report to the Cabinet Committee, which seeks to outline the evolution of the outbreak in Kent, developments since the last update, and

identify future trends, risks and resource implications for the County Council and its partners.

2. Background

2.1 Kent was a bridgehead into the British Isles from continental Europe for the invasive fungal pathogen Ash Dieback. Where infection is observed, the fungus rapidly kills young trees and progressively brings about the death of individual twigs and branches within the crowns of more mature trees, with these impacts intensifying through a cycle of annual infection and re-infection. This creates potentially dangerous standing deadwood and makes Ash trees susceptible to lethal secondary infection such as Honey Fungus. There is no treatment currently available to either prevent or cure Ash Dieback, though genetic resistance may facilitate recovery of the Ash population in the longer term.

2.2 European Ash is Kent's most widespread tree, recorded in 930 of the County's 1,043 2km squares (89.16% of the County). Its landscape and biodiversity contribution are locally significant, especially at the urban edge and across the Kent Downs Area of Outstanding Natural Beauty and the Greensand Ridge. In these areas, Ash is the dominant large native tree species and can support some 112 invertebrate species and 255 lichens. Ash forms a key component of the makeup of Kent's nationally significant ancient woodland heritage, where it is often the tallest canopy tree and allows for the development of uniquely diverse ground flora, in a UK context, by virtue of the dappled shade it creates.

2.3 Unfortunately, Kent's gateway status for international trade, mature woodlands landscape, large and growing population and extensive transport network means that this and other tree species are particularly exposed to such pathogens from overseas. Ash Dieback is now present across the entire County wherever Ash grows.

2.4 Survey work undertaken by the County Council identifies some 20,000 Ash present on KCC owned and maintained highway land, with as many as 0.5 million trees growing on private and unregistered land adjacent to highways, by-ways, and other publicly accessible lands. This has implications for future safety works and associated costs.

2.5 In response to the identification of Ash Dieback within the British Isles, KCC and Kent Resilience Forum partners initiated a Strategic Co-ordinating Group (SCG) in November 2012, in compliance with the Civil Contingencies Act 2004.

2.6 It was agreed that the County Council was best placed to assume the strategic lead. Tony Harwood (Resilience and Emergency Planning Manager) is SCG chair, and the Group continues to meet to guide the multi-agency response.

3. Progress to Date

3.1 The Ash Dieback SCG acts to coordinate planning and intelligence gathering and implement a wide-ranging Action Plan (see Appendix 1) and has contributed to guidance for stakeholders (notably Managing Chalara Ash Dieback in Kent and Ash Dieback Advice to Schools). Public warning and

informing signage, that emphasises biosecurity guidance, has also been installed across key locations in the County.

3.2 KCC has undertaken annual Ash Dieback surveys since 2013. These surveys are focussed upon nine 2km square sample areas, and undertaken across the same sites every year, with three each in East, Mid and West Kent. Resultant survey data provides vital intelligence in terms of better understanding outbreak intensity, trends and associated health and safety and resource implications. The County Council has contributed its data to an influential scientific paper "Estimating mortality rates of European Ash (*Fraxinus excelsior*) under the Ash Dieback (*Hymenoscyphus fraxineus*) epidemic". Since publication, it has been recognised by Wiley as a 'top downloaded paper', in the journal Plants, People, Planet.

3.3 Analysis of summer 2021 survey data indicates an increase in infection rates over 2020 levels. Previously, a range of biosecurity interventions had acted to contain and slow the spread of Ash Dieback in the County, however, the outbreak has now intensified in eight of the nine survey areas and become County-wide. Biosecurity and containment policies have focussed on measures to prevent movement of potentially infective material by human means out of heavily infected East Kent alongside pro-active maintenance interventions, such as removal of infected saplings and small trees wherever sporadic outlier outbreaks were identified in Mid and West Kent. Survey data indicates that this approach was previously successful in slowing the expansion of the pathogen from its East Kent stronghold. However, the latest data shows a second infection front spreading Eastwards into Mid and West Kent from East Sussex, Surrey, and Greater London, with fungal spores likely carried on prevailing South Westerly winds (see Appendix 2).

3.4 The proportion of trees exhibiting Ash Dieback symptoms observed across the nine Kent survey sites has increased by an average of 16.7% between 2020 and 2021 (Appendix 4 provides a breakdown). Significantly, 2020 had seen an observed recovery in the fortunes of European Ash in Kent, with infection rates decreasing by an average of 13.14% from 2019.

3.5 There is evidence from Kent and Denmark that the impact of Ash Dieback on street and other urban trees is less severe than in semi-natural habitats. This is due to lower levels of airborne fungal spores, increased airflow, higher canopy temperatures (limiting fungal development), and a lower likelihood of infection by secondary pathogens. However, a further study has shown that trees in the wider rural landscape, including agricultural land, are infected as readily as woodland trees.

3.6 Nationally, KCC remains an active partner within the Defra Ash Dieback Health and Safety Taskforce. Further, the Tree Council issued a UK Toolkit, which is significantly informed by Kent's local response to the Ash Dieback outbreak. The County Council has also issued 'Trading Standards Alerts' forewarning the public and businesses of the risk of 'rogue traders' seeking to profit from the outbreak.

3.7 An e-learning package addressing biosecurity policy and practice, and prominently featuring Ash Dieback, has been developed by the Resilience and

Emergency Planning Service with Learning and Development colleagues and has been completed by more than 501 KCC personnel to date. This training tool has been marketed by the County Council to seek to recoup development costs.

4. Looking Forward

4.1 Any local expansion and intensification of the Ash Dieback outbreak will result in increases in reactive health and safety tree works, with resultant impacts upon all relevant KCC budgets and most significantly Highways, Public Rights of Way and Access, Resilience and Emergency Planning Service and Infrastructure.

4.2 The current observed annual average rate of increase in Ash Dieback infection in the County, calculated from annual survey data, is 16.7% (with an average of 54.18% of Ash trees in the County currently showings signs of infection). However, there is some local evidence of individual trees showing natural resistance to the pathogen and for Ash in urban areas being less susceptible to infection than trees growing in semi-natural locations. It should be noted that following initial infection there is a time lag before the extent of dieback, secondary infection and/or decay processes render trees unsafe. Further, recovery occurs in those years where climatic conditions favour Ash and/or disadvantage the fungal pathogen, such as the hot and dry spring and summer of 2020. Therefore, the actual time horizon for the range of Ash Dieback impacts in Kent cannot be reliably forecast at this time. High rainfall levels in the summer months, as seen in 2021, appear to favour the development of the fungus and hence infection rates.

4.3 Reflecting the increase in documented Ash Dieback infection across the County and rising costs and challenges surrounding non-compliant private landowners, the County Council's Corporate Management Team has identified Ash Dieback as a **medium** risk.

5. Financial and Other Implications

5.1 Ongoing monitoring reveals that the cost to KCC Highways for felling and other safety interventions on Ash Dieback infected trees on the KCC Highways estate remain relatively low. The fluctuation in extent and intensity of infection as evidenced by the latest survey data, suggests that the costs to the County Council and its partners will continue to rise and fall in parallel with the fortunes of our Ash (see Appendix 3). So far, the cost to KCC Highways for the 2021/22 financial year is £9,111.04 (covering the period until November 2021). Since a peak of £66,000 in 2018/19, costs have decreased annually (down 7.27% between 2019/20 and 2020/21 and down 22.10% between 2018/19 and 2019/20).

5.2 KCC and partners operate policy and practice whereby the minimum required interventions are undertaken to address identified safety concerns. This approach is enshrined within the Kent Tree Officers Group Ash Dieback Toolkit, adopted by KCC and all Kent Districts, and is deemed to be most appropriate in fostering genetic resistance. It has further avoided the widespread pre-emptive

felling of potentially healthy, recovering or even resistant trees seen in some other parts of the UK, with resultant benefits for landscape, biodiversity, and the County Council's finances.

5.3 In recognition of the potentially significant costs which could arise from Ash Dieback in the future, at the start of the outbreak, KCC submitted the required 'expression of interest' for a claim against the then MHCLG administered Bellwin Scheme of Emergency Financial Assistance within the prescribed timescale. Where the criteria for the scheme are met, the grant is normally payable to authorities at 85% of eligible costs incurred above a threshold set for each authority (for KCC this remains £1,764,324). However, to date, all costs captured fall well below this qualifying threshold.

5.4 Initial projections indicated a potential eventual cost as high as £16 million for Ash Dieback related highway safety interventions in Kent (this was calculated on the basis that 4% of KCC street trees are Ash according to a recent County-wide survey, equating to some 20,000 individual trees, with a median cost for maintenance interventions, lane hire fees and other costs of £800 per tree). With as many as 0.5 million trees growing on private and unregistered land adjacent to the public highway, the eventual worst-case longer-term cost to KCC was estimated to be as high as £400 million. This figure was predicated upon the fact that interventions for trees on private and unregistered estates often incur legal and administrative costs for Local Authorities to find and engage with landowners e.g., Land Registry searches, serving of notices and follow-up action. Serving notices can sometimes result in costly boundary disputes with private landowners. Dealing with trees on unregistered land can involve Local Authorities addressing all these issues themselves which requires additional resources. In a wider context, research published in the journal Current Biology in May 2019 calculates the eventual cost to the UK of Ash Dieback at £14.8 billion. This figure is one third greater than the National Audit Office estimate for the total cost of the 2000/2001 UK Foot and Mouth Disease outbreak.

5.5 However, evidence to-date indicates that safety intervention costs associated with Ash Dieback in Kent, are much lower than these earlier estimates. This derives from the epidemiology of the fungal pathogen, with fluctuations in infection intensity from year to year, the relative resilience of Ash outside of woodlands, and its ability to mount a recovery in years with lower infection rates.

5.6 A practical concern amongst local stakeholders is lane hire cost and management of road closures to undertake necessary safety interventions in response to Ash Dieback impacts. At a Forestry Commission event, held with conservation organisations from across the South-East, this was identified as a major operational obstruction to progress, with achieving effective co-operation between the County Council, landowners and contractors seen as a key challenge.

5.7 The maintenance of bespoke budget headings for Ash Dieback safety interventions and associated staff time devoted to Ash Dieback planning and

response are key to understanding overall costs. All Districts, Boroughs and relevant KCC services are regularly reminded to capture all costs arising from the Ash Dieback outbreak within their respective budgets.

6. Conclusion

6.1 The susceptibility of young trees to Ash Dieback is already limiting growth of new generations of Ash, while mortality of semi-mature and mature Ash is increasing, particularly in those locations where trees are subject to secondary infection and additional stressors such as drought or waterlogging. The one exception to this overall decline narrative appears to be ***veteran*** and ***ancient*** Ash (those trees aged between 100 and 200+ years), which have evidenced an observed sustained recovery in crown health across all survey areas. Kent is therefore undergoing an ***Ash decline,*** which will inevitably result in changes to our landscape and wildlife as profound as those experienced during the historic Elm and Lime declines. The resultant loss of street and other urban Ash is eroding urban tree cover and associated benefits from environmental services – including flood attenuation, shelter, shade and sequestration of atmospheric carbon and particulates.

6.2 The unpredictability of outbreak intensity and resultant requirements for safety interventions underlines the importance of ongoing monitoring and cost recording, including annual survey and analysis effort. Ensuring up-to-date outbreak data enables informed decision making and implementation of measured, appropriate, and cost-effective safety interventions.

6.3 Recovery considerations will also increasingly come to the fore and will encompass the replacement of lost tree cover. Increasingly, counties impacted by Ash Dieback are framing policies addressing the replacement of lost trees. For example, both Devon and Norfolk County Councils have now agreed on a 3:2:1 tree replacement system, with three replacements for a large tree lost, two for a medium-sized tree and one for a smaller tree. From a local perspective, KCC must ensure records are maintained of how many Ash trees are lost from their estate informing any eventual tally to be replaced. This will allow for restocking once appropriate receptor sites are identified and a local recovery process is determined and funded. Restoration of urban tree cover is increasingly challenging because of the extensive hard surfaces and proliferation of underground services within remaining soft landscaped areas. The development of a tree establishment strategy is currently being undertaken by the recently appointed Kent Tree Strategy Officer and will include consideration of the options for individual tree replacement and wider tree cover restoration.

6.4 Guidance produced by the County Council and partners recommends appropriate native tree species to replace the lost Ash, including Field Maple, Small-leaved Lime and Large-leaved Lime.

6.5 KCC continue to lobby Government and other potential sponsors for a sustainable funding mechanism to support recovery. Latterly, Government has initiated a Tree Health Pilot Scheme, where Kent is singled-out as a ‘primary target area’ for investment. Further, the County Council accessed, with four

other English local authorities, a share of a £2.53 million HM Treasury Shared Outcomes Fund grant award, which provides 100% funding for a project officer post until September 2023 and has already seen 4,000 native trees and shrubs planted across Kent.

6.6 The County Council's continuing local and national leadership, its science-based interventions, and proactive operational response have all meant that the worst predictions for the impact of Ash Dieback have been averted in Kent to date. Harm to landscape and biodiversity, and associated costs from tree safety interventions, have all been minimised, in contrast with some other parts of the UK and Europe. It is therefore vital that ongoing survey data collection and analysis continues, and that local command and control structures and effective relationships with relevant Government departments are maintained going forward.

7. Recommendation(s):

The Cabinet Committee is asked to:

- Note the significant threat Ash Dieback poses to the environment and economy of Kent.
- Acknowledge the local and national leadership role of the County Council in its response to the pathogen and the resultant environmental and financial benefits that have accrued from the science-led response; and
- Endorse the planning, monitoring and response contingencies outlined within this report.

8. Background documents

- Appendix 1: KRF Ash Dieback Outbreak SCG Action Plan; Ash Dieback Outbreak Action Plan
  https://democracy.kent.gov.uk/documents/s108615/Appendix1.docx.pdf
- Appendix 2: Ash Dieback Outbreak Action Plan - Graph - Percentage of Ash with No Symptoms Comparison to Ash with Observed Symptoms 2017, 2018, 2019, 2020 & 2021
  https://democracy.kent.gov.uk/documents/s108616/Appendix2.docx.pdf
- Appendix 3: Ash Dieback Outbreak Action Plan - Percentage increases in trees exhibiting Ash Dieback symptoms observed across all survey sites between 2020 and 2021
  https://democracy.kent.gov.uk/documents/s108617/Appendix3.docx.pdf
- Appendix 4: Ash Dieback Outbreak Action Plan - Graph - cost to KCC Highways, Transportation & Waste for the Felling & Pruning of Ash dieback Infected Ash on KCC Estate
  https://democracy.kent.gov.uk/documents/s108618/Appendix4.docx.pdf

9. Contact Details

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