**HERTFORDSHIRE COUNTY COUNCIL**

Agenda Item No.

**7**

**ENVIRONMENT, PLANNING & TRANSPORT CABINET PANEL**
**FRIDAY, 11 MAY 2018 AT 10AM**

# UPDATE REPORT ON TREE HEALTH ISSUES AND THE POTENTIAL IMPACT ON HERTFORDSHIRE COUNTY COUNCIL

*Report of the Chief Executive*

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Executive Member: Derrick Ashley, Environment, Planning & Transport

## 1. Purpose of report

1.1 To update and inform the Panel of progress in understanding how current and emerging tree health issues are likely to impact Hertfordshire, and actions taken in response to recommendations of the Resources and Performance Panel for managing tree health risk.

## 2. Summary

2.1 In general, the risk associated with trees is low and is far outweighed by the benefits of trees to the wider environment, the economy, and to people's health and well-being. However, an increasing tree pest and disease threat has resulted in greater risks being associated with trees, in particular where they are situated in high use areas (i.e. roadsides).

2.2 In recent years, two tree health concerns have had particular implications for the assessment and management of tree risk in Hertfordshire. Chalara (ash dieback) and Oak Processionary Moth (OPM) have the potential to impact on a significant proportion of Hertfordshire's trees due to the common occurrence of ash and oak (respective hosts) and natural routes for disease spread. Both diseases have the potential to increase the risk (and potential liability) associated with trees and therefore to increase pressures on tree management systems. An internal audit of the county council's tree management in 2016 found a moderate level of assurance.

2.3 The County Council has a legal duty to take reasonable actions to manage tree risk on its land and has the power to require neighbouring landowners to manage overhanging trees which are a danger to the users of roads and footpaths. Departments with responsibility for trees in the County Council are primarily Environment and Infrastructure

(Countryside & Rights of Way and Highways) and Property (Rural Estates team, Building Management Team, and Estates Team).

2.4 In April 2016, tree health was registered as a County Council Corporate Risk in recognition of the high certainty of occurrence and the significant impact on public safety, service delivery, and financial loss which is expected if mitigation measures are not considered. Initially the risk level was set as Severe; on review in December 2016 the risk level was downgraded to Significant to reflect the likely impact over any one year.

2.5 Recommendations for mitigating tree health risk were identified by the Council's Resources and Performance Cabinet Panel (R&PCP) in 2015. This current report provides updates on the progress of recommended actions from the R&PCP, and the progress of Corporate Risk controls. The report will also provide an update on the status of current and emerging tree health risks in the UK, and implications for Hertfordshire.

## 3. Recommendation

3.1 That the Cabinet Panel note the report.

## 4. Background

4.1 The rate at which new pests and diseases are introduced to the UK has increased three fold in the last decade. The warming climate and the international plant trade are key factors influencing this trend. Trees are under increasing stress from other factors (such as soil compaction or inappropriate management) which can increase disease susceptibility.

4.2 It is difficult to predict how new and emerging tree health issues will affect tree risk. Influential factors include number and location of trees affected, severity of disease symptoms, and the effectiveness of control measures. New tree pests and diseases may also have a wider cost in terms of the negative impact on benefits of trees to people and the environment.

### Chalara (ash dieback)

4.3 Chalara is a fungal disease of ash resulting in progressive dieback (necrosis) of leaf, branch and main stem tissue. Disease susceptibility varies between trees dependent on age, environmental stress, and genetic factors. The disease has spread rapidly though Europe over the last two decades, although the local impact has been variable. Countries such as Denmark, Lithuania and Sweden have reported between 1-5% of trees showing high levels of natural resistance. Chalara can be a direct or indirect cause of tree death, e.g. weakening

the tree's defences against other diseases, notably the root infection *Armillaria* (honey fungus).

4.4 Chalara was first recorded in the UK in 2012. In Hertfordshire, Chalara has been confirmed in just over half of 10x10km map squares; although this is likely to under-represent the true extent of the disease as not all infection will have been reported. Defra reports that in the UK we should expect that most of our ash trees will become infected with Chalara, although not all will die. Chalara is in the late stage of progression (mortality of mature trees) at one known site in Hertfordshire, Weston Hills near Baldock (Appendix 1).

4.5 Ash is a common tree species in many situations, including woodland, hedgerows, gardens, roadsides, railway embankments, trackways (in particular disused railway lines) and open spaces. Due to the progressive nature of Chalara the risk carried by infected ash trees will become greater over time (as increasingly larger branches and stems die-off). The greatest public risk from Chalara is likely to be found in high usage areas such as highways and trackways. Ash trees on these sites are also subject to significant stress factors, such as high salt content in soils due to winter salting, which can increase disease susceptibility.

4.6 In areas such as Suffolk and Norfolk, where systematic ash monitoring is in place, ash trees have been recorded as becoming hazardous (large dead branches) within two years of the first Chalara symptoms being recorded, with mature trees typically dying within ten years. Managing risk associated with trees, in particular in areas of high public use such as highways, schools and some rights of way, is likely to require more frequent inspections and a greater volume of tree works as the impact of Chalara become more evident over the next decade.

**Oak Processionary Moth (OPM)**

4.7 Oak processionary moth (OPM) is a recent introduction to the UK, first recorded in 2006 on imported oak trees planted in London. OPM caterpillars are gregarious, feeding collectively on oak and forming communal silken nests on branches and trunks of host trees. If OPM population density is high, oak trees can be stripped of their leaves by caterpillar feeding activity. However, oaks generally recover later in the year and the long term health of host trees is not significantly affected.

4.8 There is a public health risk associated with OPM as caterpillars carry microscopic irritating hairs which can cause allergic reactions in people and domestic animals (cows, horses and dogs are affected). The most likely means of exposure to OPM hairs is contact with nests (especially if nests are low on the tree or have fallen to the ground). The hairs are also carried on the wind. Reactions following initial exposure to OPM are generally mild (do not require medication), and in people are most often confined to localised skin irritation (animals may react differently).

However, repeat exposure can result in increased sensitivity to OPM, resulting in symptoms such as eye irritation and breathing difficulties.

4.9 In 2017, the Forestry Commission received 21 reports of people reacting to OPM in the UK, and two reports for dogs. It is likely that the majority of reactions are unreported due to OPM not being recognised as the cause and most reactions not requiring medical intervention. In 2017, one case of a severe reaction to OPM (resembling anaphylaxis) was reported by a professional gardener in Southwark who sought medical advice after four years of worsening symptoms. Anecdotal reports from Europe (in countries where OPM is widely established) suggest that recreational use of woodlands has been affected by OPM.

4.10 In the last decade, OPM has become established in west and south-west London, in an area known as the core zone. Outside the core zone, OPM outbreaks are monitored and controlled by the Forestry Commission (FC). Control methods include pesticide application and nest removal. The control programme allows the UK to retain EU Protected Zone status, which requires oak trees supplied to the UK to be OPM free (70% of oak trees sold in the UK are imported). The cost of the OPM control programme currently falls to the FC on private land and to Local Authorities on public land. The FC control programme does not operate in the core zone (which includes locations such as Richmond Park with large populations of oak) as eradication is not a realistic outcome.

4.11 Hertfordshire is located on the edge of the known extent of OPM breeding population and is included in the FC's OPM monitoring and control programme. In 2016, four OPM nests were discovered in Hertfordshire, near Watford. After two years of control and monitoring by the FC, the outbreak is considered eradicated. In 2017, pheromone traps recorded male OPM moths in several locations in Hertfordshire including Oxhey Woods (which has a large oak population) and at other sites in Bushey, Rickmansworth, Watford Rural, Hoddesdon, Northaw, Berkhamsted and St Albans. Male moths travel further than females and therefore presence of males does not confirm an OPM breeding population in Hertfordshire.

4.12 In the long term, it is expected that the UK's OPM population will continue to expand. It should be considered that in the future a risk based control strategy may be adopted in the UK (as across other European countries) where it becomes the case that maintenance of the Protected Zone is unachievable or incurs unjustifiable costs (to the environment and /or public finances). In this scenario, the costs and resources for OPM control (where a threat is identified for public or tree health) are likely to fall to the landowner (public and private).

**Oriental Chestnut Gall Wasp (OCGW)**

4.13 OCGW is a native of parts of Asia which has been accidentally introduced in international trade to Europe and North America. In 2015, the County Council was issued with a Statutory Plant Health Notice (SPHN) which enforced control of an OCGW outbreak in St Albans. Control measures were carried out at a cost of £50,000 to the Local Authority, with the majority of cost accounted for by the three day road closure required to undertake felling works safely. OCGW is a quarantine pest, giving national plant health authorities powers to take measures to contain or eradicate it. Following further findings of OCGW in South-East England and London, SPHNs are not currently issued for OCGW outbreaks as eradication is not realistic.

4.14 OCGW is a low-impact pest of sweet chestnut trees, although the damage caused by OCGW can increase vulnerability to other pathogens (such as Sweet Chestnut Blight). The wasp does not bite, sting or pose any other threat to people, pets or livestock. The Forestry Commission continues to survey for OCGW to monitor its distribution, and work with owners to minimise its impacts.

**Emerging Tree Pest and Disease Threats**

4.15 Sweet chestnut blight is a fungal disease which has caused epidemics of death and dieback in sweet chestnut trees in North America and Europe. Isolated disease outbreaks have been recorded in the UK since 2011, with the majority occurring in commercial plantations. Control measures for these outbreaks involved sanitation felling, sweet chestnut material movement bans, and monitoring for signs of disease spread. In 2017, sweet chestnut blight was confirmed at a number of sites in East London, Reading, Derbyshire and Berkshire, indicating that the risk of further findings in the South East is increasing. Sweet chestnut is a naturalised non-native species in some Hertfordshire woodlands. However, it is not planted in large scale plantations as in other south-east counties (such as Sussex).

4.16 *Xylella fastidiosa* (Xylella) is a bacterial plant disease which has been recorded in Europe since 2013. *Xylella fastidiosa* is a highly adaptable pathogen with a wide host range (including 100s of herbaceous and woody species). Disease symptoms include leaf wilt, branch dieback and plant death. Common trees in the UK susceptible to the disease include elm, oak, maple and plane. The disease has been recorded in the wider environment in several areas of Europe (including parts of Spain, Corsica, Italy and the Balearic Islands). Defra have recently produced a list of plant species identified as ‘high risk’ imports (most likely to introduce Xylella to the UK). These plants include cherry, rosemary, and lavender (all have a high UK import demand). From 2018, the Royal Horticultural Society (RHS) have banned the inclusion of high risk Xylella host plants from RHS shows, with the exception of UK grown. The UK is an EU Protected Zone for Xylella, meaning that a

disease outbreak would be subject to strict control measures such as destruction of host plants in the immediate vicinity (i.e. nursery stock), and a movement ban (trade ban) for host plants within 5 km of the outbreak (if destruction of nursery stock does not contain the disease).

**Legal Obligations for Management of Tree Risk (Potential Liability)**

4.17 As a landowner, the County Council has a duty of care to people accessing its land (Occupiers Liability Act, 1984). This duty of care extends to managing the risk associated with trees. The Council also has a duty to ensure that employees and members of the public are not put at risk by its undertakings, including tree and land management (Health and Safety at Work Act, 1974). In addition, the Council has the power to enforce the management of trees on private land. This may be used at the authority's discretion where those trees are a risk to safe operation of the highway (s154 Highways Act, 1980).

4.18 In 2011, The National Tree Safety Group (NTSG) produced the 'Common Sense Risk Management of Trees' document. This is recognised as the national guidance for determining a proportionate and reasonable approach to tree risk management. In 2015, the NTSG produced a 'Pest and Disease Update' addendum in response to the increase in tree risk associated with new tree pest and disease threats (notably Chalara). The addendum recommends reviewing existing tree management systems in response to the arrival of a new disease threat, adapting survey, inspection and management regimes as appropriate.

**Tree Health Management Action**

4.19 In July 2015 the Resources and Performance Cabinet Panel (R&PCP) produced eleven (11) recommendations for managing the impact to the County Council of the increasing tree pest and disease threat. An update on tree health issues, and how they affect Hertfordshire, was reported to the December 2016 Environment, Planning and Transport Cabinet Panel.

4.20 Key tree health actions in 2016, following recommendations of the R&PCP, were aimed at raising the profile of the increasing tree health threat. Information related to tree pests and disease was disseminated through the Tree Health communication network to county council Departments with responsibility for trees and to Local District Council Tree Officers. The Chairman of the R&PCP wrote to the Secretary for Environment, Food and Rural Affairs to raise awareness of the likely cost to Local Authorities of managing the increasing tree pest and disease threat.

4.21 Tree Health was registered as a Corporate Risk in 2016, listing 14 control measures which are reported quarterly. An Internal Audit of the County Council's Departmental Tree Policies and Practices conducted

in 2016 produced seven (7) recommendations for increasing resilience and efficiency of its tree management systems. The actions identified by the Corporate Risk and the Shared Internal Audit Service complement the recommendations of the R&PCP to manage the impact of the increasing tree health threat.

4.22 In January 2017 the Countryside Management Service (CMS) recruited a Tree Health Network Officer (THNO) to progress the recommendations of the R&PCP. A key objective of the THNO role is to share up to date information on tree pests and diseases, and promote best practice for assessing and managing tree health threats. The Hertfordshire Tree Health Network is the key tool for disseminating this information. The THNO role also includes reporting control measure updates for the Corporate Risk register, and following up the recommendations of the Tree Policies and Practices Audit.

4.23 The THNO has been working with Property colleagues to produce an Action Plan for a documented Tree Strategy. The standards identified for the tree strategy are: a three year detailed (formal) rolling inspection of high risk zones; annual (informal) inspection of damaged and diseased trees in high risk areas (prioritising ash tree locations); and, provision for reactive survey of high risk zones following extreme weather events. These standards incorporate guidance detailed in 'Common Sense Risk Management of Trees' (NTSG 2011), and the NTSG (2015) Pest and Disease Update. In 2016, Property completed tree works identified in the 2016/2017 inspection of the Hertsmere Rural Estate.

4.24 The THNO has attended training, workshop, and conference events on the subject of tree health and management of tree risk, disseminating key information through the Tree Health Network. These events have included a workshop on OPM awareness and survey methods, attended by THNO and members of Rural Estates. Following the OPM workshop, and production of a newsletter for the Tree Health Network, public information leaflets for OPM were distributed around Rural Estate tenants and to GPs and pharmacies in areas of Hertfordshire most at risk from OPM (with support from Public Health).

4.25 In 2017, with the cooperation of other Local Authorities, the THNO has also been able to arrange tailored training and workshop events on monitoring and management issues related to Chalara. These events included on-site training in a 'drive-by' survey protocol, developed by Norfolk County Council, which allows rapid assessment of roadside ash trees (using categories of % dieback as a proxy for tree health). In September, Suffolk County Council hosted a Chalara workshop which was attended by representatives of Highways, Rural Estates, Risk Management and CMS. This event has informed drafting of the Property Tree Strategy (4.23), re-evaluation of the Corporate Risk focus, and has provided a clearer understanding of how we can expect

ash health, and associated risk, to develop over the next few years (4.8).

4.26 The THNO represents the Council's interests on the national Ash Health and Safety Task Force. This advises Defra in the development of national guidance and policy which can mitigate some of the challenges faced by LAs (and other landowners) in managing risk associated with Chalara. Discussed at the most recent meeting were potential changes to felling licence conditions for ash, plans to review the NTSG national guidance for minimum inspection intervals for highway trees, and development of a protocol for managing ash tree decline in high risk zones.

4.27 CMS developed a simple biosecurity and procurement protocol, in line with national guidance, which has been circulated around the Tree Health Network for all involved in these areas within the Hertfordshire Local Authority family to adopt. CMS has also set up a biosecurity kit, including sanitising spray, for regular cleaning of tools used on sensitive sites by volunteers.

4.28 The THNO has also been raising awareness of the wider community through guided walks in East Herts, North Herts, and Hertsmere. The updated CMS web page includes a tree health page with links to regularly updated tree pest and disease resources. An article on current and future tree health threats was included in CMS news which has a circulation of approximately 1,000.

## 5. Future Actions

5.1 In 2018 the THNO will work with District Council Tree Officers to agree a consistent good practice approach to tree risk management and reporting. Highway tree inspection and management intervals will be a particular focus. This review has been triggered by a recent court ruling in which Witley Parish Council was found liable for personal injury caused by a fallen tree due to their failure to increase tree inspection frequency (from three years to two years or 18 months) despite precedent from a neighbouring local authority and expert advice provided by their arboriculturist. This ruling suggests that an 18 month minimum inspection interval is reasonable in certain high risk zone locations where tree failure can be expected to result in a high probability of injury or death (Cavanagh v Witley Parish Council 2017).

5.2 A review of the County Council's Highway tree inspection regimes is planned for 2017/2018, potentially incorporating best practice and emerging legal precedents set since the previous review. The former will include alternative approaches to ash monitoring and management from other Local Authorities. The aim will be to ensure tree inspection data informs efficient and effective management of tree risk under the increasing tree health threat. For example, analysis of the age and height distribution of roadside ash would allow a more accurate

quantification of the potential liability of Highway's ash tree asset. This analysis could inform a risk based approach to planning tree inspection and work programmes.

5.3 In 2018, the THNO will continue to attend conferences, workshops, and the Defra Ash Tree Health and Safety Task Force, to remain up to date on tree health issues, policy, national guidance development, and common use methodologies for efficient monitoring and management of tree health risks (i.e. remote sensing, etc.). The THNO will also provide further opportunities for workshops and training, for Property and Highway staff with responsibilities for identifying tree pests and diseases, and assessing tree risk. The THNO will continue to disseminate information through the Tree Health Network.

5.4 A selection of proposed trees for planting in Hertfordshire will be developed and shared with local authority colleagues to provide a range of tree and shrub species appropriate to local conditions and landscape character in different areas of Hertfordshire. This "palate" will provide suitable alternatives for ash in hedgerows, shelterbelts, and other naturalised tree planting situations. It will also be designed to encourage diversification in species and age structure of new and replacement tree planting options in order to increase resilience to the increasing pest and disease threat.

5.5 Tree Policies and Practices in the County Council are Departmental, meaning there is no overarching Tree Strategy. The possibility of developing a tree strategy could be an appropriate focus for a tree health conference for Hertfordshire in 2018/2019. A corporate tree strategy would be informed by Defra's 25-year Environment Plan (published January 2018) and the Government's forthcoming Tree Health Resilience Plan (planned for late 2018). The Highway Tree Strategy is under a five-year review in 2018. The review process will consult with Countryside & Rights of Way and the Hertfordshire Landscape and Green Infrastructure Group. It will be compliant with the new code of practice 'Well Managed Highway Infrastructure' and developing national guidance and policy relating to management of tree risk.

5.6 In 2017, a number of the Corporate Risk Controls moved to a status of 'in place' or 'taking effect'. Over the next year, it would be appropriate to move the focus of the control measures from assessment of liability, to developing strategic approaches to mitigating tree health threats. For example, it would accord with Defra's 25-year Environment Plan (2018) and be responsible to review how biosecurity is considered within the Council's procurement protocol, and assess the feasibility of excluding high risk Xylella plants from procurement (unless guaranteed UK grown). It will also act to influence species choice in landscape planting secured through development.

5.7 As of March 2018, the Corporate Risk Register will recognise two categories of risk, Strategic and Corporate. Both categories will continue to be subject to current criteria for the Corporate Risk Register, i.e. potential to impact on key resources and services and the potential threat to service users and reputation of the organisation. Tree Health (ENV0142) will be registered as a Strategic Risk which means that its impact is likely to be more targeted (i.e. to particular areas of the organisation) and take place over a shorter time-frame than Corporate Risks. Strategic risks are also affected by factors which are difficult to predict, such as environmental change and new/amended legislation, and therefore risk levels may be changeable.

## 6. Financial Implications

6.1 In 2016 it was reported that the anticipated potential liability to the County Council from tree health threats (predominately Chalara) was £10m, based on an assumption of 15,000 ash trees in the Highway asset. In 2017, Highways identified 15,492 ash trees along urban road networks (high public risk zone). The £10m anticipated liability for the County Council is broadly in agreement with work undertaken elsewhere (Kent and Suffolk) which estimates a potential liability in the order of £7m to £16m. In Devon (second longest road network in the UK), it has been calculated that to manage all privately owned ash trees along highways would cost the Local Authority £26m (assuming half the costs are reclaimed).

6.2 Maintaining a reasonable approach to tree risk management in Hertfordshire may incur increasing costs in the next few years. It is likely that trees (in particular ash) will need to be inspected more frequently, with a greater amount of remedial works required. It is intended that this will be balanced by a less frequent regime for other stock. In the long term, replanting costs may also need to be considered. The Council currently has a potential pressure of £250k identified as an uncertainty within the Integrated Plan for Highways which highlights an increasing risk that this will be required over the next 5 years.

6.3 Costings for annual ash tree monitoring and management are available from some Local Authorities (where Chalara is well established). Norfolk County Council spent £78,000 in 2016 to conduct a drive-by assessment of ash tree health (using canopy cover category as a proxy for tree health) along the A and B road network (717km). Devon County Council estimates the cost of a similar survey to be £195,000 (£12.50/km). Kent County Council spent an additional £21,000 in 2016 managing roadside ash trees.

6.4 In 2017, the Forestry Commission spent £584,000 controlling OPM nationally. Cost breakdown; in £7.81/surveyed tree, £8.35/sprayed tree and £795/nest removal. In Hertfordshire OPM pheromone trapping (with positive results) and spraying (of 2016 OPM outbreak area in

Watford) took place in 2017. Further OPM outbreaks in Hertfordshire are likely in the next few years. The cost of OPM control on Local Authority owned land is borne by the landowner.

## 7. Equalities Implications

7.1 When considering proposals placed before Members it is important that they are fully aware of, and have themselves rigorously considered the equalities implications of the decision that they are taking.

7.2 Rigorous consideration will ensure that proper appreciation of any potential impact of that decision on the County Council's statutory obligations under the Public Sector Equality Duty. As a minimum, this requires decision makers to read and carefully consider the content of any Equalities Impact Assessment (EqIA) produced by officers.

7.3 The Equality Act 2010 requires the Council when exercising its functions to have due regard to the need to (a) eliminate discrimination, harassment, victimisation and other conduct prohibited under the Act; (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it and (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it. The protected characteristics under the Equality Act 2010 are age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion and belief, sex and sexual orientation.

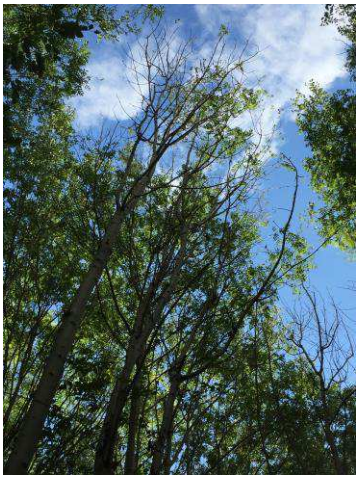
7.4 There are no equalities issues associated with this report.

***Background Information***

***National Tree Safety Group - publications***

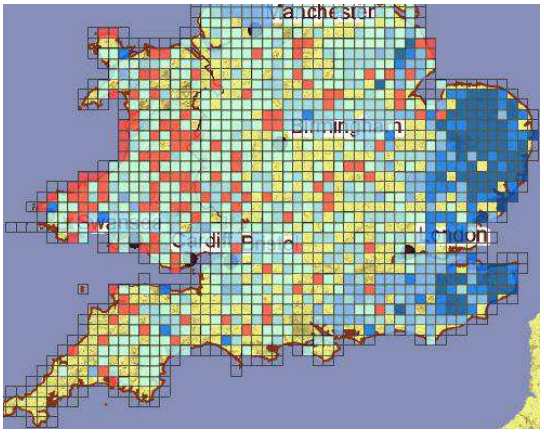
# Appendix 1

## Chalara (ash dieback) images



**Chalara in young tree - stem lesion and wilting leaves.** **Chalara in mature trees – stem lesion on main stem (photo 1) and extensive dieback (50-75%) in ash tree crowns (photo 2) .**

*Gemma Worswick, Weston Hills Local Nature Reserve nr Baldock, North Hertfordshire, 14 Sept 2017*



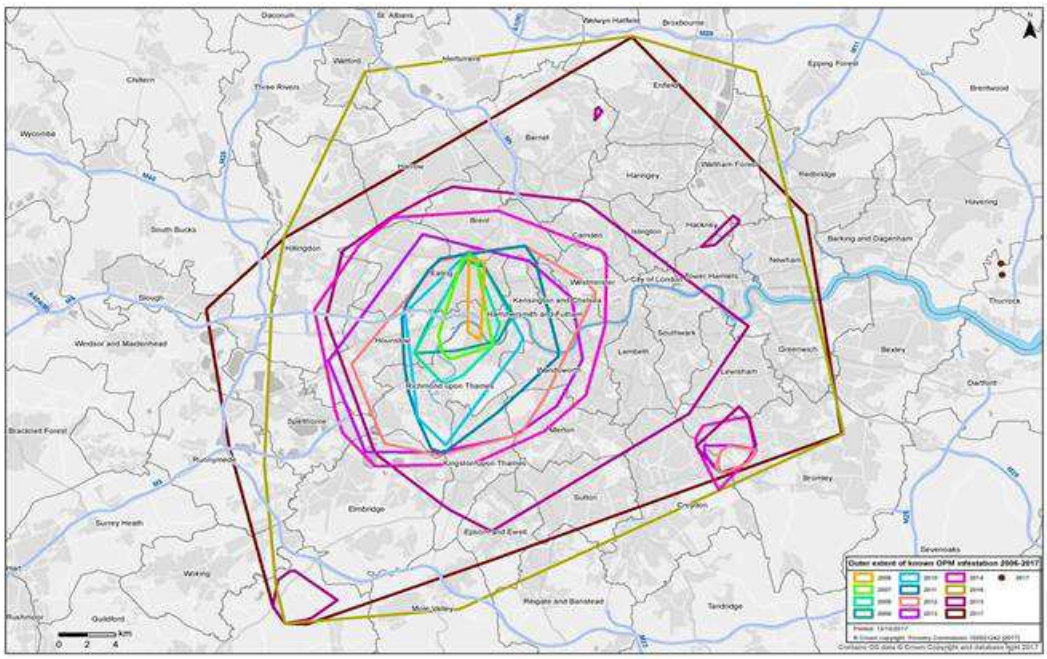

**Confirmed wider environment ash dieback infections (blue and red squares) in central and southern England and Wales, 1 Dec 2017.** **Confirmed wider environment ash dieback infections in Hertfordshire, 1 Dec 2017**

(http://www.forestry.gov.uk/chalara), Open Government Licence.

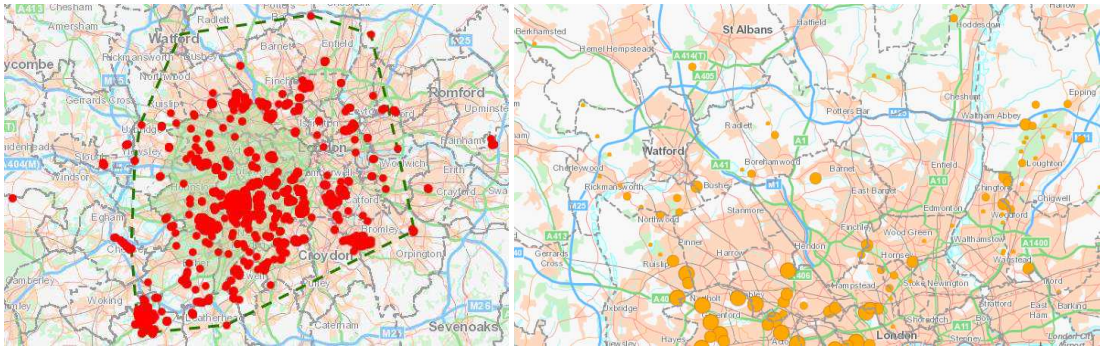
## Oak Processionary Moth (OPM) images


**Cross-section of UK ash trees infected with Chalara – demonstrates the growth stress experienced by infected trees (photo 1) and impact of concurrent Chalara and root fungal infections on timber integrity.** Images provided by Garry Battell, Woodland Advisor, Suffolk County Council


**Public warning notice for OPM in Richmond Park, London.** Gemma Worswick, 25 May 2017 **OPM nest on oak in Alexandra Palace Park - tree has been cordoned off for public safety.** Photo provided by Andrew Hoppit, OPM Project, Manager, Forestry Commission




**Spread of OPM breeding population from 2006 to 2016.** Crown copyright, courtesy Forestry Commission, Open Government Licence




**OPM nests recorded in 2017 (dots) and 2016 (dotted line shows extent of nest distribution). OPM pheromone trap results for 2017 (male moths only) – size of circle relates to number of moths caught).**

Crown Copyright, courtesy of Forestry Commission, Open Government Licence