

Tree Health in The National Forest

Introduction

The general health of trees can be affected by a variety of factors including climate change, water stress, soil compaction, soil nutrient levels, vandalism, wildlife and insect damage and tree diseases. Climate change in particular is resulting in an increase in the occurrence of insect pests and tree diseases, and outbreaks of damage to certain tree species. As well as causing damage themselves, some insect pests can also act as carriers for other bacterial and fungal tree diseases¹.

The key factor in assessing damage to trees is the severity of any issue. Some insect damage can be largely cosmetic, which trees can recover from. In other instances tree vigour may be affected, whilst in the most severe cases there can be die-back or death of trees.

Tree Health Issues

Over recent years there have been recorded instances of various tree health issues in the Forest area such as Poplar Rust, bleeding cankers (Horse Chestnut, Oak – linked to Acute Oak Decline), Phytophthora (Alder), Red Band Needle Blight (Corsican Pine) and other occurrences of less severe insect damage. At present the Forest is not being seriously affected by any of the major diseases and where outbreaks have occurred they have been localised and management steps have been taken to remedy them. However it is possible that tree health issues may become a more regular occurrence in the future.

Tree planting policy and research

The NFC, in line with national forestry policy guidance, recommends the planting of mixed species of broadleaves and conifers from different provenances (e.g. the Midlands, Southern England and continental sources where appropriate). This aims to create a robust and diverse mix of tree species to build future resilience into our woodlands. It also helps to spread the risk if particular species or provenances become more susceptible to tree health issues in the future.

In addition the design and management of woodlands is being undertaken to reduce the risk of tree health issues. For example, in the spacing and density of certain tree species; by including wide rides and open areas, to increase air flow through woodlands; and by using species mixtures in woodlands, rather than single species which are more susceptible to problems when they occur.

¹ *In nature many organisms can have pests and diseases naturally associated with them, which have often evolved over long time periods. Issues can arise when conditions change and the ability of the host organism to cope is affected, or the host has not had the benefit of time to adapt to new pests and diseases.*

The NFC is also working with Forest Research on national research into tree provenance and climate change in the Forest area. This will identify suitable continental provenances of Oak, Ash, Wild Cherry and Sweet Chestnut, that will match predicted climate change conditions for the Forest area in 2050 and 2080. This research will help woodland owners to plan for the planting of trees which should be better able to adapt to tree health issues in a changing climate (see http://www.nationalforest.org/document/research/RN2_Climate_change.pdf for further details).

Approach to tree health

The NFC aims to maintain an overview of tree health in the Forest area and to work with the Forestry Commission, Forest Research, forestry agents, woodland owners, other organisations and the public to identify and actively respond to issues that may arise. Key links are with the Forestry Commission and Forest Research who are responsible for national policy, research and management roles in this field.

If tree health issues are identified in The National Forest the following action is recommended:

- All tree health issues should be routinely reported to the Forestry Commission, whose woodland officers can help to identify causes and provide specialist advice on recommended courses of action. Contact: Peter Edge at peter.edge@forestry.gsi.gov.uk
- Cases of severe or unusual damage should be reported to Forest Research, the national specialists in diagnosing, researching and monitoring the impacts of tree health. Forest Research also provide specialist practical advice on methods of control and management. Further information and wide-ranging advice on tree health issues is available on their website. <http://www.forestresearch.gov.uk> Links to information on particular tree health issues relevant to The National Forest include:

Acute Oak Decline – <http://www.forestresearch.gov.uk/fr/INFD-7UL9NQ>

Red Band Needle Blight – <http://www.forestresearch.gov.uk/fr/infd-6zckae>

Horse Chestnut Bleeding Canker – <http://www.forestresearch.gov.uk/fr/INFD-6KYBGV>

Horse Chestnut Leaf Miner - <http://www.forestresearch.gov.uk/fr/INFD-68JJRC>

Phytophthora disease of Alder - <http://www.forestresearch.gov.uk/fr/INFD-737HUN>

Poplar Rust –

<http://www.forestresearch.gov.uk/website/publications.nsf/WebpubsbyISBN/0855385693>

- All tree health issues in woodlands should also be reported to the NFC. The NFC maintains a record of known tree disease and insect damage occurrences in woodlands in the Forest area. This helps to monitor the severity and extent of any particular damage; assess its significance to the wider National Forest area; and review the effects of any practical action

taken to remedy individual problems. This will enable a picture to be developed over time of the scale and significance of any particular issues.

Contact: Matt Brocklehurst at mbrocklehurst@nationalforest.org or Simon Evans at sevans@nationalforest.org)

- The NFC also provides practical woodland management advice to landowners and maintains a database of forestry agents and contractors who can undertake appropriate management works (see http://www.nationalforest.org/document/information/Woodland_Services_Products_List.pdf). The NFC also convenes a Woodland Owners Club for the Forest area which provides a mechanism for landowners to share best practice in woodland management and tree health matters. The NFC is unable however to give advice on trees and shrubs in gardens or in woodlands outside The National Forest boundary.

Contact Matt Brocklehurst at mbrocklehurst@nationalforest.org or Simon Greenhouse at sgreenhouse@nationalforest.org or Daniel West at dwest@nationalforest.org)

September 2010