Agenda Item 6 **England National Committee** **Paper 32/17**
15 November 2017

CHALARA DIEBACK OF ASH – FIVE YEARS ON

Purpose

1. To update the Committee on
   - the spread and impact of Chalara dieback of ash (CDA);
   - the main research activities;
   - Forestry Commission England's current activities associated with the disease;
   - the local authority perspective of CDA; and
   - our planned future approach.

Background

2. Ash makes up around 4.7 % of the total area of GB woodlands (142 thousand hectares out of a total of 3 million ha). In England ash accounts for 8.5% of the total area of woodlands (110 thousand hectares out of a total of 1.3 million ha) – and 14% of the standing broadleaved volume in woodlands. Ash also is a significant component of the 565 thousand hectares of tree cover outside woodlands in England.

3. Chalara Dieback of ash (CDA) is disease of ash trees caused by a fungus called *Hymenoscyphus fraxineus*. Infected ash trees have been found widely across Europe since large numbers of trees were first reported as dying in Poland in 1992. It is naturally spread by wind-blown spores that can travel for many miles.
4. CDA was first confirmed in the UK in February 2012 when it was found in an infected consignment of imported trees. In October 2012 a small number of cases were confirmed in Norfolk and Suffolk in the wider environment. This discovery triggered a Great Britain-wide survey of more than a thousand sites which identified where infected young trees had been planted that were supplied by nurseries where CDA had been found and additional wider environment infections.
5. The spread has been progressing as predicted by scientific modelling of the outbreak undertaken by the University of Cambridge. The Government has a comprehensive surveillance programme in place to monitor the disease, and a map of confirmed infections is presented in Figure 1 and an interactive version available at http://chalaramap.fera.defra.gov.uk/.

Table1. CDA *(Hymenoscyphus fraxineus)* infections newly confirmed in the **wider environment** only each year based on 10km square surveys (excluding nursery findings)

	2012	2013	2014	2015	2016	2017	Total	% of all 10km sqs in the country
Scotland	7	5	34	124	10	27	207	18.9%
England	82	60	165	221	310	63	901	61.3%
Wales	0	3	4	31	96	46	180	67.9%
N Ireland	0	0	0	0	17	0	17	9.1%
Isle of Man	0	0	0	0	0	1	1	7.1%
UK (total)	**89**	**68**	**203**	**376**	**433**	**136**	**1306**	**43.1%**

1.

6. The number of newly confirmed infections in each country for each year after 2011 is presented in Table 1. There has been a decline in the number of new sites being reported in England and Wales this year. However we are now starting to see a shift from new sites to more significant impacts on known infection sites in mature ash trees and ash-dominated woodlands and landscapes across the UK and particularly in Norfolk, Suffolk, Sussex, Kent and moving into Hampshire. Figures 2 and 3 provide aerial images of this impact. The overall impact is being seen primarily in terms of trees in woodland but note that there is currently limited data on the impact on non-woodland trees.

Figure1.CDA infections confirmed in the wider environment

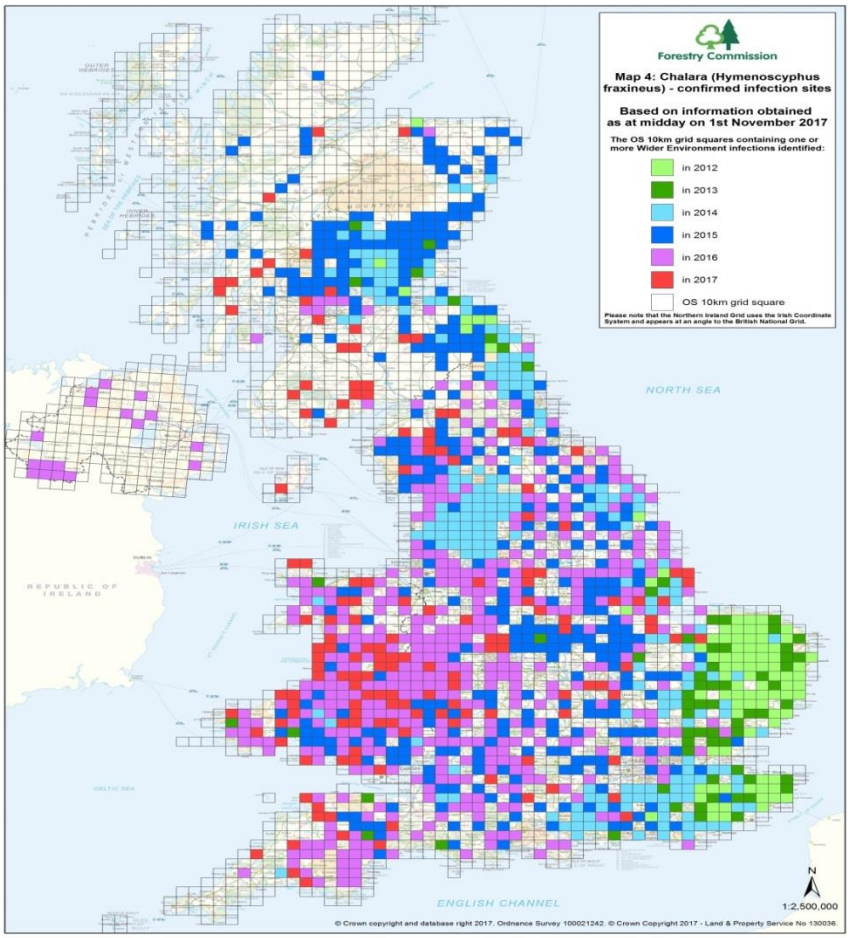

Figure 2 Aerial Survey E. Anglia 4 October 2017

Figure 3 Landscape view of CDA – South East FWAC visit to Kent 26 September 2017

Discussion

Current policy

7. The current policy on CDA is based on the guidance contained in the Chalara management plan, first published in March 2013. This acknowledged that we could not stop the spread of the disease and activity should be focused on reducing the rate of spread.
8. The plan set out action around four key objectives:
    - Reducing rate of spread;
    - Developing disease resistance of native ash including a programme of research [later terminology was modified to *tolerance* - acknowledging that long-term disease *resistance* could not be achieved];
    - Encouraging engagement in surveillance, monitoring and action; and
    - Building economic and environmental resilience in woodland.

Research progress

9. There are a significant number of CDA research projects funded by Defra, the Research Councils, and the Scottish Government. This work is being carried out by many institutions across the UK. There are over 20 research projects covering a diverse range of subjects with research primarily focused on the genetics of ash tolerance from Ash Tree Genomics to a UK ash family screening trial at Wakehurst Place. Selected highlights from the programme include:
    - Ash genome sequencing and the genetic diversity of European ash. Genetic sequencing shows we have a much more diverse genetic base of ash than in mainland Europe and that much of the ash genome in the UK comes from the

Iberian Peninsula and as such it may not be as susceptible to Chalara infection. However this is ongoing research and the wider implications for the UK ash resource is not known.

- Forest Research mass screening trials on the susceptibility of UK ash to CDA. A provenance based study which aims to discover genomic markers for tolerance. The first phase is now coming to an end and reports indicate only 2.5% of the ash trees screened exhibit any level of tolerance. Information from this project can be used in a breeding programme and screening trees before felling.
- Ash species susceptibility to CDA (and Emerald Ash Borer) - worldwide ash species CDA screening trials; 26 ash species sourced in UK arboreta, 30 ash species sourced in USA arboreta.
- Public views on genetic solutions. Gauging public acceptability of planting genetically modified ash trees.
- Future proofing plant health. Aimed at improving overall disease control and features CDA as a main component of research. Phase 1 ran from November 2014 to April 2015. Phase 2 started in April 2015 and is expected to last five years. This work will feed into Defra's 'Treescape' policy guidance and will deliver a 'Tactical Toolkit' towards the end of the project period.

Forestry Commission England action on CDA

10. In line with the Chalara management plan FC England continues a range of CDA actions:
11. Surveys:
    - Our ongoing surveys work (aerial surveys and the now established annual Chalara survey) are the basis for reporting and mapping the spread of the disease.
    - Further work on symptom progression and the variation of this across England. This will give a more balanced view of what to expect in terms of ash loss and provide The University of Cambridge modelling team's data to base predictions on the variability of environmental suitability across different site types.
12. Advice:
    - Our work on advising the Ash Safety group and the Tree Health Policy Group. Particularly our work to see if it would be feasible to simplify the felling licencing process for diseased ash.
    - Keeping the FC tree health web pages updated https://www.forestry.gov.uk/chalara
    - Ongoing work with FR which supports publications such as the recently published Research note on Ecological impacts of ash dieback and mitigation methods.

- Direct support to Forest Services Areas and their FWACs (who are looking to develop practical guidance locally), MOD, Network Rail, and general dissemination of information to other stakeholders.
- Our work with Defra Plant Health policy in terms of supporting the current research programme and considering how findings might be translated into practical guidance.

13. Grant Support
    - Countryside Stewardship (CS) supports restoration (restocking) after CDA and we are anticipating (in post CAP planning) a considerable increase in demand for such support in the next 5 years as CDA becomes more apparent in the landscape.

The local authority (LA) perspective

14. Local authorities have an obligation to manage tree safety and have done so as part of their normal routine operations for many years. CDA now presents an unprecedented pressure on resources and processes. In order to address this and in cases other than immediate safety related issues, LAs are now considering CDA in terms of general Tree Policy issues relating to Manage, Protect and Enhance and are moving away from a reactive approach whilst still recognising that stressed roadside/footpath ash trees are a major management concern. All councils use Section 154[1] approach and have confidence in it bar process delays. Council recharge unit deals with cost recovery, including Tree Officer planning time etc.
15. The views of the LAs can be categorised in terms of:
16. Concerns
    - Meeting policy aims in terms of identifying tolerant trees
    - Health and safety, and liability for roadside trees
    - Resources and access to funding and pressure to generate income from operations
    - Competing peaks in workload
    - Ground damage issues relating to harvester equipment working on footpaths
17. Approach
    - Improving identification of landownership
    - Working with the Tree Council to develop standard approach to management
    - Tree officer networks working well but could be improved
    - Need to identify clearly National intervention approach/definitions/thresholds (National Tree Safety Group to advise)
18. Outstanding issues related to FC England – Forest Services

[1] Refers to section 154 of the Highways Act 1980 c. 66 Part IX. Obstruction of highways and streets, specifically related to the 'Cutting or felling trees that overhang or are a danger to roads of footpaths.' (the process involves first a = friendly letter sent to owner advising of safety related tree problems, then more formal notification sent. then move straight to section 154 order with 21 days to invoke. CC recharge unit deals with cost recovery, including TO officer planning time etc.

- There is a need for FCE to develop some clearer written guidance relating to the scale and form of tree loss that is now being seen. Ash is often a component, rather than in pure stands, therefore the impact may not be as great as, for example, the impacts of Dutch Elm Disease
- Consideration of analogue species to fulfil some of the services which ash provides
- Need for streamlining of processes (The CLA are a consistent critic of the FC felling licence system and are amongst those demanding 'liberalisation' of the process)
- The need for greater sharing of experience
- The need for further research and to link researchers to agents/woodland owners in affected areas so that the results of research can lead to practical action to reduce the future impacts of CDA.
- Given the amount of research ongoing there is work to be done with the sector to define how current research might be applicable and what specific 'management information' stakeholders think might be needed to aid future management considerations).

19. Additional 'local' perspective is provided in Annex A with Feedback from the SE FWAC site visit to Kent to view CDA.

Current FS proposals

20. FS is planning the following CDA associated activity for 2018/19:
21. Survey/modelling
    - Surveys of CDA took place between July and September 2017 covering approximately 2,045 hectares at 114 sites. This data can now be used to identify the severity and extent of infection at these sites and will be used as the basis for 2018's survey plans.
    - Obtain further data on symptom progression and the variation of this across England. This information will be incorporated into longer term surveillance for disease tolerant trees. This will give a more balanced view of what to expect in terms of ash loss.
22. Stocktake of preparedness
    - Carry out [internal] stocktake on overall FC England preparedness for widespread loss of ash at the landscape scale. To include:
        - guidance on CDA
        - felling activity and associated regulations – the ongoing development of an online felling licence functionality will support this
        - Advice on resilience.
    - In light of the stocktake advise Defra on any implications for current policy.
23. Updating and developing guidance including:
    - Update practical guidance on managing infected woodlands (building on experience from South East of England).
    - Market development for infected ash.

- Health and safety practices - Experience of managing diseased larch suggests the safety risk of harvesting increases when handling standing dead wood. Establishing safe working practices and a focus on reducing the volume of dead and dying ash in woodlands could help mitigate this risk. This approach is likely to influence the cost of such operations.

24. Resilience (focusing on “post ADB”)
    - Consider how to accelerating the management of [infected] ash woodland to increase resilience, particularly where ash is a significant component and minimise risk to woodland users

Resource implications

25. For the FC, as more and more mature trees are infected and subsequently die from the disease over the coming years, this will lead to more resource pressures in terms of regulating felling licences, material movements and management plans and increased demand on restoration grants and their administration. Such increased demand for grants could potentially exceed very significantly the funds currently budgeted.

Risk Assessment

26. The management of CDA addresses risk FS/1 on the Forest Services Risk Register namely “Failure to discharge FS's role in reducing tree pests and diseases' impact to tolerable levels

Equality Impact Assessment

27. The current FS activity for CDA is addressed within the EqIA for the FS Business Plan. Future activity will similarly be addressed in the EqIA of future business plans.

Communications

28. The full current narrative for CDA is presented in Annex B. In light of the further progression of the disease the information presented above our recommendation would be to:
    - Revise and update advice and guidance materials to support woodland resilience delivery (incl. climate change, disease impacts including CDA, i-tree and revised ESC[2] model) and provide training to staff and the sector.
    - Work with Defra to review the current core narrative in light of further progress of the disease (around resilience, resistance and restoration). This could be along the lines of: tracking the disease, supporting management through the disease and preparing for a more resilient woodland and tree resource (without ash or with ash as a much reduced component of our landscape).

[2] Ecological Site Classification Decision Support System

Recommendations

29. The Committee are invited to:
    - note the progress of the disease so far, the ongoing research and FCE commitment to understanding and managing the disease; and
    - to comment on our proposed approach as the disease progresses.

Andy Hall
National Team Manager Tree Health
andy.hall@forestry.gsi.gov.uk

Joe Watts
Head of Sustainable Forest Management
joe.watts@forestry.gsi.gov.uk

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