City and County of Swansea

Notice of Meeting

You are invited to attend a Meeting of the

Scrutiny Performance Panel - Natural Environment

At: **Remotely via Microsoft Teams**

On: **Thursday, 26 August 2021**

Time: **2.00 pm**

Convenor: **Councillor Peter K Jones**

Membership:
Councillors: E W Fitzgerald, S J Gallagher, J A Hale, O G James, M H Jones, H Lawson, I E Mann, H M Morris, C Richards, B J Rowlands, M Sherwood, W G Thomas and L J Tyler-Lloyd

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Agenda

Next Meeting: Wednesday, 6 October 2021 at 10.00 am

Huw Evans
Head of Democratic Services
Thursday, 19th August 2021

Contact: Scrutiny Officer, 07980 757686

Cyngor Abertawe
Swansea Council

City and County of Swansea

Minutes of the Scrutiny Performance Panel - Natural Environment

Remotely via MS Teams

Tuesday, 29 June 2021 at 10.00 am

Present: Councillor P K Jones (Chair) Presided

Councillor(s)	**Councillor(s)**	**Councillor(s)**
E W Fitzgerald	S J Gallagher	O G James
M H Jones	H Lawson	I E Mann
B J Rowlands	M Sherwood	W G Thomas

Other Attendees

Mark Thomas	Cabinet Member – Environment Enhancement & Infrastructure Management
Mark Wade	Head of Housing and Public Health
Tom Price	Team Leader, Pollution Control
Victoria Seller	Research Officer, Swansea University
Emily-Jayne Davies	Scrutiny Officer

Apologies for Absence
Councillor(s): H M Morris, C Richards and L J Tyler-Lloyd

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46 Disclosure of Personal and Prejudicial Interests

In accordance with the Code of Conduct adopted by the City and County of Swansea, no interests were declared.

47 Prohibition of Whipped Votes and Declaration of Party Whips

In accordance with the Local Government (Wales) Measure 2011, no declarations of Whipped Votes or Party Whips were declared.

48 Minutes of Previous Meeting(s)

The minutes of the Natural Environment Scrutiny Performance Panel meeting, held on 19 May 2021, were agreed as an accurate record.

49 Public Questions

There were two public questions, focused on (a) domestic wood burning and (b) use of national air quality data to inform Council strategy.

The Panel discussed question (a) in the context of Air Pollution and the monitoring of same. Cllr Mark Thomas outlined the Council's approach and highlighted that a city-wide approach to monitoring/enforcement is not achievable at present, however, the Council is making continuous improvements to Air Quality standards and policies, in line with Government guidelines. Officers confirmed that under statutory nuisance provisions, the Council has powers to respond to complaints regarding smoke control, and will do so if a complaint is received.

Cllr Mark Thomas acknowledged question (b) as a wider policy issue, both locally and nationally, and undertook to provide a full written answer in due course.

50 Air Quality Management

The Panel held a discussion on the Council's current *Air Quality Management* strategies. The Panel heard from lead Cabinet Members and relevant officers on the policies and plans currently in place.

Panel Members raised questions regarding the report presented, interested to know more about the technology and available resources supporting the work of the Council's Pollution control Team, such as the $PM_{2.5}$ analyser on Fabian Way. The Panel also heard about the Green Screen which has been installed on Fabian way, and the work of the Council looking at results, both during and after lockdown, helping to identify and measure benefits to mitigate some exposure to engine pollution.

Discussion focussed on:

- Clean Air Advisory Panel has been set up with Welsh Government, to advise on matters arising from air quality.
- Scope to engage schools / pupils in green infrastructure projects – need for engagement of children at a young age, shifting traditional behaviours.
- Transboundary effects – some increased pollutants during lockdown in the wider context.
- Traffic counter / traffic flow data: Capability exists to look into specific days/events and the effect of higher density traffic on the data. Swansea University plan to research major events in Swansea, and any subsequent impact on air quality.
- Engine idling – for example, school collections. Matter of concern that children are subject to concentrated exposure during these times. Buses should not be running too long with idle engines. The Panel heard that buses under contract with the Council have a limited idling period, anything beyond that should be reported. Councillors acknowledged that it is difficult to monitor/enforce cars at pick up times outside schools. Panel Members suggested bus operators are encouraged to install monitoring technology to measure engine idling times.
- Education – exists a need to better inform public to a greater extent as to consequences of certain behaviours.
- Councillors acknowledged the increased workload and strains put on the team during the period of the pandemic response.

The Panel also received a presentation from Victoria Seller, of Swansea University, covering an overview of Air Quality strategies in Wales. Discussion focused on:

- RCPCH Report (2016) estimated 40,000 early deaths each year attributed to air quality in the UK.
- Air quality has been linked to a huge range of health issues, including nanoparticles crossing the blood/brain barrier.
- Guidelines and standards may not be protecting the health of everybody in society.
- Nitrogen Dioxide gas is traffic related, occurring locally in discrete pockets.
- Air pollution is linked to health and deprivation, disproportionately affecting some communities.
- Air Qualities Guidelines (WHO) are due to be updated imminently.
- The Well-Being of Future Generations Act (Wales) 2015 places responsibility on public bodies to work in a cohesive way to manage Air Pollution.
- Automatic Urban and Rural network (AURN) – 11 sites across Wales, 2 in rural areas, not a good spread of monitor density due to cost of monitors and time intensive operation. These monitors, plus data predictions, demonstrate issues with Nitrogen Dioxide.
- 40 automated monitors across Wales, in addition to 11 AURNs.
- 12 Authorities have diffusion tubes, small simple technology, measuring long term concentration of Nitrogen Dioxide.
- The University is to undertake a new piece of work / research surrounding the impact of reduced traffic, during lockdown, on air quality. The Hypothesis is that the reduction in traffic will correlate with a reduction in NO_2 and $PM_{2.5}$.

The Panel also took the opportunity to ask about the policies relating to the Local Development Plan / increased house building, and the subsequent increase on traffic/air pollution. Cllr Thomas highlighted a clear defined need for more housing nationally, acknowledging the balance needed between housing demands and impacts upon surrounding services.

The Panel considered the information provided, asked questions, and gave views on the way forward. The Chair thanked all for their input.

AGREED that the Panel write to the Cabinet Members with its views and recommendations.

51 Letters

The Panel received the correspondence sent following the meeting of the Panel held on 19 May 2021.

The meeting ended at 11.55 am

Report of the Cabinet Member for Environment Enhancement & Infrastructure Management

Natural Environment Scrutiny Performance Panel – 26 August 2021

Ash Dieback

Purpose:	To brief/update the Panel on Swansea Councils' response to Ash Dieback
Content:	A briefing/update on progress and overview of future aims
Councillors are being asked to:	Consider the information provided and give views
Lead Councillor:	Councillor Mark Thomas, Cabinet Member for Environment Enhancement & Infrastructure Management
Lead Officer & Report Author:	Jeremy Davies, Group Leader Parks & Cleansing

1.0 Background

1.1 The Council is responsible for all trees on its land and ensuring the safety of the public highway that may be affected by tress on land not owned by the Council.

1.2 Ash dieback, also known as Chalara dieback of ash, is a fungal disease that affects all species of ash trees (Fraxinus). The disease has spread west across the country and is now affecting almost all parts of Wales. The disease affects ash trees by blocking the water transport systems, causing leaf loss, lesions in the wood and on the bark. This leads to the dieback of the crown of the tree. Trees become brittle over time with branches breaking away from the main body of the tree. If they are not dealt with, trees are at risk of collapsing, presenting an immediate danger to the surrounding area.

1.3 Ash dieback is a Europe-wide problem and 90% of ash trees are expected to die from it. It is a significant, complex and expensive problem for landowners and councils across the UK who have ash trees on their land. Trees affected by the diseases are categorised in severity using a scale of 1 to 4, 4 being the most severe.

1.4 Some rural councils in England think as many as 500,000 ash trees on their land have been affected by ash dieback. In Swansea, we have surveyed approximately

50% of the tree stock and identified around 3000 ash trees that need removal because of the disease, though the final figure is expected to be much higher.

2. Strategic Response

2.1 Ash dieback is recorded as a corporate risk.

2.2 We convened an Ash Dieback Coordination group comprising representatives of all directorates across the authority; the group is following the Tree Councils Toolkit focusing on communications, immediate actions in relation to category 3&4 trees, ongoing identification, felling and recovery.

2.3 Cabinet and Councillors received briefings in May 2019, the council website has an FAQ section and we have communicated press releases to local media.

https://www.swansea.gov.uk/ashdieback

2.4 Highways Inspectors have been trained to identify classes of dieback and issue notices to landowners.

2.5 We are focusing on Council owned land and private landowners where their ash trees may encroach the highways.

3 Operational Response

3.1 The Parks Departments' Tree Services Unit has prioritised category 3&4 trees in its highest level of response. This does affect the capacity to carry out less urgent and some income related arboricultural works.

3.2 There are approximately 47,000 individual trees of varying species on Council land identified through surveys and estimated a further 50k+ in un-surveyed woodlands. Ash tree surveys have yielded the following results to date:

- General council land (e.g. Parks, cemeteries, highways): 1584 ash trees approximately 35% of which are category 3&4 requiring immediate response
- Housing land: 798 ash trees approximately 20% of which are category 3&4 requiring immediate response
- Schools (education land): 450 ash trees approximately 20% of which are category 3&4 requiring immediate response

3.3 Numbers of ash trees felled in Swansea:

- 2018/19: Approximately 300 (prior to Ash dieback action plan surveying)
- 2019/20: 630 mostly category 4 small, medium and large trees
- 2020/21: 186 mostly category 4 medium and large trees
- 2021/22: 72 (to date) category 3 and 4 medium and mostly large trees

Numbers felled are not to be considered a representation of the progress or effectiveness of controlling the disease; they vary for numerous reasons such as size, location and accessibility.

3.4 The Highways department is using arboricultural contractors to deal with larger groups of ash adjacent to the highway.

3.5 We are confident that we are keeping up with the removal of any ash trees considered dangerous

4 Recovery Strategy

4.1 As the widespread impacts of ash dieback start to take their toll, in addition to short-term tactics that deal with ash loss, it will be vital to consider longer-term recovery planning and how to safeguard Swansea's' precious treescapes for generations to come. We will need resilient planting and visionary thinking, as well as Action Plans to deal with the immediate threats to each area.

4.2 The Tree Council Ash Dieback Toolkit specifically refers to key principles for replacing lost ash trees and these should be considered in the forthcoming Council tree planting/afforestation strategy and plans to be developed as part of the climate change response.

4.3 The number of new trees planted on council land by the Parks Service funded by various schemes, Members and grants was:

- 2018/19: 144
- 2019/20: 444
- 2020/21: 232

It is of note that these are the trees planted directly by Parks, there are many others planted by other departments or areas of the Council.

5 Finance Implications

5.1 All works are currently resourced from existing revenue budgets.

5.2 Costs to date are approximately:

- 2018/19: Parks £60k
- 2019/20: Parks £150k
- 2020/21: Parks £90k Highways £70k

5.3 Annual shortfall is estimated at £150k

5.4 Welsh Government have funded the purchase of an elevated platform (£100k), watering infrastructure for storing trees at Clyne nursery (£7k), and 350no. trees (£36k) for planting out.

6 Future challenges & opportunities

6.1 The main challenges for the service in relation to this report are:

- The need to ensure delivery of the action plan against a backdrop of resource pressures.

- Increasing demand and expectations from stakeholders in terms of non-urgent tree maintenance.
- Increasing demand and expectations from stakeholders in terms of tree planting and early life maintenance against a backdrop of resource pressures.

6.2 The Authority will continue to review other options and opportunities for grants and funding as they become available.

6.3 The wood from felled trees that is in a re-usable condition is recovered for the Waste Wood Re-Use Project and utilised to manufacture products such as benches which are then installed in Swansea's parks as an example.

7. Summary

7.1 According to DEFRA, it is estimated that there are 125 million ash trees in woodlands and between 27-60 million ash trees outside of woodlands in the UK, plus potentially 2 billion saplings and seedlings in woodlands and non-woodland situations. Only nine years after its official identification in the UK, ash dieback has already started having significant impacts on the country's treescape. Although it is still too early to understand whether any trees will prove to be resistant to the fungus, the stark reality is that over 90% of ash trees across the UK are likely to be infected in the years to come.

7.2 This year has been reasonably good for the ash species in Swansea. Many species of trees were badly wind burnt during the two storms near the end of April but ash trees had not come into leaf at this point so were spared the damage.

7.3 Die off this year has slowed and many trees that would have been category 3 last year look like category 2 this year. Unfortunately, this does not indicate they are going to recover completely but it is supporting the evidence that the species has some genetic resistance/tolerance to the disease at some level and also that climate will affect the rate of disease spread by affecting spore levels from the fungi growing on the previous year's fallen leaf litter. It also adds to the evidence that this is a longer, more drawn out process, for dealing with the trees than originally envisaged. Depending on several external factors, the general health of the ash population will ebb and flow from good years to bad years. Our own arboricultural Officers believe the disease will become endemic once all the low tolerance trees are removed and much like Dutch elm disease it will continue to affect trees at various points into the future.

7.4 Our aim should be to manage the disease over a longer period without the need to fell every tree showing symptoms of the disease. Continual monitoring, categorisation and careful tree surgery/removal are still considered the best way to deal with the disease while caring for the environment at the same time.

8. Legal implications

8.1 The primary legislation for the process adjacent to the highway is: The Highways Act 1980.

8.2 The Authority does not have a Tree Policy at present therefore all works related to ash dieback are in accordance with arboricultural best practice and utilising the resources on offer from The Tree Council, APSE and other local authorities.

9. Equality & Engagement Implications

9.1 Engagement with the wider public sector, Welsh government and the WLGA is required to monitor any changes in legislation or best practice guidance.

Background papers: *None*

Appendices:

Appendix A: The Tree Council: Ash Dieback Toolkit

ASH DIEBACK:

an Action Plan Toolkit

Summer 2019 update (first published February 2019)

CONTENTS

Section

1

Introduction

1. Introduction

Ash dieback, *Hymenoscyphus fraxineus* (formerly known as *Chalara fraxinea*), is the most significant tree disease to affect the UK since Dutch elm disease which was first recognised in the 1960s. It will lead to the decline and possible death of the majority of ash trees in Britain and has the potential to infect more than two billion ash trees[1] (over 1.8 billion saplings and seedlings to more than 150 million mature trees) across the country.

Given that ash is widespread across our landscape, including alongside roads and streets, managing ash dieback will lead to a shift away from 'business as usual' towards new demands and priorities for resources. This Toolkit has been developed to assist Local Authorities and other regional bodies as they work proactively to manage the impacts of the disease on non-woodland trees.

Group of ash trees infected with ash dieback © Jon Stokes

Since the arrival of ash dieback, The Tree Council has led widespread research into early responses and coping strategies of public landowners to this new disease. Inevitable increases in dangerous and dying ash trees will require management and, where necessary, removal for safety reasons. However, findings indicate that many Local Authorities and other agencies are not prepared for the scale of resources that will be needed to deal with the public safety issues arising from this tree disease. Nor are they prepared for the aftermath. Ash trees currently provide supporting, regulating, provisioning and cultural gains, including increased land values and public well-being. Planned replanting will be needed to recover the vital ecosystem service benefits of the removed ash trees.

[1]See page 13 of: *Chalara in Non-Woodland Situations: Findings from a 2014 study*

A strategic and co-ordinated local response is required to deal with the multiple issues that ash dieback presents. This Toolkit is designed to assist Local Authorities and other regional or local agencies to prepare an **Ash Dieback Action Plan** (ADAP) to respond to the problems that the affected trees will create.

This Toolkit contains resources and materials created by Local Authorities and other agencies as they prepared to manage the impacts of ash dieback. These examples are presented throughout the report. They are mostly works in progress and supplied with the generous agreement of the agencies and bodies who created them. We hope to receive feedback from others as they develop their own ADAPs. Through this process, ash dieback best practice will develop and as new materials or amendments to these examples become available, we will update this document.

This Toolkit is a step-by-step guide to producing an effective ADAP and includes examples from Local Authorities who are currently active in managing their ash trees. For an up-to-date list of all the resources referenced in this document, please visit **www.treecouncil.org.uk/Ash-Dieback**

The Toolkit comprises four parts:

- **Part 1:** Raising awareness of ash dieback and the issues it may cause
- **Part 2:** Preparing the ADAP
- **Part 3:** How to take action and respond to ash dieback
- **Part 4:** Recovery from ash dieback

"For as long as possible, where safe to do so, retain ash trees. Favour prime, unstressed specimens, but consider that even moderately tolerant trees may have something to offer genetically to the future. Keep as many female (seed-producing) trees as possible. DON'T GIVE UP ON ASH!"

Part of a presentation by Joe Alsop, Senior Reserves Manager, Natural England in Lancashire to the North West Tree Health Group in June 2019

WHY IS A PLAN FOR ASH DIEBACK NECESSARY?

Ash dieback will lead to changes to our landscape and tree populations[2], changes to biodiversity[3] and landscape character[4] and potentially increase effects such as flooding caused by the way water interacts with the environment[5].

The national cost of managing trees with ash dieback (which could include monitoring, pruning and, where necessary, felling) is difficult to calculate but it has been estimated that the health and safety implications of affected roadside trees could cost £5.3 billion[6]. For example, Kent County Council (KCC) has estimated that managing the decline of ash adjacent to Kent's roads and by-ways could eventually require safety interventions affecting some 500,000 individual trees[7].

The scale of health and safety risks caused by ash dieback alone will mean that it will not be 'business as usual' for any organisation managing ash trees.

Tree failures could translate into an increase in the number of people harmed by trees and a potential increase in property claims. Organisations will need to review and, where necessary, make changes to tree safety management regimes and practices[8].

Our research has found that Local Action Plans should be developed and implemented by agencies dealing with ash dieback. This recommendation was based upon discussions with Local Authorities who felt unprepared for the impacts of ash dieback. It is also based on research by the Food and Environment Research Agency (Fera Science Ltd)[9] on the management of Dutch elm disease, which caused the loss of 30 million trees.

[2]See page 13 of: *Chalara in Non-Woodland Situations: Findings from a 2014 study*
[3]*Assessing and addressing the impacts of ash dieback on UK woodlands and trees of conservation importance*
[4]*Chalara in Non-Woodland Situations: Findings from a 2014 study*
[5]*The potential of tree and hedgerow planting to reduce the frequency and impact of flood events in the UK*
[6]Ash dieback is predicted to cost £15 billion in Britain
[7]KCC personal communication
[8]*National Tree Safety Group Common Sense Risk Management of Trees'*
[9]*Dutch Elm Disease management in East Sussex. Lessons for other tree health management schemes.* Fera Science Ltd (2013).

Figure 1 shows the four key parts of a response to a potential or current tree pest or disease. It is based upon the widely used protocols of Emergency Planners and was the basis of the Kent response to ash dieback.

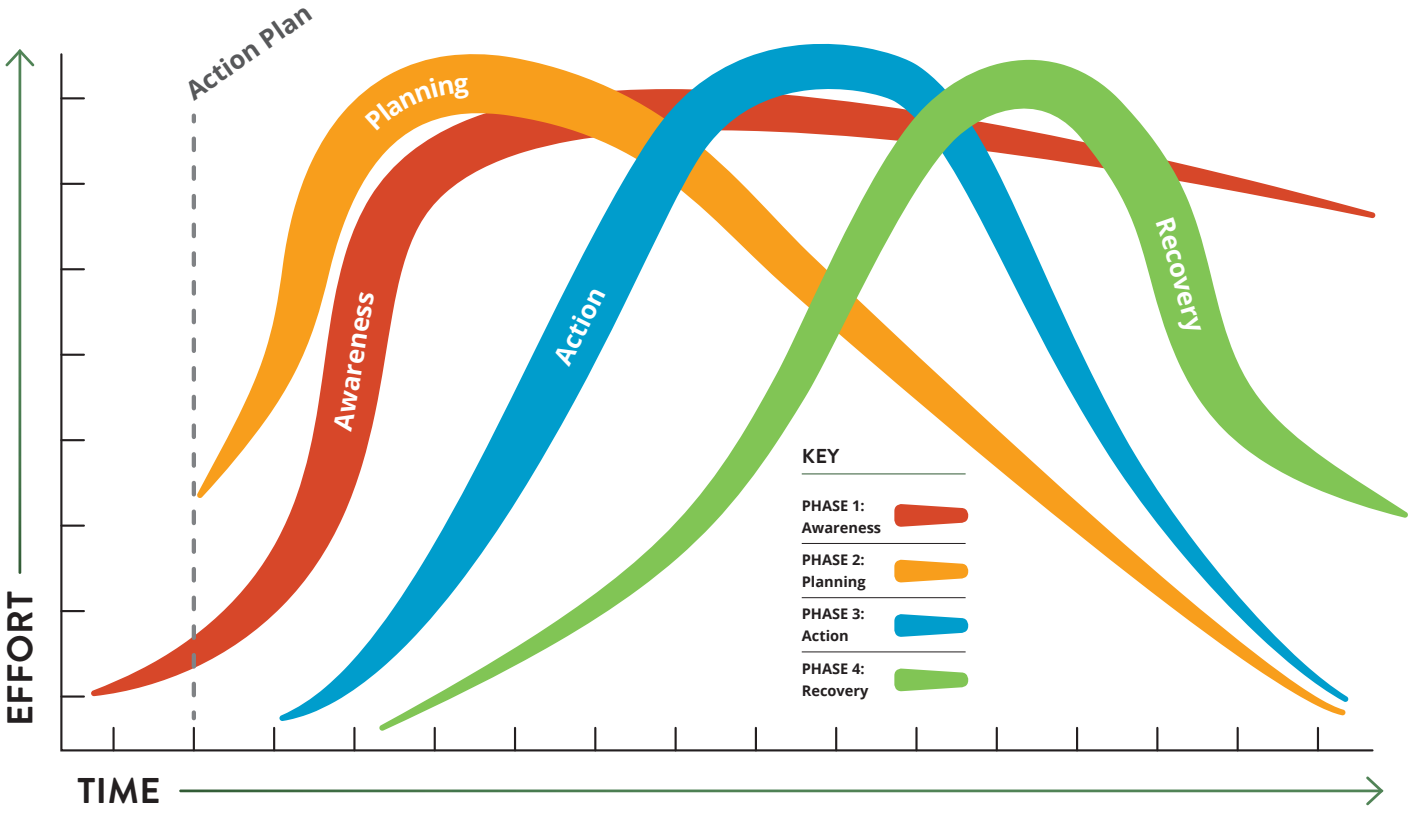


Figure 1: Phases of management of a tree pest or disease

The elements in this model are:

- **Awareness/anticipation:** raising awareness about ash dieback and the issues it may cause and realising that work needs to be undertaken to understand and deal with the problem.
- **Planning/assessment:** preparing and developing an ADAP to help manage the problems caused by the ash dieback.
- **Action/response to ash dieback:** undertaking actions (e.g. pruning or, where necessary, felling trees) to remedy the problems faced due to ash dieback.
- **Adaptation and recovery from ash dieback:** landscape restoration in the wake of ash dieback, an essential element of any emergency process.

These four elements comprise the basis for an ADAP. One vital element of the Awareness curve is the requirement to devise a Communications Plan – see **Part 3 (Action 1) of the Toolkit on page 41**.

The ADAP Toolkit aims to:

- increase understanding of the implications of ash dieback
- provide a local/regional framework for preparing an ADAP
- work at the county level, but be adaptable to any scale
- focus around the tactical issues that an organisation may face but incorporates the need to deal with the strategic impact of tree pest and disease on the wider treescape.

We are early in our understanding of the best approaches for dealing with ash dieback. As understanding deepens, the Toolkit will be updated and expanded. It is based around work being undertaken by several Local Authorities at the forefront of dealing with ash dieback infection and provides examples of the processes they have taken to gain the required resources to begin remedial work.

Section

2

The Toolkit

2. The Toolkit

PART 1: RAISING AWARENESS

To make the case for organisational time and resources to be spent on developing an Ash Dieback Action Plan (ADAP), it is necessary for each interested body to understand the potential impacts on its organisation or area.

Based upon the literature and actions of a number of Local Agencies, a logical, consistent and robust response to ash dieback should be built on the following steps:

- **Step 1: Learning about ash dieback** and deciding if it presents a risk to an organisation and its practices/procedures. This includes understanding the disease, how to identify it and where it is found.
- **Step 2: Assessing the scale of the impact** on the organisation (e.g. understanding how many ash trees are in your area/you own or manage). This includes how to collect data and estimate the number of ash trees and the potential costs of the problem.
- **Step 3: Making the case to managers/budget holders for an ADAP** to be created to deal with the problems that will be caused. This includes assessing corporate risk.

Step 1: Learning about ash dieback

WHAT IS ASH DIEBACK?

Ash dieback, formerly known as *Chalara*, affects ash and other *Fraxinus* species of trees and is caused by a fungal pathogen.

The fungus, *Hymenoscyphus fraxineus* (formerly *Chalara fraxinea*), arrived from Asia to Europe during the 1990s and spread rapidly across Europe. Although the first official record in Britain was in 2012, evidence[10] now suggests it arrived here earlier, with analysis demonstrating trees dying from the fungus in 2004.

This invasive fungus causes a range of symptoms from foliar leaf spots to branch dieback to the death of *Fraxinus excelsior* (ash) trees and some other *Fraxinus* species. Once infected, the majority of trees will die. A few ash trees may survive the infection because of genetic factors which give them tolerance to the disease. In non-woodland situations such as urban areas, where trees tend to experience greater stress, the percentage of UK ash that are likely to be tolerant to the fungus is not yet well understood[11]. In woodlands, evidence from December 2018 suggests mortality rates may be between 70% and 85%. Evidence from Europe suggests that around 10% of trees were found to be moderately tolerant to the disease, with 1-2% having high levels of tolerance. The environment also has a role in how trees decline from ash dieback, with trees growing outside of optimal conditions declining more quickly.

The precise speed of decline of any individual tree is currently impossible to predict and will be influenced by other factors including soil type, soil moisture levels and topography.

Ash leaves wilting due to ash dieback © Jon Stokes

A roadside ash in **Ash Health Class 4** © Jon Stokes

[10] Wylder et al, 2018, Evidence from mortality dating of *Fraxinus excelsior* indicates ash dieback (*Hymenoscyphus fraxineus*) was active in England in 2004–2005. *Forestry*: ICF April 2018

[11] Survey of Hymenoscyphus fraxineus in a central European urban area and exploration of its possible environmental drivers

As one example, the photographs in **Figure 2** show the change in one tree in Devon over one season (photographs taken 06/07/16 and 07/07/17). The pictures show a 10%-15% decline in the canopy in a single season, and anecdotal reports from areas of the UK currently infected by ash dieback support this as a typical rate of decline. However, some individual trees (depending on their health and condition) can decline much more rapidly and will need to be monitored. Some mature ash trees with ash dieback can decline more rapidly if other pathogens like honey fungus (*Armillaria*) are also present.[12]

Infection mostly occurs through sexually produced ascospores landing on leaves, but infection can also occur at the base of trunks (the root collar), probably entering the tree through lenticels.

Images from left: © Rob Wolton, Jon Stokes

Figure 2: Change in one tree over one season

[12] Ash tree research strategy 2019

The wind-borne ascospores are produced from fruiting bodies (small white mushrooms) on the central stem (the rachis) of last year's fallen ash leaves (**see Figure 3**).

Figure 3: Fruiting bodies on the central stem of last year's leaves

As it grows, the fungus destroys the infected tree's phloem and xylem, which results in the tree being unable to move water and nutrients around its structure. This lack of water and nutrient movement will cause the branches of the tree to fail and the tree 'dies back', hence the name. Repeated loss of nutrition and water, the depletion of energy reserves because of the lack of leaves, and the invasion of secondary root killing pathogens (e.g. *Armillaria*), causes the tree to become brittle, lose branches and eventually succumb to the disease.

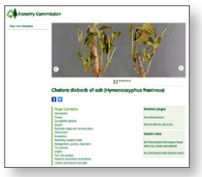
Where basal lesions are observed (**see Figure 4**) these can develop into a butt or root rot and the affected trees can become unstable and dangerous. The rot is usually associated with other secondary pathogens such as honey fungus and can occur without any obvious dieback symptoms in the canopy. This makes identifying 'dangerous' ash trees considerably harder. Basal lesions have been seen extensively across Europe and seem to be associated with areas of dense ash populations, and therefore spore load, where infection has been present for a long time. In particular, wet woodlands seem to be at highest risk from this form of infection in Europe but further evidence is needed to assess the UK context.

Figure 4: Basal lesions on an ash tree

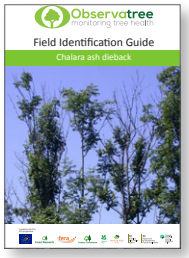
HOW TO IDENTIFY ASH DIEBACK

Recognising the visual symptoms of ash dieback is essential to assess the current health of the ash tree population – a necessary step to understanding the severity of the disease in an area. To help with identification, there are a variety of online resources available.

Examples include:



- **The Forestry Commission dieback identification advice**



- **The Observatree ash dieback identification guide**

- **The Tree Council ash dieback symptoms guide**

- **The Tree Council guide to symptoms in larger trees**

The disease can affect ash trees of all shapes and size. While the symptoms are easily visible in young trees, they are often harder to recognise in more mature trees (see **Box Six on page 30**).

WHERE IS ASH DIEBACK FOUND?

Ash dieback was first recorded at a nursery in Buckinghamshire in February 2012. This was followed by the identification of the infection of a new planting in a car park in Leicestershire in May, and subsequently on young trees in Ashwellthorpe Woods in Norfolk in the autumn of the same year.

Dying ash trees in Ashwellthorpe Woods in 2017 © Jon Stokes

By June 2018, this fungal disease was found widely throughout the UK and it is now evident in 54.5% of UK 10km squares and in more than two-thirds of England's 10km squares. **You can see an interactive distribution map of ash dieback here courtesy of Fera Science Ltd.**

However, the fungus may actually occur over more of the UK than has been officially reported, as the symptoms can be difficult to detect, especially in large trees. Just because an area of the UK may not currently be shown on the maps to have ash dieback, it does not mean it is not there. **If you suspect ash dieback in a 10km grid square then this should be reported through Tree Alert**.

The official maps also only show presence and absence of the fungus and not the levels of infection in that area. In addition, significantly different rates of dieback and levels of mortality have been recorded across the UK. This may be due to variances in site conditions, as well as in the genetic heritage of ash trees in different parts of the country[13]. Therefore, land managers should monitor the location and spread of the disease in the land they manage (see **page 18** 'collecting local ash tree data'), to understand the levels of infection found there.

[13]Stocks et al, 2017, A first assessment of *Fraxinus excelsior* (common ash) susceptibility to *Hymenoscyphus fraxineus* (ash dieback) throughout the British Isles

Step 2: Assessing the impact on your organisation

HOW MANY ASH TREES?

To understand the scale of the potential impact of ash dieback on your organisation, it is necessary to gather all available data to estimate how many ash trees are in an area and/or are managed by the organisation.

It has been estimated that there are more than two billion ash trees in the UK, a figure that includes all trees from seedlings through to mature trees.[14] Of these, 125.9 million are trees located in woods and another 27.2–60 million trees (using the same definition) are situated in non-woodland areas. This is according to the Forestry Commission definition of a 'tree' as having a stem greater than 4cm diameter at 1.3 metres above the ground.[15]

In the urban environment:

- **It is estimated that there are four million urban ash trees in the UK, 4.1% of the total 89 million urban trees**
- **Highways England estimates that there are at least four million ash trees next to their road network**
- **Network Rail estimates there are 400,000 large ash trees adjacent to the rail network.**

Further details on the number of ash trees in Britain can be found in **Ash Dieback in Non-Woodland Situations**.

These ash tree numbers simply provide national context and cannot give a picture of the local situation. The specific impact of ash dieback will depend upon the number and distribution of ash in any given area.

A further set of data was produced by the Centre for Ecology and Hydrology (CEH) who in 2012 used the Countryside Survey Dataset to produce a map (**Figure 5**) which showed the density of ash around the UK.

[14] Chalara in Non-Woodland Situations, by The Tree Council on behalf of DEFRA

[15] NFI preliminary estimates of quantities of broadleaved species in British woodlands, with special focus on ash

For further details of this work see this **update** from CEH, and the **full report**.

To understand the local impact of ash dieback, an assessment of the ash population and its distribution is required. To achieve this, organisations need to collate all locally available information on ash and also potentially undertake some specific local ash tree data gathering.

COLLECTING LOCAL ASH TREE DATA

The best starting point is to assemble all the existing local ash data from any source, such as the Forestry Commission's National Inventory of Woodland and Trees, Local Authority Tree Preservation Orders or Public Realm Tree Surveys, Ancient Tree Hunt data or records from the local Biodiversity Record Centre. In Herefordshire, the authority aimed to investigate those ash trees adjacent to the highway or on council-owned land which could cause a problem if they died or fell on to the highway or a public space. During the summer of 2016, Herefordshire Council staff collected data to determine the potential number of ash trees within the county (see **Box 1** for their review and the sources of information used).

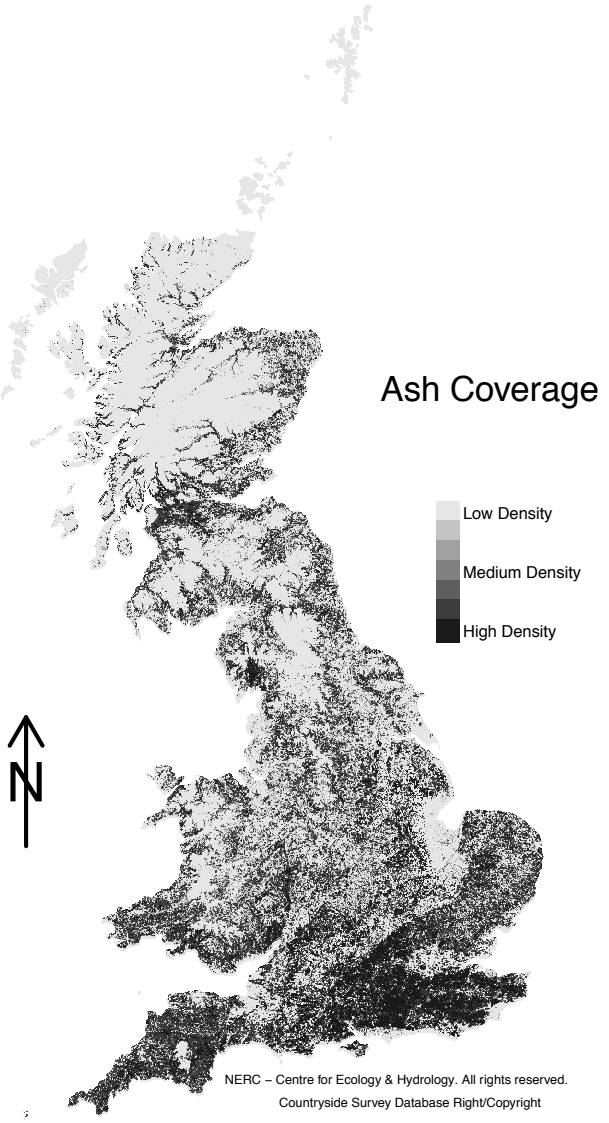


Figure 5: Ash coverage map

BOX 1 Herefordshire ash assessment

During the summer of 2016, Herefordshire Council staff collected data to determine the potential number of ash trees within the county. There were no dedicated staff or financial resources allocated to this process and all data accessed was freely available, or available internally within the authority. Time to collate the information was estimated at 18 hours spread across several months and required extensive local knowledge.

FINDINGS INCLUDE:

- **Ash is an abundant tree in Herefordshire featuring highly along linear features such as hedges, roads, railways and riversides.**
- **Best available figures suggest there are now in excess of 500,000 full grown or nearly mature ash trees outside woodlands in the county; ash is the most numerous hedgerow tree and provides more than 50% of the non-woodland tree canopy cover of the county.**
- **Ash-dominated woodland covers more than 6,500 hectares (more than 25%) of all broadleaved woodland in Herefordshire (National Inventory of Woodland and Trees [Hereford & Worcester], Forestry Commission, 2003 – data 1997). Ash is also present within urban areas: council-managed public open space contains more than 2,600 mature ash. Herefordshire is in the top 10 counties for the percentage of its coverage which comprises ash canopy in woodland.**
- **The Woodland Trust Ancient Tree Inventory lists 8,328 "ancient, veteran or notable" ash trees in England with more than 6% (531) in Herefordshire (correct as at 25/11/2016).**
- **The biodiversity value of ash as a host species is extensive: over the past 10 years there are 451 records held by the Herefordshire Biological Records Centre (HBRC)[16] for species on this 'red' list (data supplied November 2016).**
- **It is estimated that there are in excess of 120,000 ash trees growing beside Herefordshire's more than 3,250km of public roads and an equal or even greater number potentially impacting the 3,360km of public rights of way in the county. This is based on data extrapolated from highway surveys in Devon and Norfolk.**
- **Ash species are included in the descriptions of 79% of the council's registered Tree Preservation Orders.**

Herefordshire Council Public Realm Tree Safety Surveys 2010 and 2012

For further details **see the full assessment here**.

[16] 451 records held by the Herefordshire Biological Records Centre (HBRC)

Once any existing data has been drawn together, it is highly likely that additional data will be needed. This can be collected via targeted surveys focused on ash. However, experience suggests that these surveys are usually commissioned as part of the development of an Action Plan rather than at this initial stage. Further details are presented in **Box 7 on page 31**.

POTENTIAL COSTS OF ASH DIEBACK

Once there is an estimate of the number of ash trees in an area the next step is to calculate the potential budgetary costs to the organisation. Scenario planning can aid this process – for example, asking questions like:

– *What would be the impact on expenditure and risk if 60%/75%/90% of ash trees in the area are in decline/dead because of ash dieback in the next 5–10 years?*
– *What resources are required if a high number become dangerous in a single season?*

When estimating the resources required you should ensure that your costings cover:

- **additional survey work**
- **additional practical tree management costs e.g. pruning or felling dangerous trees**
- **additional staff time to work with private owners to ensure dangerous trees are removed**
- **staff time to deal with increased public reaction e.g. requests to fell**
- **staff time to deal with requests to fell ash trees that have TPOs**
- **additional costs of any replacement planting that may be undertaken**
- **other additional staff or consultant costs**
- **additional communications and consultation needed to explain ash dieback to relevant stakeholders**

Not all of these will be appropriate in all circumstances. This exercise has been undertaken by one County Council and their first estimates can be seen in Box 2. Calculations were also undertaken by a Borough Council to estimate their potential costs when ash dieback hit their trees; this can be seen in Box 3. Unlike the County Council figures, the Borough figures do not include the replacement of any private trees but are focused around those owned or managed by the Council.

BOX 2 County Council assessment of budget implications

Basic statistics:

6,020
ash trees recorded on adopted **highway verges**

120,000
estimated number of ash trees in **private ownership and within falling distance of the highway**

1,546
ash trees recorded in **school grounds**

5,968
estimated number of recorded **woodland ash adjacent to public areas**

83% **of the recorded ash trees are 6 metres plus in size**
(the size that requires work to be undertaken to remove safety risks)

Cost implications of removal:

Assumption: **75%** mortality rate with **£400** average cost of removal *(excluding inspection)*

Adopted highway verges: **83%** of **6,020** trees **x75%** mortality rate @ **£400** each **= £1,499,000**

Private ownership adjacent to highway: **83%** of **120,000** trees **x75%** mortality rate @ **£400** each **= £29,880,000**

School grounds: **83%** of **1,546** trees **x75%** mortality rate @ **£400** each **= £385,000**

Woodland adjacent to public areas: **83%** of **5,968** trees **x75%** mortality rate @ **£400** each **= £1,468,000**

Tree planting to address loss:

Based on a Free Tree Scheme for **83,127** trees lost on local authority owned land and adjacent to the highway, @ **£15** per tree **= £1,246,905**

Total potential costs at 75% mortality = £34,478,905
(10% change in mortality equates to +/- £6.7m)

BOX 3 Borough Council assessment of budget implications

This Borough has a mixture of *Fraxinus* species in their area but by far the most predominant is *Fraxinus excelsior*, with 1,115 ash trees under their management, which represents 7.5% of their managed tree stock.

Their tree population of *Fraxinus excelsior* comprises: 665 trees with a stem diameter up to 30cms; 413 trees with a stem diameter 30 to 60cms; 37 trees with a stem diameter 60 to 90cms.

Using their figures to remove these trees would cost an additional:

60% loss **Remove and stump grind** **= £140,299**

75% loss **Remove and stump grind** **= £158,168**

90% loss **Remove and stump grind** **= £176,037**

In addition, there would be an increase of 254% in the current safety inspection costs.

The replacement costs for the ash trees would range from

£117,075 **(60% loss) to** **£175,612** **(90% loss)**

In both Local Authorities and other agencies, the costs of removal and replacement have been looked at. In the County example, where there are potentially many more trees to replant but a smaller cost per tree (£15) the removal/replacement spending ratio is weighted heavily toward the costs of removal.

However, in the Borough example the costs of £175 per tree (larger trees being planted in more urban environments) push the removal/replanting ratio much closer to parity.

Once the first estimates on ash trees numbers and the potential costs that come with ash dieback have been collated, the information will form the basis for the next step of the process – making a case for an ADAP.

Step 3: Making a case for an Ash Dieback Action Plan (ADAP)

To make the case for an ADAP, it's important to consider not only the potential practical costs that may occur for the organisation (see Step 2 above), but also the risks posed to the organisation as identified in the corporate risk register. Reviewing both together allows a determination of whether ash dieback presents a risk to the organisation's operations.

CORPORATE RISK

In our discussions with Local Authorities, the potential impacts of dying and dangerous trees as a result of ash dieback have always been accepted as posing a significant corporate risk. Creating an Action Plan to manage these risks has been recognised as the simplest way to ensure an organisation can effectively combat ash dieback and the problems it brings.

The following are examples of how ash dieback may impact a corporate risk assessment:

HEALTH AND SAFETY IMPACTS

- **Potential for death or injury as a result of ash dieback related accidents, both to professionals working on trees and to the general public**
- **Increased health and safety issues due to declining ash trees on roads, owned and managed land such as in county parks, housing estates, schools, cycleways, bridle paths and footpaths**
- **Risks to statutory functions or service delivery such as retaining safe schools, public open spaces or highways**
- **Risks to staff and user community from trees on adjacent land falling into your estate**
- **Risks from falling ash to your infrastructure such as fencing, signs, equipment stores.**

ECONOMIC IMPACTS

- **Increased liabilities in cases of death or injury as a result of ash dieback related incidents**
- **Inadequate staffing levels and the ability (or inability) to undertake the work required resulting in increased costs to recruit and retain the necessary staff**
- **Increased expenditure from direct and indirect cost due to ash dieback e.g. additional staff and management activities, and the impacts this may have on other services and budgets**
- **Additional costs of the disposal of waste products from felled ash entering the waste management system**
- **Increasing prices as a result of market competition for a limited pool of skilled tree contractors**
- **Increased direct/indirect costs due to increased flood risk resulting from changes in the way water may be held back by tree roots, or absorbed into the soil, or taken up by ash trees**
- **Costs of replanting needed to retain ecosystem services provided by ash e.g. flood reduction, urban shading, carbon storage and habitat for biodiversity**
- **Increased liabilities as a result of risks to adjacent land and 'third party' property from your trees falling/shedding branches**
- **Drop in market prices for ash wood products due to excess ash on the market.**

REPUTATIONAL DAMAGE

- **Potential for disruption as a result of ash dieback management e.g. widespread road closures to deal with potentially dangerous trees**
- **Political and reputational risks as a result of negative press over ash dieback management and public outrage and/or anxiety**
- **Potentially strained relationships with land owners and managers as ash dieback spreads and increased costs fall on the private owners.**

ENVIRONMENTAL IMPACTS

- **Landscape changes with impacts on tourism and recreational opportunities**
- **Losses to ecosystem services such as reductions in air quality, potential for increased flooding, biodiversity losses, increases in noise levels adjacent to roads, losses of visual screens**
- **Risks to protected species/ sites through alteration of habitat structure, stability and composition e.g. loss of bat breeding/feeding sites**
- **Losses of carbon storage and sequestration**
- **Loss of biodiversity from the decline or extinction of species which are largely or entirely dependent upon ash.**

BOX 4 Pest and disease triage and risk registers

To enable ash dieback to be added to their emerging corporate risk register, West Sussex County Council developed and are trialling a 'triage' system to assess the risk posed by any pest or disease.

During 2017, they used the 'triage system' to demonstrate the potential impacts of ash dieback and to justify the resources needed to develop an ADAP. The suggested process is as follows:

– Relevant officers are alerted to a new pest/disease threat by Defra and its agencies
– The impact of the pest or disease is 'triaged' against the risks identified in the West Sussex Community Risk Assessment and organisational risk register which include the following:

- **Resource risk:** loss of environment value, such as ecosystem services at a habitat scale, and economic value in the shape of budget, staff, direct and indirect costs
- **Risk to statutory duties/functions/service delivery:** as highway authority (including public rights of way) and as landowner: schools, other properties and landholding
- **Political/reputational risk:** public outrage/public anxiety
- **Health and safety risk:** fatalities/casualties/social disruption.

Risks are categorised against each item in the risk register as follows: LOW: MEDIUM: HIGH:

IMPACT	LIKELIHOOD				
	1 – Very Unlikely	2 – Unlikely	3 – Possible	4 – Likely	5 – Certain
1 – Insignificant					
2 – Minor					
3 – Moderate					
4 – Significant					
5 – Catastrophic					

The rankings of each item are taken independently (not aggregated or averaged), and the highest-ranking impact determines the 'triage' outcome below. This allows the County Council to respond to the pest or disease appropriately. The 'triage' pathway includes the following options:

1. **If the impact of the pest or disease is insignificant to minor (1 or 2 in the table) to the organisation or area, the pest/disease should be reviewed at least annually to ensure no change. If the national threat (as defined by Defra) posed by the pest or disease is changed within the year, then the pest/disease should be re-triaged.**
2. **If the impact is moderate (3 in the table), information about the pest/disease should be monitored regularly. If the pest/disease is present in the area, then monitoring of the extent/impact may need to be undertaken. If the national threat posed by the pest or disease (as defined by Defra) is changed, then the pest/disease should be re-triaged.**
3. **If the impact on the organisation is significant or catastrophic (4 or 5 in the table) – then the organisation should prepare and enact a Pest or Disease Local Action Plan.**

During its development, it became clear that it could also be applied to any pest/disease. For further details on West Sussex's process framework for decisions on priorities for action **see here**.

West Sussex's pest and disease triage is influenced by the Sussex Resilience Forum's Community Risk Assessment (**see here**). Using these thresholds and the available information on the pest/disease, the County Council has been able to make a comparable assessment of the likely impact of ash dieback on the various elements of the County's risk framework. This has resulted in the production of a local plant health risk register based on the **UK Plant Health Risk Register**. This is a live document to monitor and record the threats. Ash dieback registered several 'significant' impacts against their risk register and therefore warranted an Action Plan, which is currently being developed.

Every organisation will have different elements and thresholds for its risk register but using this approach may help in establishing the need for an ADAP.

Summary: The need for an Ash Dieback Action Plan

Proactive management of trees and risks is more cost effective than reactive management, and to proactively manage ash dieback, you need to communicate that:

- **There will be dead/dying ash trees:** the spread of ash dieback will cause a significant proportion of all ash trees to decline or die. This will financially and practically impact every organisation responsible for vegetation management.
- **There is only a short period for preparation:** death of mature trees may happen after only a few years of infection, so an organisation may not have long to prepare for the impacts of ash dieback and its additional costs.
- **The scale of the impact must be assessed:** the scale of the problems posed by ash dieback is likely to be significantly greater than the impact of Dutch elm disease (as there are at least twice the number of ash trees in public spaces as there were elm trees). This includes the additional costs attached to managing the decline of ash. Being reactive to the problem is likely to be more expensive than planning your response through an Action Plan.
- **It will impact corporate risk:** ash dieback will impact corporate risk registers particularly in respect of risks to statutory functions or service delivery, increased potential for deaths or injuries, budget impacts, risks to infrastructure, increased liabilities, risks to staff and 'user' communities, as well as political and reputational risks.
- **There will need to be changes in management practices:** changes to tree management practices will be necessary as ash dieback spreads.
- **Working with others for efficient joint responses:** the response to ash dieback needs to be planned, to avoid working in silos and conflicting with other local policies such as landscape and biodiversity policies.
- **Communication and collaboration is key:** a plan will provide better opportunities for communication and discussion and provide opportunities for agencies to work strategically together to share costs and responsibilities.

It is vital to understand that ash dieback will not be 'business as usual'.

Ash dieback is either already in an area or is likely to be in the next few years with potentially serious practical and financial impacts to many areas and organisations. Therefore, to manage ash dieback effectively a collective, co-ordinated approach across organisations and areas is recommended.

PART 2: PREPARING AN ASH DIEBACK ACTION PLAN

HOW TO PREPARE AN ASH DIEBACK ACTION PLAN (ADAP) AND WHAT SHOULD BE IN IT

The development of an ADAP requires a number of different approaches depending on available staff and resources. The length of time to produce a Plan will also vary depending on the complexity of the organisation/area and the resources available to undertake the work.

Experience over the last four years has shown that the preparation of a fully functioning Plan may take anything from three to four months to over a year.

Table 1 shows the process that you are likely to undertake as you prepare and then deliver an ADAP, including an estimate of the timescale it may take to achieve the task, based on experience. Many of these stages can be run simultaneously.

ACTIONS	TOTAL TIME
Step 1: compile an assessment of your ash trees and their health	**3–6 months (average)**
Step 2: set up cross-organisational meetings on ash dieback	**1 month**
Step 3: prepare the Plan	**3 months to 1 year**
Step 4: set up an internal and/or external steering group to deliver the Plan	**3 months to 1 year**

Table 1: Estimated total time for preparing an ADAP

Step 1: Compiling an assessment of ash trees

Undertake an initial desktop exercise of the available information about the ash tree population as described in **Box 1**.

Where data is limited, some targeted data collection is likely to be necessary. This might cover items such as high-risk location ash numbers, age classes, geographical hotspots of ash and, where possible, an assessment of their health.

As an example, during the summer of 2014, Devon County Council staff collected data from across the county to determine the potential number of highway trees within the county (**see Box 5**).

BOX 5 Devon County Council Highway Survey

In summer 2014, a total of 440km of Devon roads were surveyed. This comprised trees on 30km of A-roads (divided into three 10km sections) in each of Devon's eight district council areas. The survey took in the coast, high ground, farmland and moors to give a good geographical and environmental cross-section of each district.

Trees on other road classes were counted using videos produced for highways assessment. Ten kilometres of class B, C and unclassified road were counted in each district, again counting both highways and private trees.

All ash trees (public and private) that were within falling distance of the highway were counted. Two age classes were recorded: under and over forty years. Extrapolation from this data suggested that in Devon there were an estimated 447,639 ash trees within falling distance of the highway. For further details **see here**.

ASH TREE HEALTH

During the development of this Toolkit it became clear that when gathering data on an ash tree population, it is sensible to assess the current state of ash tree health at the same time.

It can be difficult to identify the symptoms of ash dieback in larger trees. During 2014, Suffolk County Council developed a system to describe the health of an ash tree using a four-part categorisation focused on the state of the ash tree's canopy as a proxy for overall health (see Box 6).

It is important to note that poor condition of the canopy might not be a result of ash dieback. Other problems such as drought stress, root problems or even wood pigeon damage can cause the ash tree canopy to decline. In addition, surveys of the tree canopy, will not reveal other signs of infection such as basal lesions. However, in the absence of other easy-to-recognise characteristics in large trees, canopy cover is a useful proxy for health and is relatively easy to assess.

BOX 6 Suffolk County Council Ash Health Assessment System

In Suffolk, the canopies of the ash trees are scored, assessing the percentage of the crown that remains. Using this four-category framework allows a tree to be assigned to a health category, which informs subsequent potential action. The four categories are:

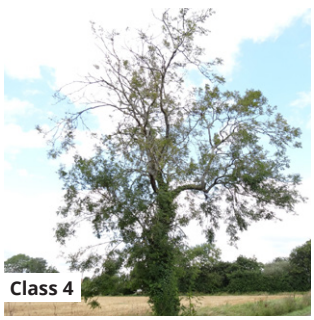
- **Class 1: 100%–76% remaining canopy**
- **Class 2: 75%–51% remaining canopy**
- **Class 3: 50%–26% remaining canopy**
- **Class 4: 25%–0% remaining canopy**

For further details **see here** which includes the four reference photographs which are benchmarks for the percentage of the canopy remaining (also shown below).


Class 1


Class 2


Class 3


Class 4

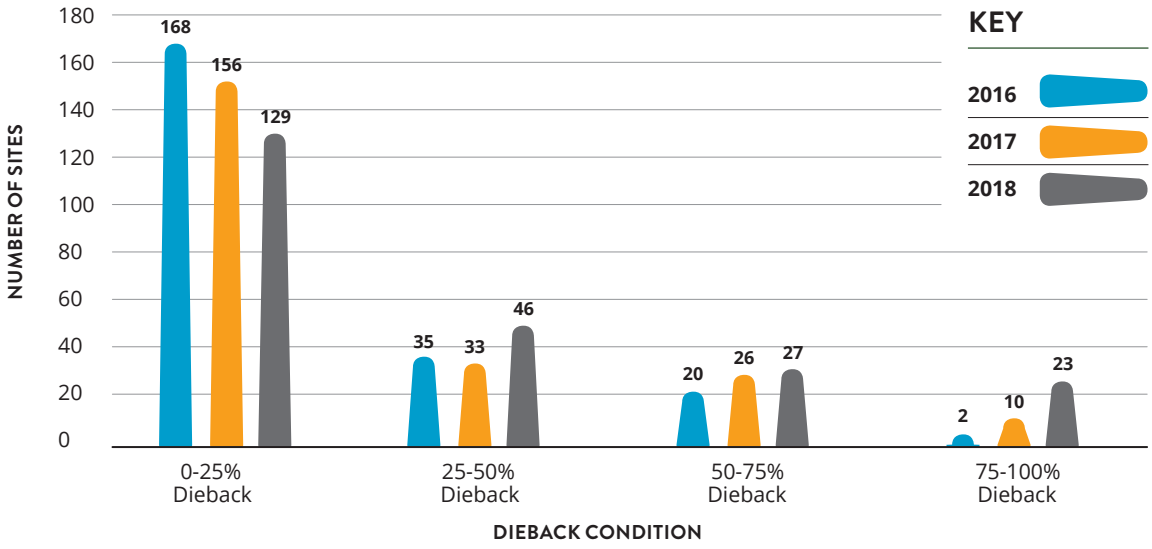
During 2016, 2017 and 2018 Norfolk County Council undertook a sample survey of the number of highway ash trees and adapted the Suffolk system for assessing ash tree health, adding two extra classes. During their survey, they recorded ash tree health in the **four-category Suffolk system** and added 100% healthy and 100% dead trees which shows the percentage of crown remaining. The summary of the health data is shown in **Box 7**.

BOX 7 Norfolk County Council (NCC) Highway Ash Survey

In 2016 and 17 NCC surveyed all ash trees within falling distance of A, B and some minor roads representing 20% of NCC's road network. Over 30,000 trees were assessed. Statistical analysis (Fera Science Ltd) indicates an estimated ash population within falling distance of the highway of between 155,700 and 180,100 trees. Around 12% of surveyed trees are owned by NCC and approximately 5% require felling at this time.

To establish year on year change 225 sites with 3,005 trees were assessed from 2016 to 2018. The following graph combines the 0% and 100% observations and shows the decline of healthy ash trees (0-25%), the increase in unhealthy (75-100%) and the uncertainty of transition phase (25-75%). NCC are using this evidence base for decision making.

Highways Ash Tree Condition 2016 vs 2017 vs 2018



See Norfolk's Survey methodology used, the survey form, and ADB information, procedure and photo guide.

BASAL LESIONS

The impacts of basal lesions due to ash dieback are not yet understood. Both the ash dieback pathogen and secondary pathogens have been found to cause these basal lesions to develop into root and butt rot. It is thought that the basal lesions occur when the fungus infects through the lenticels on the stem of the tree when the infection pressure is high. Reports from Europe, reported at the London FRAXBACK conference in 2012, suggest that:

- **Basal lesions and the subsequent root and butt rots drive mortality of larger ash trees in many areas, especially on wet woodland sites**
- **Basal lesions are often associated with an additional secondary pathogen –** ***Armillaria sp*****. however the ash dieback fungus can also be a primary agent of the lesion**
- **When secondary pathogens are present, the tree can die rapidly, topple or break, particularly on wet sites where ash dieback has been present for a long time**
- **If a tree is suffering with basal lesions and root and butt rots, bark beetles can become widely established**
- **Basal lesions and the subsequent root and butt rots can destabilise trees before the canopy has begun to decline.**

Early identification of basal lesions can be difficult. Those conducting surveys or inspections should look for discrete lesions forming a triangle at the base of the tree. These can become bigger and more advanced as the infection progresses. As our understanding of this issue improves, guidance may change, but currently it seems prudent that any detailed inspections of ash trees should check for basal lesions, and if recorded, appropriate tree safety work should be undertaken.

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SURVEY RECOMMENDATIONS

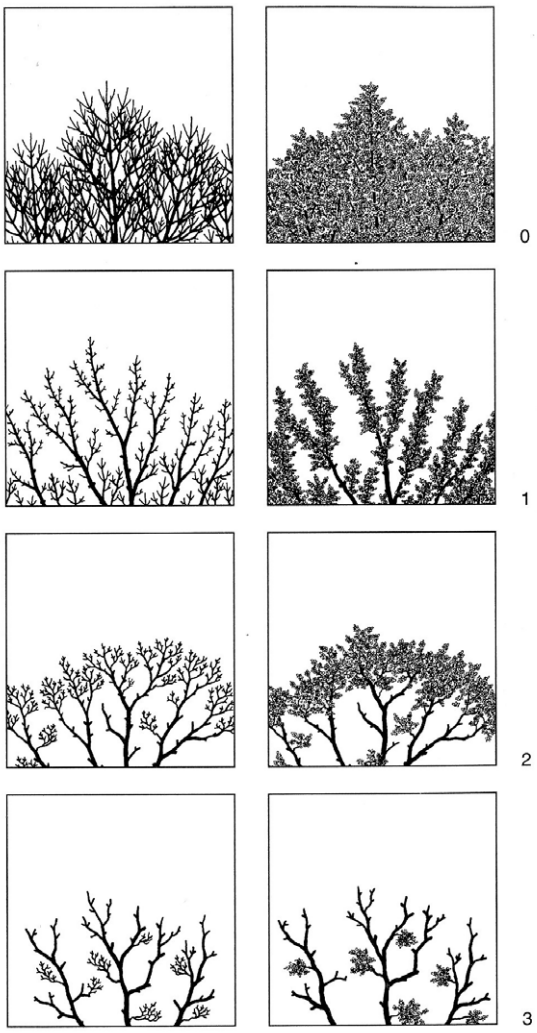
We are now recommending nationally that these four Health Classes are used in any future surveys. Thus, each surveyed ash tree should be assigned to one of the following four Ash Health Classes:

- **Ash Health Class 1** – 100%–76% remaining canopy
- **Ash Health Class 2** – 75%–51% remaining canopy
- **Ash Health Class 3** – 50%–26% remaining canopy
- **Ash Health Class 4** – 25%–0% remaining canopy

The Suffolk version is directly comparable with work undertaken on tree vitality from Roloff (2001)[17] which will allow comparison of UK data with that from Europe if accurate records are kept.

Combining surveying tree numbers and making an assessment of their health is an effective use of resources. This will allow organisations to understand both the abundance of ash and their current state of health.

Any subsequent surveys should then be used to monitor changes between Health Classes over time. This will allow a greater understanding of the spread and speed of impact of ash dieback. Monitoring over time is also essential as reports show that in some years trees may recover canopy condition, especially during hot and dry summers when the weather is not ideal for fungal sporulation. However, overall the tree's health will still be declining due to the infection in the wood. So, it is essential that even if recovery is noted, surveying does not stop.



Taken with permission from 'A. Roloff 2001: *Baumkronen*. Publisher: Ulmer, Stuttgart/GER

Figure 5: *Fraxinus* Vitality Classes
Pictures 1 & 2 are European Vitality Class 0 which in the UK is equivalent to Health Class 1.
Pictures 3 & 4 = Health Class 2.
Pictures 5 & 6 = Health Class 3.
Pictures 7 & 8 = Health Class 4.

[17]See A. Roloff 2001: *Baumkronen*. Publisher: Ulmer, Stuttgart/GER

MANAGEMENT IMPLICATIONS OF THE ASH HEALTH CLASS SYSTEM

Along with providing a method for recording the state of health of ash trees, the Ash Health Class system provides a framework for discussion about the management practices that will be needed to manage the decline in ash for public safety. As an example, Suffolk's four reference pictures were shown to 120 Local Authority tree officers. They were asked for their management decisions based around the reference images. Their responses were:

	Inspect in line with tree management policies	Increased inspection and possible work	Detailed and specialist inspection and/or work	Fell or remove
Ash Health Class 1	100%			
Ash Health Class 2	95%	5%		
Ash Health Class 3	5%	85%	10%	
Ash Health Class 4			80%	20%

Table 2: Management response to canopy decline

This data suggests that as the decline in an ash tree's health becomes more visually apparent, then management decisions and practices on that tree alter. Assessing and monitoring changes in your ash population's health is therefore vital in assessing the current and future scale of management issues organisations face.

To assist staff with management decisions following a survey, Norfolk County developed a Highway Inspection Flowchart, which can be **seen here**.

Step 2:
Engaging colleagues with ash dieback and the need for a plan

Once local tree data has been gathered and used to update financial models (see **Box 2 on page 21**), a cross-organisational meeting(s) on ash dieback should be set up to bring the issues to the attention of colleagues and management – **see Box 8** from Leicestershire.

BOX 8 Leicestershire County Council engagement with colleagues

During the summer of 2017, ash dieback and its implications was considered by Leicestershire County Council's Environment and Transport Departmental Management Team. Representatives from Finance, Property Services, Insurance, the Transformation Unit and Human Resources were also in attendance to understand the wider implications for the Council. As a result of this meeting, ash dieback was escalated to the Corporate Management Team and was added to the Council's corporate risk register. A cross-departmental project team was set up to develop the Council's response to ash dieback.

This team produced their Ash Dieback Action Plan in July 2018 (**see Plan**), with over £5 million being set aside to deal with ash dieback in the county. The Plan was approved at a full Council meeting in July 2018 and a recording is available on **YouTube** (item on ash dieback begins at 1 hour 35 minutes).

The purpose of this engagement is to seek managerial support to produce the ADAP and to move to the next stage in the process – developing the ADAP itself.

During these meetings you will need to explore the organisational risks outlined on **page 24** on health and safety, economic, reputational, and environmental impacts. In discussions with Directors of Local Authorities during the development of this Toolkit, concerns about the impacts of ash dieback differed between organisations, but consistently highly rated concerns were:

1. **Health and safety impacts**
   - Potential for death or injury as a result of ash dieback related accidents
   - Increased health and safety issues as a result of declining ash trees on roads, owned and managed land such as in county parks, housing estates, schools, cycleways, bridle paths and footpaths
2. **Economic impacts**
   - Increased liabilities in cases of death or injury as a result of ash dieback related incidents
   - Inadequate staffing levels to undertake the work required resulting in increased costs to recruit and retain the necessary staff
   - Increased direct and indirect costs caused by ash dieback such as additional staff, additional management activities and the impacts this may have on other services and budgets
3. **Reputational impacts**
   - Political and reputational risks as a result of negative press and/or public criticism of ash dieback management
   - Potentially strained relationships with land owners and managers as ash dieback spreads and increased costs fall on the private owners
4. **Environmental impacts**
   - Landscape changes with impacts on tourism and recreational opportunities.

Following on from this meeting you may also need to:

- **seek political support for the ADAP**
- **designate an ADAP champion or advocate- preferably a Councillor, Committee Chair or Council Leader, Director or senior manager.**

We have found during the development of this Toolkit that it is extremely helpful to gain political support at the earliest stage for the organisation's plans for ash dieback. This political support is usually vital to ensure resources and officer time. Suitable briefing of local politicians on ash dieback will therefore be necessary; see Norfolk County Council's Committee report on ash dieback, dated **September 2016**, **October 2016**, and **November 2017**.

Formal adoption of the ADAP may also be needed, which may involve:

- **ratification by Cabinet or relevant Committee**
- **publication on the Council's website**
- **integration into and referenced by other Council policy documents e.g. Local Biodiversity Plans or Landscape Plans**
- **development of any frameworks or Supplementary Planning Documents.**

Step 3: Creating an Ash Dieback Action Plan

Once managerial support exists for creating an ADAP, organisations need to allocate staff time and/or resources to develop the ADAP. **To assist in the creation of the ADAP, we have produced a template which can be downloaded here with suggestions for structure and content.** Within this, each organisation can tailor the template as needed.

RECOMMENDED COMPONENTS OF AN ASH DIEBACK ACTION PLAN

The exact nature of an ADAP will depend upon the needs of the organisation and the issues it faces. As more Plans are produced, **the template plan** will be refined. A summary of components is listed below:

- **An executive summary of the ADAP**
- **ADAP: priorities, outcomes and outputs**
- **About ash dieback: biology, spread and potential impact**
- **Benefits of ash trees and woodlands**
- **Management advice: options for managing ash dieback**
- **The potential impacts of ash dieback in your area including:**
  - Landscape and biodiversity
  - Local landowners, land managers and homeowners
  - Local utilities and infrastructure organisations
- **Recovery from the impacts of ash dieback – rebuilding a resilient treescape**
- **Potential impacts of ash dieback on the work of your organisation and other organisations in your area**
  - Health and safety impacts
  - Economic impacts
  - Reputational impacts
  - Environmental impacts
- **The Delivery Plan including: priority actions, estimated costs, lead delivery partners and development of new approaches to tree management, for example the potential use of tree shears.**

Step 4: Setting up an internal and/or external plan delivery group

Once the Plan is developed and agreed, set up an internal and/or external steering group to work on delivering the Plan. This could be achieved by establishing a new working party (**see Box 9**).

BOX 9 Devon Ash Dieback Resilience Forum

Following the publication of the **Devon Ash Dieback Action Plan**, the Devon Ash Dieback Resilience Forum was created to oversee implementation.

The objectives for the Forum were to:

- **Provide a stronger approach to dealing with ash dieback**
- **Provide consistency**
- **Avoid duplication/wasted resources**
- **Allow better knowledge-sharing with all ash dieback stakeholders.**

Following the first meeting in July 2016, the group's **aims were agreed**.
Sub-groups were established to deliver collective action on the following areas:

- **Ash Dieback Risk Management**
- **Ash Dieback Environmental Impact Reduction**
- **Communications.**

The Forum includes:
Arboricultural Association; AONB Devon; Clinton Devon Estates; Country Landowners Association; Dartmoor National Park; Devon Biodiversity Records Centre; Devon County Council; Devon Hedge Group: Devon Highways; Devon Living Churchyards; Devon Wildlife Trust; East Devon District Council; Exmoor National Park; Forestry Commission; FWAG SW; Kier Highways for HE; National Trust; National Farmers Union; Natural England; Network Rail; North Devon District Council; North Devon Biosphere Reserve; Plymouth City Council; RSPB; Teignbridge District Council; The Tree Council; Torbay Coast and Countryside Service; Torbay Council; Treeconomics; Western Power Distribution; Woodland Trust

A recognisable brand identity was designed so that all communications with stakeholders could be seen to come from a unified source. This **letterhead** was agreed in October 2016 to allow Forum members to communicate with outside stakeholders.

The development of the Devon Ash Dieback Resilience Forum has facilitated a co-ordinated approach to managing ash dieback in Devon, ensuring that the preparations for dealing with ash dieback have been consistent between agencies, avoiding duplication or wasted resources.

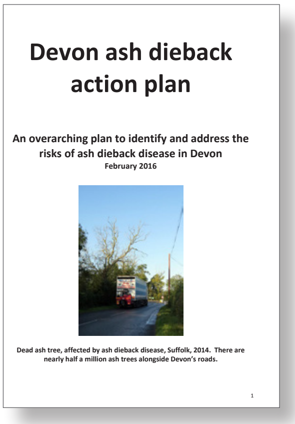
Devon have looked at the long-term impact of ash dieback on the county and have introduced a three-to-one replacement of ash trees, planting three for every mature tree.

Resources that the group have created include:

- **A guide to protecting species and habitats when dealing with ash dieback**
- **Ash dieback website structure**

EXISTING ASH DIEBACK LOCAL AUTHORITY PLANS

To our knowledge, versions of ADAPs have been developed in the counties of **Devon**, **East Lindsey**, **Kent**, and **Leicestershire**. They are also being developed in East and West Sussex, Norfolk, Cornwall, Suffolk, Test Valley and Wiltshire. As further plans become available, this section will be expanded.



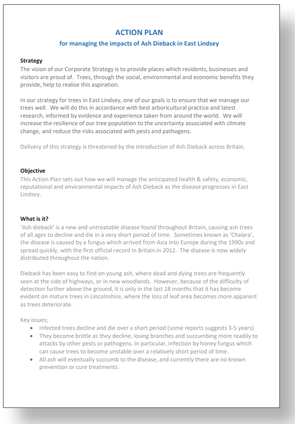
Devon ash dieback action plan

An overarching plan to identify and address the risks of ash dieback disease in Devon
February 2016

Dead ash tree, affected by ash dieback disease, Suffolk, 2014. There are nearly half a million ash trees alongside Devon's roads.

1

Devon



ACTION PLAN
for managing the impacts of Ash Dieback in East Lindsey

Strategy
The vision of our Corporate Strategy is to provide places which residents, businesses and visitors are proud of. Trees, through the social, environmental and economic benefits they provide, help to realise this aspiration.

In our strategy for trees in East Lindsey, one of our goals is to ensure that we manage our trees well. We will do this in accordance with best arboricultural practice and latest research, informed by evidence and experience taken from around the world. We will increase the resilience of our tree population to the uncertainty associated with climate change, and reduce the risks associated with pests and pathogens.

Delivery of this strategy is threatened by the introduction of Ash Dieback across Britain.

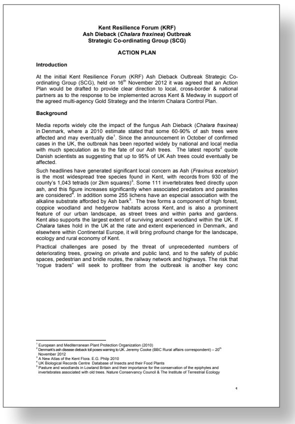
Objective
This Action Plan sets out how we will manage the anticipated health & safety, economic, reputational and environmental impacts of Ash Dieback as the disease progresses in East Lindsey.

What is it?
'Ash dieback' is a new and untreatable disease found throughout Britain, causing ash trees of all ages to decline and die in a very short period of time. Sometimes known as 'Chalara', the disease is caused by a fungus which arrived from Asia into Europe during the 1990s and spread quickly, with the first official record in Britain in 2012. The disease is now widely distributed throughout the nation.

Dieback has been easy to find on young ash, where dead and dying trees are frequently seen at the side of highways, or in new woodlands. However, because of the difficulty of detection further above the ground, it is only in the last 18 months that it has become evident on mature trees in Lincolnshire, where the loss of leaf area becomes more apparent as trees deteriorate.

Key issues;
- Infected trees decline and die over a short period (some reports suggests 3-5 years).
- They become brittle as they decline, losing branches and succumbing more readily to attacks by other pests or pathogens. In particular, infection by honey fungus which can cause trees to become unstable over a relatively short period of time.
- All ash will eventually succumb to the disease, and currently there are no known prevention or cure treatments.

East Lindsey



Kent Resilience Forum (KRF)
Ash Dieback (*Chalara fraxinea*) Outbreak
Strategic Co-ordinating Group (SCG)

ACTION PLAN

Introduction

At the initial Kent Resilience Forum (KRF) Ash Dieback Outbreak Strategic Co-ordinating Group (SCG), held on 16th November 2012 it was agreed that an Action Plan would be drafted to provide clear direction to local, cross-border & national partners as to the response to be implemented across Kent & Medway in support of the agreed multi-agency Gold Strategy and the Interim Chalara Control Plan.

Background

Media reports widely cite the impact of the fungus Ash Dieback (*Chalara fraxinea)* in Denmark, where a 2010 estimate stated that some 60-90% of ash trees were affected and may eventually die[1]. Since the announcement in October of confirmed cases in the UK, the outbreak has been reported widely by national and local media with much speculation as to the fate of our Ash trees. The latest reports[2] quote Danish scientists as suggesting that up to 95% of UK Ash trees could eventually be affected.

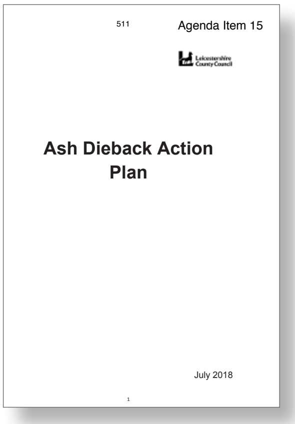
Such headlines have generated significant local concern as Ash (*Fraxinus excelsior*) is the most widespread tree species found in Kent, with records from 930 of the county's 1,043 tetrads (or 2km squares)[3]. Some 111 invertebrates feed directly upon ash, and this figure increases significantly when associated predators and parasites are considered[4]. In addition some 255 lichens have an especial association with the alkaline substrate afforded by Ash bark[5]. The tree forms a component of high forest, coppice woodland and hedgerow habitats across Kent, and is also a prominent feature of our urban landscape, as street trees and within parks and gardens. Kent also supports the largest extent of surviving ancient woodland within the UK. If *Chalara* takes hold in the UK at the rate and extent experienced in Denmark, and elsewhere within Continental Europe, it will bring profound change for the landscape, ecology and rural economy of Kent.

Practical challenges are posed by the threat of unprecedented numbers of deteriorating trees, growing on private and public land, and to the safety of public spaces, pedestrian and bridle routes, the railway network and highways. The risk that "rogue traders" will seek to profiteer from the outbreak is another key conc

[1] European and Mediterranean Plant Protection Organization (2010)
[2] Denmark's ash disease dieback toll poses warning to UK. Jeremy Cooke (BBC Rural affairs correspondent) – 20th November 2012
[3] A New Atlas of the Kent Flora. E.G. Philp 2010
[4] UK Biological Records Centre Database of Insects and their Food Plants
[5] Pasture and woodlands in Lowland Britain and their importance for the conservation of the epiphytes and invertebrates associated with old trees. Nature Conservancy Council & The Institute of Terrestrial Ecology

1

Kent



511 Agenda Item 15

Leicestershire County Council

Ash Dieback Action Plan

July 2018

1

Leicestershire

PART 3: HOW TO TAKE ACTION AND RESPOND TO ASH DIEBACK

Once an Ash Dieback Action Plan (ADAP) has been developed, the response to ash dieback will move into the Action phase of Figure 1 (page 7), where the focus will be around activity (e.g. felling trees) to remedy the problems faced because of ash dieback.

During this phase of ash dieback (see **Figure 1**), which is likely to last for many years, specific management options will change and best practice will be developed and modified. Through this Toolkit we will distribute updated examples and developed best practice as it appears.

We encourage any organisation to contact us to provide feedback or examples of alternative practices.

ACTION 1 – DEVELOPING A COMMUNICATIONS PLAN FOR INTERNAL AND EXTERNAL AUDIENCES

A complex range of internal and external stakeholders need to be involved in order to effectively address ash dieback. A communications plan will ensure all partners have the information they need to be effective. Your communications plan should identify all internal and external stakeholders, what they need to know and how they will be kept informed.

The Landscape and Ecological Resilience Group (LERG) of the Devon Ash Dieback Resilience Forum has developed a communications strategy which identifies how the different partner organisation should communicate with relevant stakeholders across key parts of the response – from how to recognise and respond to ash dieback, to inspiring action from the wider community, to growing knowledge about the disease through information sharing. You can view the document **here**.

My Tree My Responsibility – Publicity Campaign

In June 2019, Devon County Council launched the publicity campaign 'My Tree, My Responsibility'. Although this theme is relevant to all trees with the potential to affect highway safety, the focus has been on the risk presented by ash. The campaign is supported by their communications staff and involves press releases, social media activity and web content. Small (A3) posters will be displayed along the highway in specific ash dieback hot-spots. While the county council will be arranging works to trees for which it has responsibility, these signs are intended to highlight the need for inspection and appropriate intervention by others.

ACTION 2 – UNDERSTANDING BIODIVERSITY AND ASH LOSS

Ash trees support a large number of other species. A list of 955 species that use ash trees has been collated, of which 45 are obligate on ash, i.e. are only known to occur on ash trees and 62 are highly associated with ash (rarely found on trees other than ash). This list of these species can be found in an Excel spreadsheet called AshEcol which is available **here**.

If a species rarely uses trees other than ash then it's population may decline if ash trees decline. However, for species that use other tree species in addition to ash it may be possible to continue to support their populations. An assessment has been made of each of the 955 ash-associated species and whether they would or would not use each of 48 other tree species. This information is also available in AshEcol. In addition, some trees may have what's called genetic tolerance, meaning they may survive and reproduce to create the next generation of ash trees. Therefore, it is important to retain ash trees where it is safe to do so.

To help woodland managers of ash trees, a 5-step procedure has been developed to aid them in identifying how to change the management of their woodlands to support ash-associated biodiversity in the face of a decline in ash trees. This 5-step procedure is outlined **here**.

This procedure was followed at 15 case study sites across the whole of the UK. Each case study is available for **download here**.

ACTION 3 – DEVELOPING A COMMON POSITION FOR ASH DIEBACK AND CURRENT LEGAL PRACTICES

There is a desire among many Local Authorities and other agencies to develop a collective approach to dealing with ash dieback, to ensure that common 'best practice' is shared and undertaken. The Kent Tree Officers' group prepared a paper which sets out the collective working practice of Kent tree officers in relation to ash dieback. They have shown that it is possible to reach a common working practice within a county and this provides a basis for discussion within other Local Authority groups. The full document can be **downloaded here**.

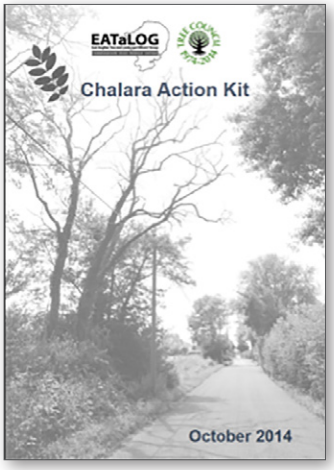


Figure 7: Suffolk Ash Dieback Toolkit

ACTION 4 – MANAGING ASH DIEBACK IN HIGH-RISK AREAS

As part of the work of the Devon Ash Dieback Resilience Forum, a matrix was developed of the management options for ash trees in high-risk areas affected by ash dieback. This model incorporates the four Ash Tree Health Classes (as set out in **Box 5**) and Devon's proposed management reactions to each. This can be **downloaded here**.

ACTION 5 – LEAFLET AND BIO-SECURITY TOOLKIT/GUIDANCE

As ash dieback spread in Kent (see **Figure 7**) and Suffolk (see **Figure 8**), public-facing guidance was developed. These two documents are examples of materials produced about ash dieback for local communities. It should be noted that these leaflets were produced in the early years of ash dieback and information and recommendations may have changed as the understanding of ash dieback has developed.

Figure 8: Kent Ash Dieback Toolkit

The Forestry Commission has also produced more guidance on **managing ash dieback** and **specific advice for ash dieback in woodlands**.

ACTION 6 – VOLUNTEER RECORDING OF THE DECLINE IN ASH TREES

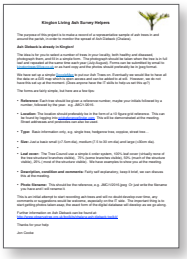
In Herefordshire, The Tree Council has piloted work with local volunteer Tree Wardens to develop a method for recording and monitoring the decline of individual ash trees.

As the speed of change between Health Class has obvious management implications, this is an area of work that The Tree Council is still developing with Fera Science Ltd.

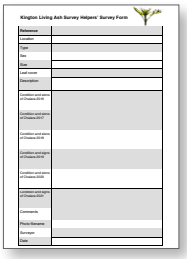
These two documents outline the procedure that has been developed in Herefordshire:

- **Herefordshire survey outline letter**
- **Herefordshire survey recording form**

If your authority/agency would like to explore this further, please contact **Jon.Stokes@treecouncil.org.uk**.



Herefordshire survey outline letter



Herefordshire survey recording form

ACTION 7 – HIGHWAY CLEARANCE

In Devon, the first co-ordinated felling of highway ash trees took place around Bickleigh following ash dieback during February 2018. Over three days, 60 ash trees were removed due to safety concerns resulting from ash dieback in the area. During this task, up to nine tree surgeons worked simultaneously, with extensive road closures for the duration of the work. Additionally, private owners adjacent to the road were offered the opportunity to have their trees removed during the task at a cost. A presentation from the Highway Operation Manager on 'Managing Devon's Trees in practice' can be found **here** with details of lessons learnt on slide 16. The Bat Conservation Trust have also produced guidance on **managing trees along highways, roads and rights of way**.

PART 4: RECOVERY AND ADAPTATION

The aim of the recovery phase should be to create a treescape that is resilient to any future pest and disease issues. As ash dieback develops there will be a need to produce not only a tactical response to the Action phase (Figure 1 on page 7) but also a strategic response to wider treescape issues during the adaptation and recovery phase.

This local strategic planning should incorporate the concepts set out in Defra's **Tree Health Resilience Strategy** (published May 2018). The strategy focuses on delivering three outcomes to build resilience – (1) resistance, (2) response and recovery, and (3) adaptation. The strategy sets out plans to reduce the risk of pest and disease threats occurring, and strengthening the resilience of our trees to withstand threats. The focus is on working to improve the extent, condition, diversity and connectivity of our trees, woods and forests, and enhance protection to minimise the risk of new threats occurring. The strategy promotes four environmental goals to build resilience:

ENVIRONMENTAL GOAL 1: Extent	increasing tree cover
ENVIRONMENTAL GOAL 2: Connectivity	enhancing the linear forest and matrix of trees within other habitat settings
ENVIRONMENTAL GOAL 3: Diversity	increasing the genetic and structural diversity of our treescape
ENVIRONMENTAL GOAL 4: Condition	healthier trees and more dynamic woodlands

These are issues that are relevant at both national and local levels, and as ash dieback spreads, it will become increasingly important for managers of trees to develop a local tree strategy for their future treescape.

However, a 2016 survey of 181 tree professionals (Defra Future Proofing Plant Health research) who collectively managed around nine million trees found that almost half of respondents had no form of tree strategy, with Local Authorities being the least likely to have one (only 38%). The survey also indicated that even when a Tree Strategy has been produced by Local Authorities, who managed two-thirds of the nine million trees, 29% have not been reviewed in the last three years and 17% have never been reviewed at all.

This absence of a current Tree Strategy is usually due either to a lack of budget to create one, or a lack of organisational will. Findings during the development of this Toolkit show that organisations dealing with ash dieback have needed to develop/refine existing Tree Strategies to be proactive in managing ash dieback, particularly in relation to plans for the Recovery phase. This is a fast-changing area of work that The Tree Council are investigating further.

PREPARING AND DEVELOPING A TREE STRATEGY

In Kent, Suffolk and Norfolk, ash dieback has resulted in the need to create a tree strategy, to enable decisions to be considered in the wider context of the future of the landscape/treescape. In Kent, the development of a tree strategy was included in the first draft of the Ash Dieback Action Plan (ADAP) – **see here** and **Box 10**.

BOX 10 Kent Tree Strategy Development

2016 saw preliminary scoping work for a Kent Tree Strategy, which has now been formalised as an agreed action within the multi-agency Kent Environment Strategy Implementation Plan 2017. The Kent Resilience Forum Ash Dieback Strategic Co-ordinating Group now has lead responsibility for delivery of the tree strategy within the Implementation Plan. A framework for the Kent Tree Strategy was agreed and baseline data established (2017), with the final document programmed for completion within the 2019/20 financial year. The Tree Strategy will provide:

- **a blueprint and tool for planners, land managers and other public, private and voluntary sector stakeholders to safeguard and expand Kent's tree and woodland cover**
- **a greater understanding and utilisation of the environmental services delivered by trees and woodland.**

It is envisaged that the document will be adopted as a Supplementary Planning Document expanding upon policies contained within existing local planning policy.

When ash dieback broke out in Suffolk in 2012, the County Council produced an informal Cabinet paper to highlight the public safety, economic and environmental risks posed by Chalara. They then realised that ash dieback highlighted the need for a countywide tree policy that would need to be adopted by Suffolk County as well as the districts and boroughs.

As of winter 2018, the Suffolk Tree Policy is at the consultation stage and it is hoped the Suffolk Tree Policy will go to Cabinet for a decision in 2019.

RECOVERY STRATEGY

As the widespread impacts of ash dieback start to take their toll, in addition to short-term tactics that deal with ash loss, it will be vital to consider longer-term recovery planning and how to safeguard Britain's precious treescapes for generations to come. We will need resilient planting and visionary thinking, as well as Action Plans to deal with the immediate threats to each community.

In Devon, the Resilience Forum subgroup on Landscape and Ecological Resilience has undertaken a review of ash in the Devon landscape and has developed some key messages and principles for landscape, wildlife and natural capital maintenance and restoration.

They state that "the loss of ash is likely, due to its sheer abundance, to impact heavily on landscape quality, wildlife dependent on trees, the volume of storm run-off and the summer temperatures of cities and towns. Its loss will also have an impact on soil composition, specialist lichen communities and broadleaved timber products in woodlands."

They have developed **eight key principles for replacing lost ash trees**:

1. **Act now to minimise the landscape impact of ash tree loss – start promoting new trees and taking better care of existing trees.**
2. **Use the 3/2/1/ formula: at least 3 new trees for loss of a large tree, 2 for a medium tree and 1 tree for a small tree.**
3. **Promote natural regeneration wherever possible, particularly in woodlands.**
4. **Grow the right trees in the right places in the right ways, and give them the right aftercare.**
5. **Encourage a diverse range of trees to develop a resilient landscape. (No one species alone can substitute ash. However, aspen, alder, field maple, sycamore, birch, rowan and disease-resistant elm, along with native oaks, have some similar traits.)**
6. **When choosing species, consider local factors such as what trees are characteristic of the area, soil type, management requirements, local stresses, etc.**
7. **For wildlife, landscape and woodfuel, choose native species, or those well established in the British Isles such as sycamore, wild pear, crab apple or white willow. In urban areas it is more acceptable to use species from other parts of the world.**
8. **Reduce the risks of introducing new diseases by only planting trees sourced and grown (UKSG) in Britain.**

The Forum has also produced a number of useful guidance notes which can be read below:

Section

3

Conclusions

3. Conclusions

Only seven years after its official identification in the UK, ash dieback has already started having significant impacts on the country's treescape. Although it is still too early to understand whether any trees will prove to be resistant to the fungus, the stark reality is that over 90% of the 2 billion ash trees across the UK are likely to be infected in the years to come.

The risks that dead and diseased ash trees may pose to human health and safety, together with the significant economic and environmental impacts, mean that it is vital to accept that ash dieback cannot be treated as 'business as usual' by anyone who manages trees or the landscape.

As a nation we cannot afford to be passive and let ash dieback run its course without careful thought, vision and proactive intervention. The stakes are too high. This four-part Toolkit aims to offer a structured, tried and tested Action Plan framework to tackle the challenge.

The Tree Council believes that ash dieback also presents an opportunity to develop new resilient treescapes throughout the UK. Currently, fewer than one third of Local Authorities have active tree strategies. However, the development of Resilience Forums consisting of local environmental and tree organisations will create well-placed groups to support Local Authorities to develop detailed tree strategies once the response to ash dieback is under way. The Tree Council's network of volunteer Tree Wardens is also well placed to help Local Authority tree officers monitor and replant over the coming years.

Communication, collaboration and active engagement with local communities will be key to the success of managing ash dieback. We believe the valuable resource provided by the new Resilience Forums and the Tree Wardens should be nurtured and encouraged, to address the challenges of ash dieback and work together to develop tree strategies for the future.

Section

4

Acknowledgements:

Acknowledgements, funding and disclaimer

4. Acknowledgements, funding and disclaimer

This report has been developed and published by The Tree Council and Fera Science Ltd, but would not have been possible without the input of many Local Authorities and other agencies. The Tree Council would like to thank all the people who have taken time to contribute facts, figures and opinions.

These include staff and voluntary members of:

- **Devon Ash Dieback Resilience Forum**
- **Devon Hedge Group**
- **Devon County Council**
- **Fareham Borough Council**
- **Fera Science Ltd (Food and Environment Research Agency)**
- **Forestry Commission**
- **Forest Research**
- **Hampshire Tree Officer Group**
- **Herefordshire Biological Records Centre**
- **Herefordshire Council**
- **Kent County Council**
- **Kent Tree Officer Group**
- **Leicestershire County Council**
- **Norfolk County Council**
- **Suffolk County Council**
- **Sussex Resilience Forum**
- **West Sussex County Council**
- **West Sussex Tree Officer Group**

This report has been undertaken in partnership with Fera Science Ltd and draws on funding provided by the Department of Environment, Food and Rural Affairs.

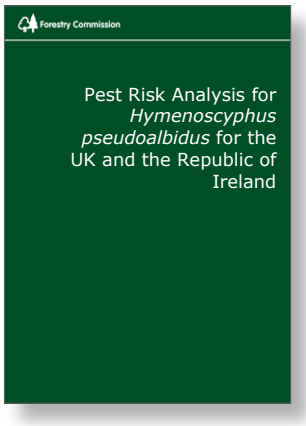
Section

5

Further resources:

Ash dieback references (in order of publication date)

5. Further ash dieback resources (in order of publication date)

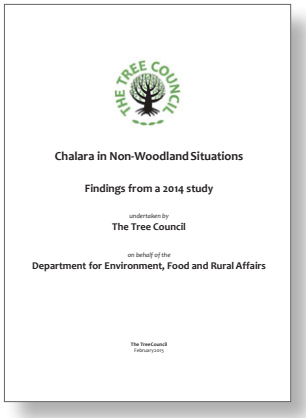


PEST RISK ANALYSIS FOR *HYMENOSCYPHUS PSEUDOALBIDUS* (ANAMORPH *CHALARA FRAXINEA*) FOR THE UK AND THE REPUBLIC OF IRELAND (MAY 2013)

Published by the Forestry Commission, this was the first major review of ash dieback and the impacts that it may cause. Note: This was produced before the name of the fungus was changed to *Hymenoscyphus fraxineus*. It can be **downloaded here**.

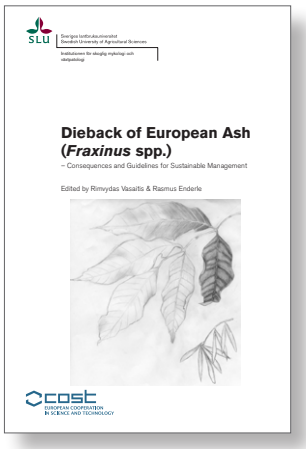
THE POTENTIAL ECOLOGICAL IMPACT OF ASH DIEBACK IN THE UK (JUNE 2014)

Published by the Joint Nature Conservation Committee (JNCC) (issue no. 483), this is a technical report aimed at those involved in tree and woodland management for biodiversity and nature conservation. The report will be of particular value for those considering long-term options for building resilience in woodlands and encouraging adaptation to support biodiversity during the transition as and when ash dieback takes effect. A detailed and useful guide to the research, which can be **downloaded here**.



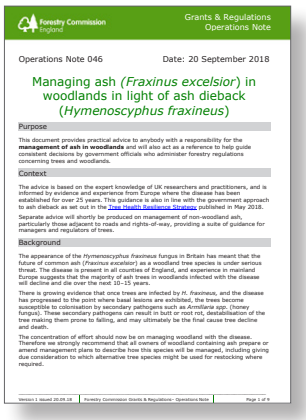
CHALARA IN NON-WOODLAND TREES (FEBRUARY 2015)

A report produced for Defra by The Tree Council outlining the issues that ash dieback may cause in non-woodland situations. It can be **downloaded here**.



DIEBACK OF EUROPEAN ASH (*FRAXINUS SPP.*) – CONSEQUENCES AND GUIDELINES FOR SUSTAINABLE MANAGEMENT (2017)

Edited by Rimvydas Vasaitis & Rasmus Enderle, this publication is a summary of research undertaken as part of the FRAXBACK European funded project into ash dieback. A detailed and useful guide to the research, which can be **downloaded here**.



FORESTRY COMMISSION OPS NOTE 046: MANAGING ASH (*FRAXINUS EXCELSIOR*) IN WOODLANDS IN LIGHT OF ASH DIEBACK (*HYMENOSCYPHUS FRAXINEUS*) (SEPTEMBER 2018)

This document provides practical advice to anybody with a responsibility for the management of ash in woodlands and will also act as a reference to help guide consistent decisions by government officials who administer forestry regulations concerning trees and woodlands. It can be **downloaded here**.

ASH DIEBACK:

an Action Plan Toolkit

Summer 2019 update (first published February 2019)

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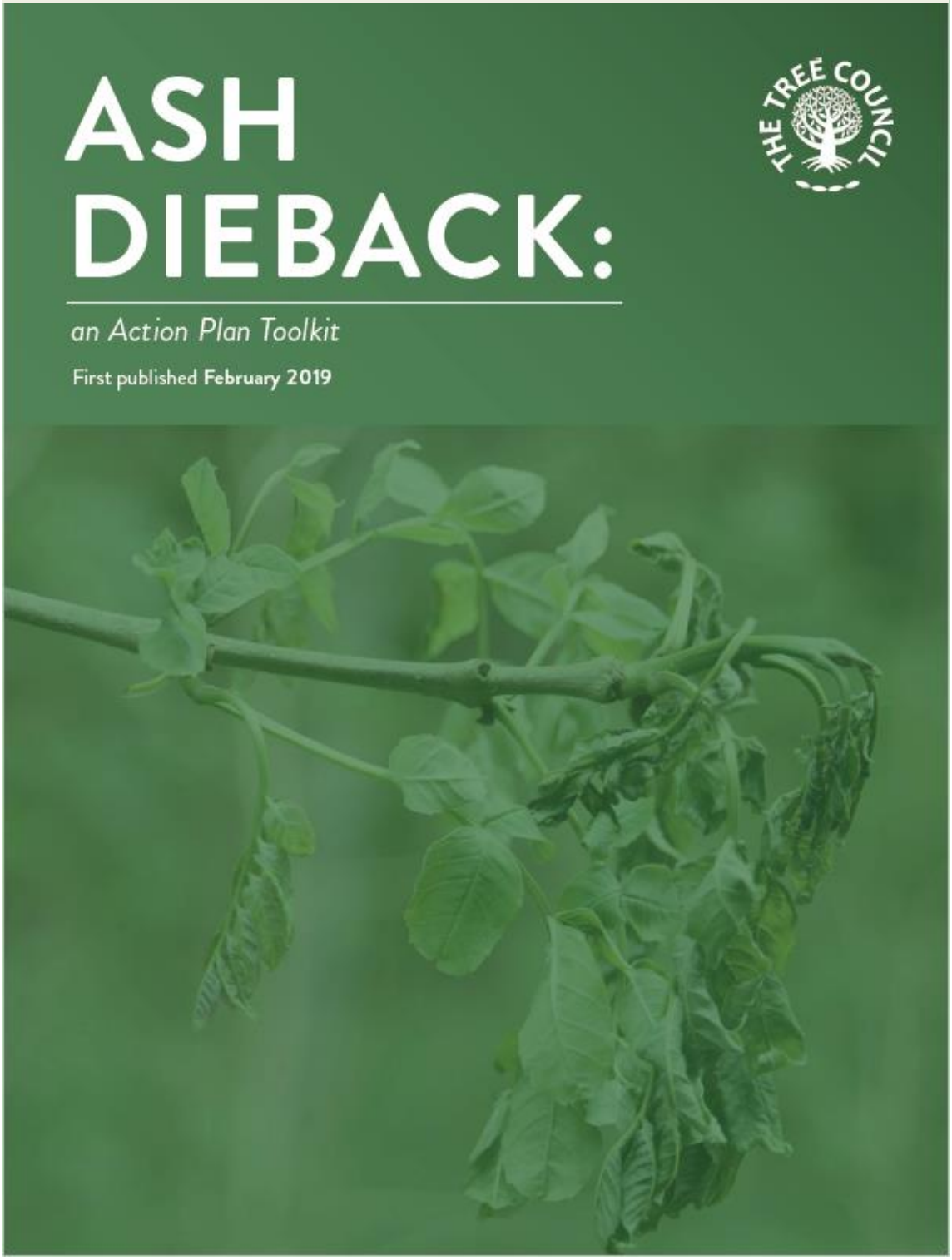
info@treecouncil.org.uk

020 7407 9992

Registered charity number 279000

Citation: Stokes. J., and Jones, G. (2019).
Ash Dieback: An Action Plan Toolkit.
Tree Council Publication. Tree Council, London. 57pp.
Keywords: Ash Dieback; toolkit; local authorities; Tree Council

GWYWIAD YR ONNEN: PECYN CYMORTH CYNLLUN GWEITHREDU Cyhoeddwyd yr ail argraffiad ym mis **Gorffennaf 2019**



CYNNWYS

Adran 1: Rhagarweiniad

Gwywiad yr Onnen, *Hymenoscyphus fraxineus* **(caiff hefyd ei adnabod fel** *Chalara fraxinea***), ydy'r clefyd mwyaf i gael effaith ar y DU ers clefyd llwyfen yr Isalmaen gafodd ei adnabod gyntaf yn y 1960au. Bydd yn arwain at ddirywiad ac o bosibl marwolaeth y rhan fwyaf o goed ynn mewn ychydig flynyddoedd. Mae ganddo'r posibilrwydd i heintio dros 2 biliwn o goed ynn[1] (dros 1.8 biliwn o goed ifanc ac eginblanhigion a hyd at dros 150 miliwn o goed aeddfed) ledled y wlad.**

O ystyried bod yr onnen ar led ar hyd ein tirwedd, gan gynnwys ar ochrau ffyrdd a strydoedd, bydd rheoli gwywiad yr onnen yn arwain at symud i ffwrdd o agwedd 'busnes fel arfer' tuag at orchmynion a blaenoriaethau newydd am adnoddau. Mae'r Pecyn Cymorth hwn wedi'i ddatblygu er mwyn cynorthwyo Awdurdodau Lleol a chyrff rhanbarthol eraill wrth iddynt weithio'n rhagweithiol i reoli effaith y clefyd ar goed nad ydynt mewn coetiroedd.

Coed wedi'u heffeithio gan wywiad yr onnen © Jon Stokes

Ers dechrau gwywiad yr onnen, mae'r Cyngor Coed wedi arwain ar ymchwil cyffredin ar ymatebion cynnar a strategaethau ymdopi tirfeddianwyr lleol ar gyfer y clefyd newydd yma. Bydd cynnydd anochel mewn coed ynn peryglus ac ar farw yn golygu y bydd yn angenrheidiol cael gwared ar fwyfwy ohonynt am resymau diogelwch. Fodd bynnag, yn ôl canfyddiadau, tydy llawer o Awdurdodau Lleol ac asiantaethau eraill ddim yn barod ar gyfer y fath raddfa o adnoddau fydd eu hangen er mwyn delio gyda materion diogelwch y cyhoedd sy'n codi o'r clefyd coed hwn. Tydyn nhw ychwaith ddim yn barod ar gyfer canlyniad hyn oll. Mae coedd ynn ar hyn o bryd yn cynnig buddion cefnogol, rheoli, darparu a diwylliannol, gan gynnwys gwerth tir uwch a lles y cyhoedd. Bydd angen cynllunio i ailblannu'r coed er mwyn adfer buddion hanfodol ecosystem y coed ynn gaiff eu torri i lawr.

Mae angen ymateb lleol strategol a chydgysylltiedig er mwyn ymdopi gyda'r nifer o broblemau ddaw yn sgil gwywiad yr onnen. Mae'r Pecyn Cymorth hwn wedi'i gynllunio er mwyn cynorthwyo Awdurdodau Lleol ac asiantaethau rhanbarthol a lleol eraill i baratoi **Cynllun Gweithredu Gwywiad yr Onnen** (CGGO) er mwyn ymateb i'r problemau fydd yn codi o achos y coed heintus.

Mae'r Offeryn hwn yn cynnwys adnoddau a deunyddiau wedi'u creu gan Awdurdodau Lleol ac asiantaethau eraill wrth iddynt baratoi i reoli effaith gwywiad yr onnen. Caiff yr enghreifftiau hyn eu cyflwyno trwy gydol yr adroddiad. Maent yn bennaf yn waith sydd ar fynd ac wedi'u cyflawni gyda chaniatâd hael yr asiantaethau a'r cyrff wnaeth eu creu. Rydym yn gobeithio derbyn adborth gan eraill wrth iddynt ddatblygu eu CGGO eu hunain. Trwy'r broses hon, bydd arferion gorau gwywiad yr onnen yn datblygu wrth i ddeunydd newydd neu welliannau i'r enghreifftiau hyn ddod i rym, byddwn felly yn diweddaru'r ddogfen hon.

[1] **See page 13 of:** *Chalara in Non-Woodland Situations: Findings from a 2014 study*

Mae'r Pecyn Cymorth hwn yn ganllaw cam-wrth-gam ar gyfer creu CGGO effeithiol ac yn cynnwys enghreifftiau gan Awdurdodau Lleol sydd eisoes yn gweithredu ar reoli eu coed ynn. I weld rhestr ddiweddar o'r holl adnoddau gaiff eu cyfeirio atynt yn y ddogfen hon, ewch i **www.treecouncil.org.uk/Ash-Dieback**

Mae pedair rhan i'r Pecyn Cymorth:

- **Rhan 1:** Codi ymwybyddiaeth o wywiad yr onnen a'r problemau gall achosi
- **Rhan 2:** Paratoi'r CGGO
- **Rhan 3:** Sut mae gwneud rhywbeth ac ymateb i wywiad yr onnen
- **Rhan 4:** Adfer o wywiad yr onnen

PAM FOD ANGEN CYNLLUN AR GYFER GWYWIAD YR ONNEN?

Bydd gwywiad yr onnen yn arwain at newidiadau i'n tirwedd a phoblogaeth goed [2], newidiadau i fioamrywiaeth[3] a chymeriad y dirwedd[4] ac o bosibl yn cynyddu effeithiau tebyg i lifogydd wedi'i achosi gan sut mae'r dŵr yn rhyngweithio gyda'r amgylchedd[5].

Mae'r gost genedlaethol o gael gwared ar goed sydd â gwywiad yr onnen yn anodd ei chyfrifo ond gall y gost o oblygiadau iechyd a diogelwch o achos coed ar ochrau ffyrdd sydd â'r clefyd hwn fod yn £5.3 biliwn. Er enghraifft, mae Cyngor Sir Caint wedi amcan y bydd rheoli dirywiad coed ynn sy'n agos i ffyrdd a chilffyrdd Caint yn y pen draw yn gofyn am ymyriadau diogelwch gaiff effaith ar tua 500,000 goed[6].

Bydd graddfa peryglon iechyd a diogelwch o achos gwywiad yr onnen yn unig yn golygu na fydd hi'n agwedd o 'fusnes fel arfer' i unrhyw sefydliad sy'n rheoli coed ynn.

Gall methiannau coed olygu cynnydd mewn nifer o bobl gaiff eu niweidio gan goed a chynnydd posibl mewn hawliadau eiddo. Bydd angen i sefydliadau adolygu a, lle bo angen, gwneud newidiadau i drefniadau ac ymarferion rheoli diogelwch coed[7].

Yn ôl ein hymchwil, asiantaethau sy'n delio gyda gwywiad yr onnen ddylai ddatblygu a gweithredu Cynlluniau Gweithredu Lleol. Daw'r argymhelliad hwn ar ôl trafodaethau gydag Awdurdodau Lleol oedd yn teimlo nad oeddynt yn barod ar gyfer effaith gwywiad yr onnen. Daw'r argymhelliad hefyd yn dilyn ymchwil gan Asiantaeth Ymchwil Bwyd a'r Amgylchedd (Fera Science Ltd)[8] ar reolaeth clefyd llwyfen yr Isalmaen, wnaeth achosi colli 30 miliwn o goed.

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[2] Edrychwch ar dudalen 13 o: *Chalara in Non-Woodland Situations: Findings from a 2014 study*

[3] *Asesu a mynd i'r afael ag effaith gwywiad yr onnen ar goetiroedd y DU a choed sydd o bwys o ran cadwraeth*

[4] Chalara in Non-Woodland Situations: Findings from a 2014 study

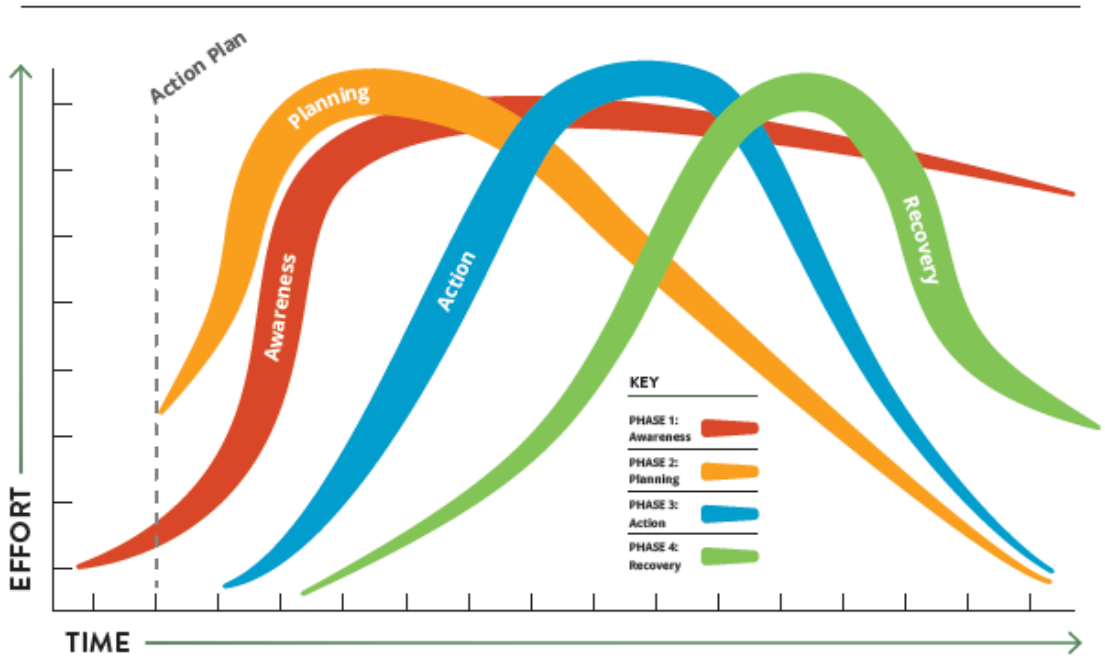
[5] *Posibilrwydd plannu coed a gwrychoedd er mwyn lleihau amlder ac effaith digwyddiadau o lifogydd yn y DU*

[6] Cyfathrebu personol Cyngor Sir Caint

[7] Datganiad NTSG Ionawr 2015

[8] Rheoli Clefyd Llwyfen yr Isalmaen yn Nwyrain Sussex. Gwersi ar gyfer cynlluniau rheoli iechyd coed eraill. Fera Science Ltd (2013)

Mae Ffigwr 1 yn dangos y pedair rhan allweddol o ymateb i glefyd neu bla coed posibl neu bresennol. Mae'n seiliedig ar brotocolau Cynllunwyr Argyfwng gaiff eu defnyddio gan lawer a dyma oedd sail ymateb Caint i wywiad yr onnen.



Ffigwr 1: Cyfnodau rheoli clefyd neu bla coed Cynllun Gweithredu

Elfennau'r model hwn ydy:

• **Ymwybyddiaeth/disgwyliad:** codi ymwybyddiaeth am wywiad yr onnen a'r problemau gall achosi a sylweddoli bod angen gwneud gwaith er mwyn deall ac ymdopi gyda'r broblem.

• **Cynllunio/asesu:** cynllunio a datblygu CGGO i helpu i reoli'r problemau gaiff eu hachosi gan wywiad yr onnen.

• **Gweithredu/ymateb i wywiad yr onnen:** dilyn camau gweithredu (er enghraifft, torri coed i lawr) er mwyn datrys problemau yn sgil gwywiad yr onnen.

• **Addasu ac adfer o wywiad yr onnen:** adfer y dirwedd yn sgil gwywiad yr onnen, rhan hanfodol o unrhyw broses argyfwng.

Mae'r pedair elfen hyn yn rhoi sail i Gynllun Gweithredu Gwywiad yr Onnen. Un rhan hanfodol o'r rhan Ymwybyddiaeth ydy'r gofyn i lunio Cynllun Cyfathrebu - edrychwch ar **Ran 3 (Cam Gweithredu 1) y Pecyn Cymorth.**

Bwriad y Pecyn Cymorth CGGO ydy:

• gwella dealltwriaeth ynglŷn â goblygiadau gwywiad yr onnen

• rhoi fframwaith lleol/rhanbarthol ar gyfer darparu CGGO

• gweithio ar lefel sirol, ond yn gallu addasu ar gyfer unrhyw raddfa

• canolbwyntio ar broblemau tactegol all wynebu sefydliad ond sy'n cynnwys yr angen i ddelio gydag effaith strategol clefyd a phla coed ar y dirwedd goed ehangach.

Rydym ar y camau cynnar o ddeall beth ydy'r ffyrdd gorau o ddelio gyda gwywiad yr onnen. Wrth i'n dealltwriaeth ddyfnhau, caiff y Pecyn Cymorth ei ddiweddaru a'i ymhelaethu. Mae'n seiliedig ar waith gan nifer o Awdurdodau

Lleol sydd wrth wraidd y gwaith o ddelio gyda haint gwywiad yr onnen ac yn rhoi enghreifftiau o'r prosesau maent wedi'u hymgymryd er mwyn bod â'r adnoddau sydd eu hangen er mwyn dechrau ar y gwaith o adfer.

2. Y Pecyn Cymorth

RHAN 1: CODI YMWYBYDDIAETH

Er mwyn cyflwyno achos i allu treulio amser a gwario ar adnoddau ar gyfer Cynllun Gweithredu Gwywiad yr Onnen (CGGO), mae'n angenrheidiol i bob corff perthnasol ddeall yr effaith bosibl ar ei sefydliad neu ardal.

Yn seiliedig ar ddeunydd darllen a gweithredoedd nifer o Awdurdodau Lleol, bydd angen creu ymateb rhesymegol, cyson
a chadarn i wywiad yr onnen yn seiliedig ar y camau canlynol:

• **Cam 1: Dysgu am wywiad yr onnen** a phenderfynu a ydy o'n cyflwyno perygl i sefydliad a'i ymarferion/dulliau gweithredu. Mae hyn yn cynnwys deall y clefyd, sut mae ei adnabod a lle mae modd dod o hyd iddo.

• **Cam 2: Asesu graddfa'r effaith** ar y sefydliad (er enghraifft, deall faint o goed ynn sydd yn eich ardal/rydych chi eu piau neu yn eu rheoli). Mae hyn yn cynnwys sut i gasglu data ac amcangyfrif nifer y coed ynn a chost posibl y broblem.

• **Cam 3: Cyflwyno achos i reolwyr/pobl sy'n gyfrifol am y gyllideb i greu Cynllun Gweithredu Gwywiad yr Onnen** er mwyn delio gyda'r problemau fydd yn codi. Mae hyn yn cynnwys asesu'r risg corfforaethol.

Cam 1: Dysgu am wywiad yr onnen

BETH YDY GWYWIAD YR ONNEN?

Mae gwywiad yr onnen, gaiff hefyd ei adnabod weithiau fel *Chalara*, yn effeithio ar goed ynn a rhywogaethau eraill o goed *Fraxinus* a chaiff ei achosi gan bathogen ffwngaidd. Daeth y ffwng, *Hymenoscyphus fraxineus* (enw arall amdano ers talwm oedd *Chalara fraxinea*), o Asia i Ewrop yn ystod y 1990au gan ledaenu'n gyflym ar draws Ewrop. Er mai'r cofnod cyntaf swyddogol ym Mhrydain oedd yn 2012, mae tystiolaeth[9] bellach yn awgrymu ei fod wedi cyrraedd yma cyn hynny, gyda dadansoddiad yn dangos bod coed yn marw o'r ffwng yn 2004.

Mae'r ffwng ymledol hwn yn achosi nifer o symptomau o smotiau ar ddail i wywiad canghennau i farwolaeth coed *Fraxinus excelsior* (ynn) a rhai rhywogaethau *Fraxinus* eraill. Unwaith bydd y coed yn heintus, bydd y rhan fwyaf yn marw.

Coeden onnen ar ochr ffordd yn ***Nosbarthiad Iechyd yr Onnen 4*** *© Jon Stokes*

[9]Wylder et al, 2018, Tystiolaeth o ddyddiad marwolaeth *Fraxinus excelsior* yn nodi bod gwywiad yr onnen (*Hymenoscyphus fraxineus*) yn bresennol yn Lloegr yn 2004-2005. *Forestry*: ICF Ebrill 2018

Gall ambell i goeden onnen oroesi'r haint oherwydd ffactorau genetig wnaeth eu galluogi i oddef y clefyd. 'Mewn sefyllfaoedd nad ydynt mewn coetiroedd, tebyg i ardaloedd trefol neu ddinesig, lle mae coed yn tueddu i fod dan fwy o straen bioffisegol, mae hi'n aneglur ar hyn o bryd beth ydy'r canran o goed ynn yn y DU sy'n debygol o allu goddef y ffwng[9a]. Mewn coetiroedd, mae tystiolaeth ym mis Rhagfyr 2018 yn awgrymu y gall cyfraddau marwolaeth fod rhwng 70% i 85%. Mae tystiolaeth o Ewrop yn awgrymu bod tua 10% o goed yn gallu goddef y clefyd ychydig, gydag 1-2% â lefel uchel o oddefiad. Mae gan yr amgylchedd hefyd ran yn sut mae coed yn dirywio o wywiad yr onnen, gyda choed sy'n tyfu y tu allan i'r amodau gorau posibl yn dirywio yn gynt. Ar hyn o bryd mae hi'n amhosibl rhagweld beth ydy union gyflymder dirywiad unrhyw goeden a bydd ffactorau eraill yn dylanwadu ar hyn gan gynnwys y math o bridd, lefelau gwlypter y pridd a daearyddiaeth leol.

Dail yr onnen yn gwywo oherwydd gwywiad © Jon Stokes

Fel un enghraifft, mae'r lluniau yn **Ffigwr 2** yn dangos y newid mewn un goeden yn Nyfnaint dros un tymor (tynnwyd y lluniau ar 06/07/16 a 07/07/17). Mae'r lluniau yn dangos dirywiad o 10%-15% yn y canopi mewn un tymor, ac mae adroddiadau anecdotaidd o ardaloedd o'r DU sydd wedi'u heffeithio gan wywiad yr onnen yn cefnogi hyn fel cyfradd arferol o ddirywiad. Fodd bynnag, gall rhai coed unigol (yn dibynnu ar eu hiechyd a'u cyflwr) ddirywio yn llawer cynt a bydd angen eu monitro). Gall rhai coed ynn aeddfed gyda gwywiad yr onnen ddirywio yn gynt os bydd pathogenau eraill tebyg i ffwng mêl (*Armillaria*) hefyd yn bresennol. Caiff y coed eu heintio yn bennaf wrth i asgosborau sydd wedi'u hatgynhyrchu yn rhywiol lanio ar ddail, ond gall y coed hefyd ddal yr haint ar waelod y boncyff (coron y gwreiddiau), mwy na thebyg trwy lentiselau sy'n mynd i mewn i'r goeden.

Ffigwr 2: Newid mewn un goeden mewn un tymor
Lluniau o'r chwith: © Rob Wolton, Jon Stokes

© Jon Stokes

Ffigwr 3: Cyrff hadol ar goesyn canolog dail y llynedd

Caiff yr asgosborau gaiff eu cludo gan y gwynt eu cynhyrchu o gyrff hadol (madarch gwyn bach) ar goesyn canolog (y racis) dail sydd wedi disgyn o goeden onnen y llynedd (**edrychwch ar Ffigwr 3**). Wrth iddo dyfu, mae'r ffwng yn dinistrio ffloem a sylem y goeden heintus, sy'n arwain at y goeden yn methu symud dŵr a maetholion o amgylch ei strwythur. Bydd y diffyg symud dŵr a maetholion hwn yn achosi i ganghennau'r goeden fethu a bydd y goeden yn 'gwywo', sy'n egluro'r enw. Bydd colli maetholion a dŵr dro ar ôl tro, yn ogystal â dihysbyddu egni oherwydd y diffyg dail, ac ymyriad pathogenau eilaidd sy'n lladd gwreiddiau (er enghraifft, *Armillaria*), yn achosi i'r goeden fynd yn fregus, colli ei changhennau ac yn y pen draw ildio i'r clefyd.

Lle caiff niweidiau sylfaenol eu harsylwi (**edrychwch ar Ffigwr 4**) gall y rhain ddatblygu yn bydredd gwreiddiau a gall y coed heintus ddod yn ansefydlog a pheryglus. Mae'r pydredd gan amlaf yn gysylltiedig â phathogenau eilaidd eraill tebyg i ffwng mêl a gall ddigwydd heb unrhyw symptomau amlwg o wywo yn y canopi. Mae hyn yn ei gwneud gryn dipyn yn anoddach adnabod coed ynn 'peryglus'.

Mae niweidiau sylfaenol wedi'u canfod yn eang ar draws Ewrop ac maent yn debyg o fod yn gysylltiedig ag ardaloedd o boblogaethau ynn niferus, ac felly llwyth sbôr, lle mae haint wedi bod yn bresennol am gyfnod hir. Yn benodol, mae coetiroedd gwlyb yn debyg o fod â'r risg uchaf o'r math hwn o haint yn Ewrop ond mae angen tystiolaeth bellach er mwyn asesu'r cyd-destun yn y DU. Am wybodaeth fanylach am fioleg gwywiad yr onnen **edrychwch ar y gwaith ymchwil hwn gan y Comisiwn Coedwigaeth**.

Ffigwr 4: Niwed sylfaenol ar goeden onne

© Jo Clark: Future Trees Trust

SUT MAE ADNABOD GWYWIAD YR ONNEN

Mae adnabod symptomau gweledol gwywiad yr onnen yn hanfodol er mwyn asesu iechyd presennol poblogaeth coed ynn - cam angenrheidiol er mwyn deall difrifoldeb y clefyd mewn ardal. I helpu gydag adnabod y rhain, mae amrywiaeth o adnoddau ar gael ar-lein. Dyma rai enghreifftiau:

- **Cyngor adnabod gwywiad y Comisiwn Coedwigaeth**
- **Canllaw adnabod gwywiad yr onnen Observatree**
- **Canllaw symptomau gwywiad yr onnen y Cyngor Coed**

- **Canllaw symptomau mewn coed mawr y Cyngor Coed**

Gall y clefyd gael effaith ar goed ynn o bob maint a siâp. Tra bod y symptomau yn eithaf gweledol mewn coed ifanc, maent gan amlaf yn anoddach eu hadnabod mewn coed aeddfetach (edrychwch ar **Flwch 6 ar dudalen 30**).

LLE MAE MODD DOD O HYD I WYWIAD YR ONNEN?

Cafodd gwywiad yr onnen ei gofnodi am y tro cyntaf mewn meithrinfa yn Swydd Buckingham ym mis Chwefror 2012. Yn dilyn hyn, cafodd y clefyd ei adnabod ar blanhigyn newydd mewn maes parcio yn Swydd Caerlŷr ym mis Mai, ac yna wedi hynny ar goed ifanc yng Nghoedwig Ashwellthorpe yn Norfolk yn yr hydref yr un flwyddyn.

Erbyn mis Mehefin 2019, roedd y clefyd ffwngaidd hwn i'w weld ar hyd y DU ac mae bellach yn amlwg yn 54.5% o sgwariau 10km y DU a thros ddau draean o sgwariau 10km Lloegr. **Mae modd ichi weld map rhyngweithiol sy'n dangos sut mae gwywiad yr onnen wedi'i wasgaru yma gyda diolch i Fera Science Ltd.**

Fodd bynnag, efallai bod y ffwng yn bresennol mewn mwy o rannau o'r DU na'r hyn sydd wedi'i gofnodi'n swyddogol, gan ei bod yn anodd canfod y symptomau, yn enwedig mewn coed mawr. Os nad ydy ardal o'r DU yn ymddangos ar y map fel ardal sydd â gwywiad yr onnen ar hyn o bryd, dydy hyn ddim o reidrwydd yn golygu nad ydy'r clefyd yno. **Os ydych yn amau bod gwywiad yr onnen mewn grid sgwâr 10km yna dylech roi gwybod am hyn drwy Tree Alert**.

Mae'r mapiau swyddogol hefyd yn dangos presenoldeb ac absenoldeb y ffwng yn unig, ac nid lefelau'r haint mewn unrhyw ardal. Yn ychwanegol at hyn, mae cyfraddau gwywiad yr onnen a lefelau marwolaeth o wahaniaeth sylweddol wedi'u cofnodi mewn ardaloedd gwahanol. Gall hyn fod oherwydd gwahaniaethau mewn cyflyrau safleoedd, yn ogystal â gwahaniaethau yn etifeddiaeth genetig coed ynn mewn gwahanol rannau o'r wlad (Stocks et al., 2017). Felly, mae'n hanfodol bod rheolwyr tir yn monitro lleoliadau a gwasgariad y clefyd mewn unrhyw ardal (edrychwch ar **dudalen 18** 'casglu data coed ynn lleol') gan ei bod yn bwysig deall beth ydy lefel yr haint mewn ardal er mwyn dilyn unrhyw gamau gweithredu angenrheidiol.

Cam 2: Asesu'r effaith ar eich sefydliad

SAWL COEDEN ONNEN?

Er mwyn deall graddfa effaith bosibl gwywiad yr onnen ar eich sefydliad, mae'n angenrheidiol casglu'r holl ddata sydd ar gael er mwyn amcangyfrif faint o goed ynn sydd mewn ardal a/neu caiff eu rheoli gan y sefydliad.
Mae amcan bod dros 2 biliwn o goed ynn yn y DU, ffigwr sy'n cynnwys yr holl goed o eginblanhigion i goed aeddfed.[10] O'r rhain, mae 125.9 miliwn yn goed mewn coedwigoedd a 27.2–60 miliwn o goed (gan ddefnyddio'r un diffiniad) mewn ardaloedd nad ydynt yn goetiroedd. Mae hyn yn ôl diffiniad y Comisiwn Coedwigaeth o 'goeden' gyda choesyn sy'n fwy na 4cm mewn diamedr ac yn 1.3 metr uwchben y ddaear.[11]

Mewn amgylchedd trefol neu ddinesig:

- **Mae amcan bod 4 miliwn o goed ynn trefol/dinesig yn y DU, 4.1% o'r 89 miliwn o goed trefol/dinesig i gyd**
- **Mae Priffyrdd Lloegr yn amcangyfrif bod o leiaf 4 miliwn o goed ynn wrth ymyl eu rhwydwaith ffyrdd**
- **Mae Network Rail yn amcangyfrif bod 400,000 o goed ynn mawr yn gyfagos i'r rhwydwaith rheilffordd.**

Mae modd cael gwybodaeth bellach ar nifer y coed ynn ym Mhrydain yn **Ash Dieback in Non-Woodland Situations**.

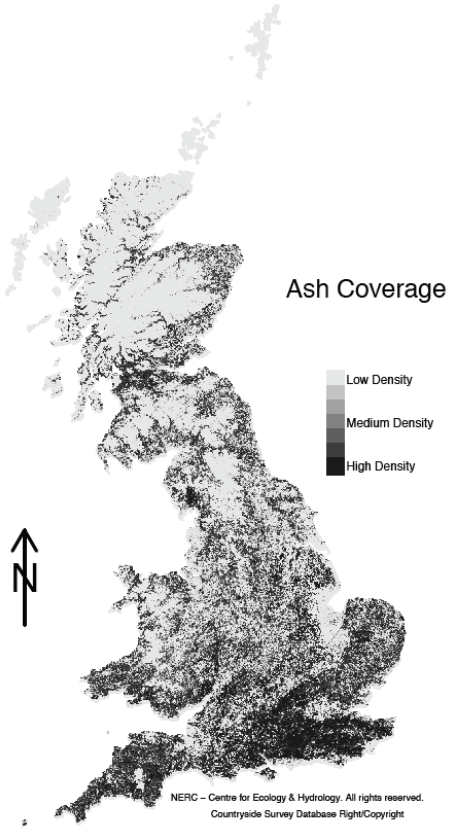
[10] Chalara in Non-Woodland Situations, by The Tree Council on behalf of DEFRA

[11] 11NFI preliminary estimates of quantities of broadleaved species in British woodlands, with special focus on ash

Mae'r ffigyrau coed ynn hyn yn darparu cyd-destun cenedlaethol yn unig, nid ydynt yn rhoi darlun o'r sefyllfa leol. Bydd effaith benodol gwywiad yr onnen yn dibynnu ar nifer a gwasgariad yr onnen mewn unrhyw le.
Cafodd set bellach o ddata ei gynhyrchu gan y Ganolfan Ecoleg a Hydroleg (CEH) wnaeth ddefnyddio set data yr Arolwg Cefn Gwlad yn 2012 i gynhyrchu map (**Ffigwr 5**) oedd yn dangos pa mor niferus oedd coed ynn ledled y DU.

Am wybodaeth bellach am y gwaith hwn, edrychwch ar y **diweddariad** hwn gan CEH, a'r **adroddiad llawn**.

Er mwyn deall beth ydy effaith lleol gwywiad yr onnen, bydd angen cynnal asesiad o boblogaeth yr onnen a'i gwasgariad.
Er mwyn gwneud hyn, bydd angen i sefydliadau gasglu'r holl wybodaeth sydd ar gael yn lleol am yr onnen a hefyd o bosibl ymgymryd â gwaith casglu data coed ynn lleol penodol.



Ffigwr 5: Map lleoliad coed ynn
Hawl/hawlfraint Cronfa ddata yr Arolwg Cefn Gwlad NERC - Canolfan Ecoleg a Hydroleg. Cedwir pob hawl.

CASGLU DATA COED YNN LLEOL

Y man cychwyn gorau ydy casglu'r holl ddata lleol sydd ar gael am yr onnen o unrhyw ffynhonnell, er enghraifft o Restr Genedlaethol o Goetiroedd a Choed y Comisiwn Coedwigaeth, Gorchmynion Cadwraeth Coed neu Arolygon Coed mewn Mannau Cyhoeddus gan Awdurdodau Lleol, data Ancient Tree Hunt neu gofnodion o'r Ganolfan Cofnodion Bioamrywiaeth lleol. Yn Swydd Henffordd, roedd yr awdurdod yn bwriadu ymchwilio i'r coed ynn hynny oedd gyfagos i'r briffordd neu ar dir oedd yn berchen i'r cyngor fyddai'n gallu achosi problem petaent yn marw neu yn disgyn ar y briffordd neu ardal gyhoeddus. Yn ystod haf 2016, bu i staff Cyngor Swydd Henffordd gasglu data i fesur y nifer posibl o goed ynn yn y sir (edrychwch ar **Flwch 1** am eu hadolygiad a'r ffynonellau gwybodaeth gafodd eu defnyddio).

BLWCH 1 Asesiad coed ynn Swydd Henffordd

Yn ystod haf 2016, bu i staff Cyngor Swydd Henffordd gasglu data i fesur y nifer posibl o goed ynn yn y sir. Ni chafodd staff penodol nac adnoddau ariannol eu neilltuo ar gyfer y broses hon ac roedd yr holl ddata ar gael yn rhwydd, neu ar gael yn fewnol yn yr awdurdod. Mae amcan bod 18 awr wedi'i dreulio yn casglu'r wybodaeth dros gyfnod o sawl mis ac roedd gofyn am wybodaeth leol helaeth.

CANFYDDIADAU:

• Mae'r onnen yn goeden niferus yn Swydd Henffordd ac yn ymddangos llawer ar hyd ardaloedd llinellog fel gwrychoedd, ffyrdd, rheilffyrdd a glannau afon.

• Mae'r ffigyrau gorau sydd ar gael yn awgrymu bod mwy na 500,000 o goed ynn llawn twf neu bron â bod yn aeddfed y tu allan i goetiroedd yn y sir; yr onnen ydy'r goeden fwyaf niferus ar hyd gwrychoedd ac mae'n darparu dros 50% o ganopi coed nad ydynt mewn coetiroedd yn y sir.

• Mae coetiroedd sy'n llawn o'r onnen yn bennaf yn ymestyn dros 6,500 hectar (mwy na 25%) o'r holl goetir o goed dail llydan yn Swydd Henffordd (Rhestr Genedlaethol o Goetiroedd a Choed [Henffordd a Chaerwrangon], y Comisiwn Coedwigaeth, 2003 - data 1997). Mae'r onnen hefyd yn ymddangos mewn ardaloedd trefol/dinesig: mae mannau cyhoeddus agored dan reolaeth y cyngor yn cynnwys dros 2,600 o goed ynn aeddfed. Mae Swydd Henffordd yn y 10 sir uchaf ar gyfer canran yr onnen sy'n rhan o'r canopi mewn coetir.

• Mae Rhestr o Goed Hynafol yr Ymddiriedolaeth Goetir yn rhestru 8,328 o goed ynn "hynafol, hen a nodedig" yn Lloegr gyda dros 6% (531) yn Swydd Henffordd (ffigwr cywir ar 25/11/2016).

• Mae gwerth bioamrywiaeth yr onnen fel rhywogaeth gynhaliol yn helaeth: dros y 10 mlynedd diwethaf mae Canolfan Cofnodion Biolegol Swydd Henffordd (HBRC)[12] wedi dal 451 cofnod [12] ar gyfer rhywogaethau ar y rhestr 'goch' (data wedi'i ddarparu ym mis Tachwedd 2016).

• Mae amcan bod mwy na 120,000 o goed ynn yn tyfu ar ochr dros 3,250km o ffyrdd cyhoeddus Swydd Henffordd a ffigwr gyfartal os nad yn fwy o bosibl yn cael effaith ar y 3,360km o hawliau tramwy cyhoeddus yn y sir. Mae hyn yn seiliedig ar ddata wedi'i ailosod o arolygon priffyrdd yn Nyfnaint a Norfolk.

• Mae rhywogaethau'r onnen wedi'u cynnwys yn nisgrifiadau 79% o Orchmynion Cadwraeth Coed cofrestredig y sir.

Arolygon Diogelwch Coed mewn Mannau Cyhoeddus Cyngor Swydd Henffordd 2010 a 2012

Am wybodaeth bellach edrychwch ar yr asesiad llawn yma.

Unwaith bydd unrhyw ddata presennol wedi'i dynnu at ei gilydd, mae'n debygol iawn y bydd angen data ychwanegol. Mae modd casglu hyn drwy arolygon penodol sy'n canolbwyntio ar yr onnen. Fodd bynnag, yn ôl profiad, mae awgrym bod yr arolygon hyn gan amlaf yn cael eu comisiynu fel rhan o ddatblygiad Cynllun Gweithredu yn hytrach nag ar y man cychwynnol hwn. Mae gwybodaeth bellach ym **Mlwch 7**.

COSTAU POSIBL O ACHOS GWYWIAD YR ONNEN

Unwaith bydd amcan o'r nifer o goed ynn mewn ardal y cam nesaf fydd cyfrifo'r costau cyllidebol posibl i'r sefydliad. Gall cynllunio senario helpu gyda'r broses hon - er enghraifft, gofyn cwestiynau tebyg i:

- *Beth fuasai'r effaith ar wariant a risg petai 60%/75%/90% o goed ynn yn yr ardal yn dirywio/marw oherwydd gwywiad yr onnen yn y 5–10 mlynedd nesaf?*
- *Pa adnoddau fydd eu hangen os bydd nifer fawr yn dod yn beryglus mewn un tymor?*

[12] 451 cofnod gan Ganolfan Cofnodion Biolegol Swydd Henffordd (HBRC)

Wrth ichi amcan yr adnoddau fydd eu hangen dylech sicrhau bod eich costau yn cynnwys y canlynol

- **gwaith arolwg ychwanegol**
- **costau gwaith rheoli coed ymarferol ychwanegol, er enghraifft, torri coed peryglus i lawr**
- **amser ychwanegol staff i weithio gyda pherchnogion preifat er mwyn sicrhau eu bod yn cael gwared ar goed peryglus**
- **amser staff i ddelio gyda mwy a mwy o ymatebion gan y cyhoedd, er enghraifft, ceisiadau i dorri coed i lawr**
- **amser staff i ddelio gyda cheisiadau i dorri coed ynn i lawr sydd â Gorchymyn Cadwraeth Coed**
- **costau ychwanegol i ailblannu unrhyw beth**
- **unrhyw gostau staff neu ymgynghori eraill ychwanegol**
- **cyfathrebu ac ymgynghoriadau ychwanegol er mwyn egluro gwywiad yr onnen i randdeiliaid perthnasol**

Ni fydd pob un o'r rhain yn briodol ym mhob sefyllfa. Un Cyngor Sir sydd wedi ymgymryd â'r ymarfer hwn ac mae eu hamcangyfrifon cyntaf i'w gweld ym Mlwch 2. Bu i Fwrdeistref Sirol hefyd ymgymryd â chyfrifiadau i amcangyfrif eu costau posibl pan fydd gwywiad yr onnen yn taro eu coed; mae modd gweld hyn ym Mlwch 3. Yn wahanol i ffigyrau'r Cyngor Sir, tydy ffigyrau'r Fwrdeistref Sirol ddim yn cynnwys ailosod unrhyw goed preifat ond yn hytrach yn canolbwyntio ar y coed dan berchnogaeth neu reolaeth y Cyngor.

BLWCH 2 Asesiad Cyngor Sir o oblygiadau i'r gyllideb

Ystadegau sylfaenol:

6,020 o goed ynn wedi'u cofnodi ar **ochrau priffyrdd** wedi'u mabwysiadu

120,000 ffigwr amcan o goed ynn dan **berchnogaeth breifat ac o fewn pellter i ddisgyn ar briffordd**

1,546 o goed ynn wedi'u cofnodi ar **dir ysgol**

5,968 ffigwr amcan o **goetir onnen sy'n gyfagos i fannau cyhoeddus**

Mae **83%** **o'r coed ynn wedi'u cofnodi yn 6 metr a mwy mewn maint** *(y maint sydd angen gwaith er mwyn cael gwared ar risgiau diogelwch)*

Goblygiadau costau torri coed i lawr:

Rhagdybiaeth: cyfradd marwolaeth o **75%** gyda chost arferol torri coed i lawr yn **£400** *(ddim yn cynnwys arolwg)*

Ochrau priffyrdd wedi'u mabwysiadu: **83%** o **6,020** o goed **x75%** cyfradd marwolaeth @ **£400** yr un

= £1,499,000

Perchnogaeth breifat gyfagos i briffyrdd: **83%** o **120,000** o goed **x75%** cyfradd marwolaeth @ **£400** yr un

= £29,880,000

Tir ysgol: **83%** o **1,546** o goed **x75%** cyfradd marwolaeth @ **£400** yr un

= £385,000

Coetiroedd cyfagos i fannau cyhoeddus: **83%** o **5,968** o goed **x75%** cyfradd marwolaeth @ **£400** yr un

= £1,468,000

Plannu coed er mwyn gwneud iawn am y golled:

Yn seiliedig ar Gynllun Coed Am Ddim ar gyfer **83,127** o goed a gollir ar dir awdurdodau lleol ac sydd gyfagos i'r briffordd, @ **£15** y goeden **= £1,246,905**

Cyfanswm costau posibl ar farwolaeth 75% = £34,478,905

(Newid 10% mewn marwolaeth yn cyfateb i +/- £6.7m)

BLWCH 3 Asesiad Bwrdeistref Sirol o oblygiadau i'r gyllideb

Mae cymysgedd o rywogaethau *Fraxinus* yn y Fwrdeistref hon ond yr un amlycaf o bell ffordd ydy'r *Fraxinus excelsior*, gyda 1,115 o goed ynn o dan eu rheolaeth, sy'n cynrychioli 7.5% o'r coed maen nhw'n eu rheoli.

Mae eu poblogaeth o goed *Fraxinus excelsior* yn gyfuniad o : 665 o goed gyda choesyn â diamedr hyd at 30cm; 413 o goed gyda choesyn â diamedr o 30 i 60cm a 37 o goed gyda choesyn â diamedr o 60 hyd at 90cm.

Gan ddefnyddio'u ffigyrau nhw, y gost ychwanegol i gael gwared ar y coed hyn fuasai:

Colled o 60% **Torri'r coed a malu'r bôn yn fân** **= £140,299**

Colled o 75% **Torri'r coed a malu'r bôn yn fân** **= £158,168**

Colled o 90% **Torri'r coed a malu'r bôn yn fân** **= £176,037**

Yn ogystal buasai'r gost archwilio diogelwch cyfredol yn cynyddu 254%.

Buasai'r costau i ailblannu'r coed ynn yn amrywio o

£117,075 **(colled o 60%) i** **£175,612** **(colled o 90%)**

Bu i Awdurdodau Lleol ac asiantaethau eraill fwrw golwg ar gostau torri'r coed ac ailblannu'r coed. Yn y Sir enghreifftiol, lle mae'n bosib y bydd llawer mwy o goed i'w hailblannu ond lle mae'r gost fesul pob coeden yn llai (£15), caiff y gymhareb gwario i dorri coed / ailblannu ei bwyso'n drwm tuag at y costau torri'r coed.

Fodd bynnag, yn y Fwrdeistref enghreifftiol mae'r costau o £175 fesul coeden (coed mwy wedi'u plannu mewn mannau mwy trefol) yn gwthio'r gymhareb torri / ailblannu yn llawer nes at fod yn gyfartal. Unwaith caiff yr amcan gostau cyntaf ynghylch y niferoedd o goed ynn a'r costau posib ynghlwm â gwywiad yr Onnen eu casglu, gallwn ddefnyddio'r wybodaeth er mwyn pennu camau nesaf y broses – llunio cais ar gyfer Cynllun Gweithredu Gwywiad yr Onnen (CGGO).

Cam 3: Gwneud achos am Gynllun Gweithredu Gwywiad yr Onnen (CGGO)

I lunio achos ar gyfer Cynllun Gweithredu Gwywiad yr Onnen (CGGO), mae'n bwysig ystyried nid yn unig y costau ymarferol posib i'r mudiad (gwelwch Gam 2 uchod), ond hefyd y peryglon posib i'r mudiad fel caiff eu hadnabod yn y gofrestr risg gorfforaethol. Bydd adolygu'r ddau ar y cyd yn fodd o benderfynu ydy gwywiad yr onnen yn golygu risg i weithrediadau'r mudiad.

RISG CORFFORAETHOL

Yn ein trafodaethau gydag Awdurdodau Lleol, caiff effeithiau dichonol o goed ar farw a pheryglus yn sgil gwywiad yr onnen eu derbyn fel risg corfforaethol sylweddol bob amser. Cafodd llunio Cynllun Gweithredu i reoli'r risgiau hyn ei adnabod fel y ffordd symlaf o ofalu gall mudiad fynd i'r afael â gwywiad yr onnen, a'r trafferthion yn sgil hyn ,yn effeithiol.

Mae'r canlynol yn enghreifftiau o sut gall gwywiad yr onnen effeithio ar asesiad risg corfforaethol:

EFFAITH AR IECHYD A DIOGELWCH

• Posib o achosi marwolaeth neu anaf yn sgil damweiniau yn ymwneud â gwywiad yr onnen, i weithwyr proffesiynol yn gweithio ar y coed ac i'r cyhoedd.

• Mwy o broblemau iechyd a diogelwch yn sgil llai o goed ynn ar ffyrdd, tir o dan berchnogaeth a chaiff ei reoli fel parciau gwledig, stadau tai, ysgolion, llwybrau beicio, llwybrau march a llwybrau cerdded.

• Risgiau i weithrediadau statudol neu ddarpariaeth gwasanaethau fel cynnal ysgolion diogel, mannau agored cyhoeddus neu briffyrdd.

• Risgiau i staff a defnyddwyr o goed ar dir gyferbyn yn disgyn i mewn i'ch ystâd.

• Risgiau o goed ynn yn disgyn ar ffensys, arwyddion neu storfeydd offer.

EFFAITH AR YR ECONOMI

• Cynnydd mewn cyfrifoldebau mewn achosion o farwolaeth neu anafiadau yn sgil damweiniau yn ymwneud â gwywiad yr onnen.

• Lefelau staffio annigonol a'r gallu (neu anallu) i gyflawni'r gwaith gofynnol gan olygu mwy o gostau i recriwtio a chadw'r staff hanfodol

• Cynnydd mewn gwariant uniongyrchol ac anuniongyrchol oherwydd gwywiad yr onnen e.e. staff ychwanegol a gwaith rheoli, ac effeithiau posib hyn ar wasanaethau a chyllidebau eraill.

• Costau ychwanegol er mwyn cael gwared ar nwyddau gwastraff o goed ynn cwympedig yn cyrraedd y system rheoli gwastraff.

• Costau cynyddol yn sgil cystadleuaeth yn y farchnad ar gyfer nifer cyfyngedig o gontractwyr coed medrus

• Cynnydd mewn costau uniongyrchol / anuniongyrchol yn sgil mwy o risg o lifogydd oherwydd newidiadau i'r ffordd caiff dŵr ei storio gan wreiddiau coed, neu ei amsugno i'r pridd neu ei amsugno gan goed ynn.

• Costau ailblannu angenrheidiol er mwyn cadw gwasanaethau ecosystem gan goed ynn e.e. lleihau llifogydd, cysgodi mannau trefol, storio carbon a chynefinoedd ar gyfer bioamrywiaeth.

• Mwy o gyfrifoldebau yn sgil risgiau i dir gyferbyn ac eiddo 'trydydd parti' yn sgil eich coed yn disgyn / canghennau yn torri

• Gostyngiad mewn costau marchnad ar gyfer nwyddau coed ynn yn sgil mwy o goed ynn ar y farchnad.

NIWED I'R ENW DA

• Posib o amhariadau yn sgil rheoli gwywiad yr onnen e.e. cau sawl ffordd er mwyn mynd i'r afael â choed a all achosi peryg

• Risgiau gwleidyddol ac i enw da yn sgil newyddion negyddol yn y wasg yn sgil rheoli gwywiad yr onnen ynghyd â gwarth cyhoeddus a/neu orbryder.

• Perthnasau dan bwysau o bosib gyda pherchnogion a rheolwyr tir wrth i fwy o goed ynn wywo a bod mwy o gostau ynghlwm i berchnogion preifat.

EFFAITH AR YR AMGYLCHEDD

• Newidiadau i'r dirwedd gydag effeithiau ar dwristiaeth a chyfleoedd adloniadol

• Colled ynghylch gwasanaethau ecosystem fel lleihad mewn ansawdd aer, posib o gynnydd mewn llifogydd, colledion o ran bioamrywiaeth, cynnydd mewn lefelau sŵn gyferbyn â ffyrdd, colled sgriniau gweledol

• Risgiau i rywogaethau / safleoedd wedi'u gwarchod drwy addasu strwythurau, sefydlogrwydd a chyfansoddiad cynefinoedd e.e. colli safleoedd bridio / bwydo ystlumod

• Colled mewn ymneilltuad carbon a charbon wedi'i gadw

• Colled mewn bioamrywiaeth yn sgil lleihad neu farwolaeth rhywogaethau sy'n ddibynnol yn sylweddol neu'n gyfan gwbl ar goed ynn.

BLWCH 4 Brysbennu plâu a chlefydau a chofrestri risgiau

Er mwyn medru ychwanegu gwywiad yr onnen i'w cofrestr risg corfforaethol ar y gweill, bu i Gyngor Sir Gorllewin Sussex ddatblygu ac maen nhw'n treialu system 'brysbennu' er mwyn asesu'r risg gan unrhyw bla neu glefyd

Yn ystod 2017, bu iddyn nhw roi'r 'system brysbennu' ar waith er mwyn dangos effeithiau dichonol gwywiad yr onnen ac er mwyn cyfiawnhau'r adnoddau angenrheidiol i ddatblygu Cynllun Gweithredu Gwywiad yr Onnen. Mae'r broses awgrymedig fel a ganlyn:

– Caiff swyddogion perthnasol eu hysbysu am beryg pla/clefyd newydd gan Defra a'i asiantaethau
– Caiff effaith y pla neu glefyd ei 'brysbennu' yn erbyn y risgiau wedi'u hadnabod yn Asesiad Risg Cymunedol a chofrestr risg cyfundrefnol Gorllewin Sussex sy'n ymwneud â'r canlynol:

• Risg Adnoddau: colli gwerth amgylcheddol, fel gwasanaethau ecosystem ar raddfa cynefinoedd ynghyd â gwerth economaidd o ran costau cyllideb, staff, uniongyrchol ac anuniongyrchol.

• Risg i ddyletswyddau/gweithredoedd/darparu gwasanaethau statudol: fel awdurdod priffyrdd (gan gynnwys hawliau tramwy cyhoeddus) ac fel perchennog tir: ysgolion, eiddo eraill a thirddaliadaeth

• Risg Gwleidyddol / i enw da: gwarth cyhoeddus / gorbryder cyhoeddus

• Risg iechyd a diogelwch: marwolaethau / damweiniau / amhariad cymdeithasol.

Risks are categorised against each item in the risk register as follows: LOW: MEDIUM: HIGH:

IMPACT	LIKELIHOOD				
	1 – Very Unlikely	2 – Unlikely	3 – Possible	4 – Likely	5 – Certain
1 – Insignificant					
2 – Minor					
3 – Moderate					
4 – Significant					
5 – Catastrophic					

Caiff trefn pob eitem eu cofnodi'n annibynnol (heb eu hagregu neu eu cyfartaleddu), ac mae'r effaith gaiff ei restru uchaf yn pennu'r deilliant 'brysbennu' isod. Mae hyn yn caniatáu i'r Cyngor Sir ymateb i'r pla neu glefyd yn briodol. Mae'r llwybr 'brysbennu' yn ymwneud â'r opsiynau canlynol:

1. Os ydy effaith y pla neu glefyd yn ddinod neu'n bitw (1 neu 2 yn y tabl) i'r mudiad neu safle, dylid adolygu'r pla/clefyd yn flynyddol o leiaf er mwyn gofalu nad oes unrhyw newid. Os ydy'r peryg cenedlaethol (wedi'i ddiffinio gan Defra) yn sgil y pla neu glefyd yn newid yn ystod y flwyddyn, yna fe ddylai ail-frysbennu'r pla/clefyd.

2. Os ydy'r effaith yn gymharol (3 yn y tabl), dylid monitro gwybodaeth am y pla/clefyd yn rheolaidd. Os ydy'r pla/clefyd yn bresennol yn yr ardal, yna mae'n bosib bydd yn rhaid monitro union raddau/effaith. Os ydy'r risg cenedlaethol yn sgil y pla neu glefyd (wedi'i ddiffinio gan Defra) yn newid, yna fe ddylid ail-frysbennu'r pla/clefyd.

3. Os ydy'r effaith ar y mudiad yn sylweddol neu drychinebus (4 neu 5 yn y tabl) – yna fe ddylai'r mudiad baratoi neu ddatgan Cynllun Gweithredu Lleol ynghylch Plâu neu Glefydau.

Yn ystod y cyfnod datblygu, daeth i'r amlwg fod modd ei roi ar waith gydag unrhyw bla/clefyd. I wybod mwy am fframwaith proses Gorllewin Sussex ar gyfer penderfyniadau ynghylch blaenoriaethau ar gyfer gweithredu, gwelwch yma.

Caiff system brysbennu plâu a chlefydau Gorllewin Sussex ei ddylanwadu gan Asesiad Risg Cymunedol Fforwm Gwydnwch Sussex (gwelwch yma). Gan ddefnyddio'r trothwyon hyn a'r wybodaeth sydd ar gael am blâu / clefydau, bu modd i'r Cyngor Sir gynnal asesiad cymaradwy o effaith tebygol gwywiad yr onnen ar elfennau amrywiol fframwaith risg y Sir.

Bu i hyn achosi cynhyrchu cofrestr risg iechyd planhigion lleol yn seiliedig ar y Cofrestr Risg Iechyd Planhigion Prydain. Mae hon yn ddogfen fyw er mwyn monitro a chofnodi'r risgiau. Bu i wywiad yr Onnen gofrestru sawl effaith 'sylweddol' yn erbyn eu cofrestr risgiau ac felly bu'n rhaid llunio Cynllun Gweithredu, sydd wrthi'n cael ei ddatblygu ar hyn o bryd.

Bydd gan bob mudiad wahanol elfennau a throthwyon ar gyfer eu cofrestr risg ond gan ddefnyddio'r dull hwn, bydd o bosib yn help i sefydlu'r angen am Gynllun Gweithredu Gwywiad yr Onnen.

Crynodeb: Yr angen am Gynllun Gweithredu Gwywiad yr Onnen

Mae rheoli'r coed a risgiau yn rhagweithiol yn fwy cost effeithiol na rheoli adweitheddol ac er mwyn reoli gwywiad yr onnen yn rhagweithiol, bydd angen datgan y canlynol:

- **Fe fydd coed ynn meirw / ar farw:** bydd lledaeniad gwywiad yr onnen yn achosi i gyfran sylweddol o holl goed ynn i ostwng neu farw. Bydd effeithiau ariannol ac ymarferol ar bob mudiad sy'n gyfrifol am reoli llystyfiant.

- **Mae yna ond cyfnod byr i baratoi:** mae'n bosib y bydd y coed hŷn yn marw wedi ond ychydig o flynyddoedd o heintiad, felly mae'n bosib na fydd gan fudiadau llawer o amser i baratoi ar gyfer effeithiau gwywiad yr onnen a'i gostau ychwanegol.

- **Mae'n rhaid asesu graddfa'r effaith:** mae'n debyg y bydd graddfa'r broblem yn sgil gwywiad yr onnen yn sylweddol uwch na chlefyd y Llwyfen yr Isalmaen (gan fod yna o leiaf dwywaith y nifer o goed ynn mewn mannau cyhoeddus na choed llwyfen). Mae hyn hefyd yn cynnwys y costau ychwanegol ynghlwm â rheoli gwywiad yr onnen. Mae ymdrin â'r broblem yn adweitheddol yn debygol o fod yn ddrytach na chynllunio'ch ymateb drwy Gynllun Gweithredu.

- **Bydd yn effeithio ar y risg corfforaethol:** bydd gwywiad yr onnen yn effeithio ar gofrestri risg corfforaethol yn enwedig o ran risgiau i weithredoedd statudol neu ddarpariaeth gwasanaethau, peryg o fwy o farwolaethau neu anafiadau, effeithiau ar gyllidebau, risgiau i isadeiledd, mwy o gyfrifoldebau , risgiau i gymunedau staff a 'defnyddwyr' ynghyd â risgiau gwleidyddol neu i'r enw da.

- **Bydd angen gwneud newidiadau i ymarferion rheoli:** bydd angen gwneud newidiadau i ymarferion rheoli coed wrth i wywiad yr onnen ledaenu.

- **Cydweithio gydag eraill ar gyfer ymatebion effeithiol ar y cyd:** bydd angen cynllunio ymateb i wywiad yr onnen, er mwyn osgoi gweithio seilo a gwrthdaro gyda pholisïau lleol eraill fel polisïau yn ymwneud â thirwedd a bioamrywiaeth.

- **Mae cyfathrebu a chydweithio yn allweddol:** bydd cynllun yn cynnig gwell gyfleoedd ar gyfer cyfathrebu a thrafod ynghyd â chynnig cyfleoedd i asiantaethau gydweithio'n strategol gyda'i gilydd er mwyn rhannu costau a chyfrifoldebau.

Mae'n hanfodol deall nad ydy gwywiad yr onnen yn 'fusnes fel arfer'.

Mae gwywiad yr onnen un ai mewn ardal yn barod neu mae'n debyg y bydd yn ymddangos yn y blynyddoedd nesaf gydag effeithiau ymarferol ac ariannol difrifol dichonol i nifer o ardaloedd a mudiadau. Felly, er mwyn rheoli gwywiad yr onnen yn effeithiol, caiff dull ar y cyd rhwng mudiadau ac ardaloedd ei argymell.

RHAN 2: PARATOI CYNLLUN GWEITHREDU GWYWIAD YR ONNEN

SUT MAE PARATOI CYNLLUN GWEITHREDU GWYWIAD YR ONNEN (CGGO) A BETH DDYLAI EI GYNNWYS

Mae gofyn rhoi nifer o wahanol weithdrefnau ar waith wrth ddatblygu Cynllun Gweithredu Gwywiad yr Onnen yn dibynnu ar y staff ac adnoddau sydd ar gael. Bydd y cyfnod amser ar gyfer cynhyrchu Cynllun hefyd yn amrywio yn dibynnu ar gymhlethdod y mudiad/ardal a'r adnoddau ar gael i ymwneud â'r gwaith.

Dengys profiadau yn ystod y pedair blynedd diwethaf gall paratoi Cynllun cwbl weithredol gymryd o dri i bedwar mis i dros flwyddyn.

Mae Tabl 1 yn dangos y broses byddwch chi'n debygol o roi ar waith wrth ichi baratoi a chyflwyno Cynllun Gweithredu Gwywiad yr Onnen, gan gynnwys amcan o'r raddfa amser posib er mwyn cyflawni'r dasg, ar sail profiad. Mae modd cynnal sawl un o'r camau hyn ar yr un pryd.

		TOTAL TIME
ACTIONS	Step 1: compile an assessment of your ash trees and their health	3–6 months (average)
	Step 2: set up cross-organisational meetings on ash dieback	1 month
	Step 3: prepare the Plan	3 months to 1 year
	Step 4: set up an internal and/or external steering group to deliver the Plan	3 months to 1 year

Table 1: Estimated total time for preparing an ADAP

Cam 1: Gwneud asesiad o goed ynn

Cynnal ymarfer cychwynnol ar y cyfrifiadur o'r wybodaeth sydd ar gael am boblogaeth coed ynn fel caiff ei ddisgrifio ym **Mlwch 1**.

Pan fo'r data yn brin, bydd angen casglu data penodol o bosib. Mae'n bosib y bydd hyn yn ymdrin ag eitemau fel niferoedd coed ynn mewn ardaloedd lle mae risg uchel, dosbarthiadau oed, poethfannau daearyddol lle mae coed ynn a lle'n bosib asesiad o'u hiechyd. Fel enghraifft, yn ystod haf 2014, bu i staff Cyngor Sir Devon gasglu data o bob cwr o'r sir i bennu'r nifer dichonol o goed ar y priffyrdd yn y sir (**gwelwch Flwch 5**).

BLWCH 5 Arolwg Priffyrdd Cyngor Sir Devon

Yn ystod haf 2014, cafodd cyfanswm o 440km o ffyrdd Devon eu harolygu. Cafodd coed ar 30km o Ffyrdd-A (wedi eu rhannu yn dair adran 10km) eu harolygu ym mhob un o wyth ardal cyngor rhanbarth Devon. Bu i'r arolwg ymdrin â'r arfordir, yr ucheldir, tir ffermio a rhostiroedd er mwyn cynnig trawstoriad daearyddol ac amgylcheddol da o bob rhanbarth.

Cafodd coed ar ffyrdd dosbarthiadau eraill eu cyfri yn defnyddio fideos wedi'u cynhyrchu ar gyfer asesiadau priffyrdd. Cafodd coed ar ddeg cilomedr o ffyrdd dosbarth B, C a diddosbarth eu cyfri ymhob rhanbarth, eto wrth gyfri coed priffyrdd a rhai preifat.

Cafodd holl goed ynn (cyhoeddus a phreifat) a oedd o fewn pellter disgyn o'r briffordd eu cyfri. Cafodd dau ddosbarth eu cofnodi: o dan a dros ddeugain mlynedd. Bu i allosodiad o'r data hwn awgrymu y bu oddeutu 447,639 o goed ynn yn Devon a oedd o fewn pellter disgyn o'r briffordd. I wybod mwy, **gwelwch yma**.

IECHYD YR ONNEN

Yn ystod cyfnod datblygu'r Pecyn Cymorth hwn hwn, daeth i'r amlwg wrth fynd ati i gasglu data ar boblogaeth coed ynn, mae'n syniad da i asesu cyflwr cyfredol iechyd yr onnen yr un pryd.

Gall fod yn anodd adnabod symptomau gwywiad yr onnen mewn coed mwy. Yn ystod 2014, bu i Gyngor Sir Suffolk ddatblygu system i ddisgrifio iechyd yr onnen yn defnyddio categoreiddiad pedwar rhan yn canolbwyntio ar gyflwr canopi'r onnen i bennu'r iechyd cyffredinol (gwelwch Flwch 6).

Mae'n bwysig nodi mae'n bosib nad ydy cyflwr gwael y canopi yn sgil gwywiad yr onnen. Gall problemau eraill fel pwysau sychder, problemau gyda gwreiddiau neu hyd yn oed difrod gan golomennod coed achosi i ganopi'r onnen ddirywio. At hyn, ni fydd arolygiadau o ganopi'r coed yn datgelu arwyddion eraill o heintiad fel nodwydd waelodol. Fodd bynnag, pan fo diffyg nodweddion hawdd eu hadnabod mewn coed mawr, mae arolygu'r canopi yn ddefnyddiol i bennu'r iechyd ac mae'n gymharol hawdd ei asesu.

BLWCH 6 System Asesu Iechyd Coed Ynn Cyngor Sir Suffolk

Yn Suffolk, caiff canopïau coed ynn eu sgorio, gan asesu'r canran o'r corun sy'n weddill. Gan ddefnyddio'r fframwaith pedwar categori hwn, bydd modd pennu coeden i gategori iechyd, sy'n cynnig awgrymiadau gweithredu i fynd i'r afael â'r broblem. Dyma'r pedwar categori:

- **100%–75% o'r canopi yn weddill**
- **75%–50% o'r canopi yn weddill**
- **50%–25% o'r canopi yn weddill**
- **25%–0% o'r canopi yn weddill**

I wybod mwy, **gwelwch yma** lle bydd pedwar llun cyfeirnod sy'n feincnodau ar gyfer y canran o'r canopi sy'n weddill (wedi'i ddangos isod hefyd). Holl luniau © Gary Battell

0% o wywiad – Corun Iach

25% o wywiad

50% o wywiad

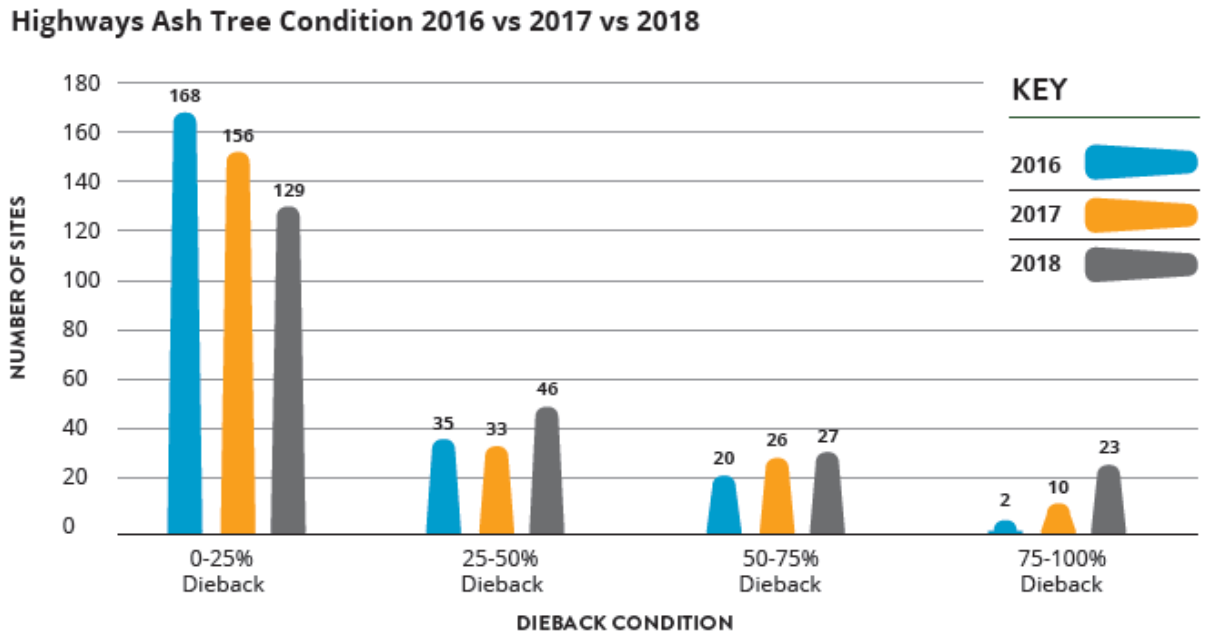
75% o wywiad

Yn ystod 2016, 2017 a 2018 bu i Gyngor Sir Norfolk gynnal arolwg enghreifftiol o'r nifer o goed ynn ar y priffyrdd ac asesu system Suffolk ar gyfer asesu iechyd coed ynn, gan ychwanegu dau ddosbarth ychwanegol. Yn ystod eu harolwg, bu iddyn nhw gofnodi iechyd coed ynn yn defnyddio **system pedwar categori Suffolk** ac ychwanegu coed a oedd yn 100% iach a 100% marw sy'n dangos y canran o'r corun sy'n weddill. Caiff crynodeb o'r data iechyd ei ddangos ym **Mlwch 7**.

BLWCH 7 Arolwg Coed Ynn ar Briffyrdd Cyngor Sir Norfolk

Yn 2016 a 2017 bu i Gyngor Sir Norfolk gynnal arolwg o'r holl goed ynn a oedd o fewn pellter disgyn o ffyrdd A a B yn ogystal â rhai isffyrdd gan gynrychioli 20% o rwydwaith ffyrdd Cyngor Sir Norfolk. Cafodd 30,000 o goed eu hasesu. Bu i ddadansoddiad ystadegol (Fera Science Ltd) ddynodi bod amcan boblogaeth coed ynn sydd o fewn pellter disgyn o'r briffordd rhwng 155,700 a 180,100 o goed. Mae oddeutu 12% o goed wedi'u harolygu yn berchen i Gyngor Sir Norfolk a bu angen torri oddeutu 5% bryd hynny.

Er mwyn bwrw golwg ar y newidiadau o flwyddyn i flwyddyn, cafodd 225 safle gyda 3,005 o goed eu hasesu rhwng 2016 a 2018. Mae'r graff canlynol yn cyfuno'r arsylwadau 0% a 100% ac yn dangos dirywiad coed ynn iach (0-25%), y cynnydd mewn coed ynn gwael eu hiechyd (75-100%) a'r ansicrwydd ynghylch y cyfnod trawsnewid (25-75%). Mae Cyngor Sir Norfolk yn defnyddio'r dystiolaeth hyn er mwyn gwneud penderfyniadau.



Gwelwch methodoleg Arolwg Norfolk, y ffurflen arolwg, a gwybodaeth, gweithdrefn a chanllaw lluniau Gwywiad yr Onnen.

NIWEIDIAU SYLFAENOL

Nid ydym yn ymwybodol o effeithiau nodwyddau gwaelodol yn sgil gwywiad yr onnen hyd yn hyn. Bu inni ganfod fod y pathogen gwywiad yr onnen a'r pathogen eilradd yn achosi i'r nodwyddau gwaelodol hyn bydru'r gwreiddiau a'r bonion . Mae'n debyg bod yr nodwyddau gwaelodol yn ffurfio pan fo'r ffwng yn heintio trwy'r lentiselau ar goesyn y goeden pam fod pwysau'r haint yn uchel. Mae'r adroddiadau o Ewrop, wedi'u cyhoeddi yng nghynhadledd FRAXBACK Llundain yn 2012, yn awgrymu'r canlynol:

• Mae nodwyddau gwaelodol a'r pydredd i wreiddiau a bonion yn achosi i goed ynn mwy mewn sawl man i farw, yn enwedig ar safleoedd coetir gwlyb.

• Caiff nodwyddau gwaelodol eu cysylltu gyda pathogen eilradd ychwanegol yn aml -– *Armillaria sp***. fodd bynnag gall ffwng gwywiad yr onnen hefyd fod yn brif gatalydd i'r nodwyddau.**

• Pan fo pathogenau eilradd yn bresennol, gall y goeden farw'n sydyn, cwympo neu dorri, yn enwedig ar safleoedd gwlyb lle bu gwywiad yr onnen yn bresennol am amser maith.

• Os ydy coeden yn dioddef o nodwyddau gwaelodol a phydredd i'w wreiddiau a'i fonyn, gall chwilod rhisgl ddod yn hynod gyffredin

• Gall nodwyddau gwaelodol a'r pydredd i wreiddiau a bonion yn sgil hynny ansefydlogi coed cyn i'r canopi ddechrau dirywio.

© Jon Stokes

Gall adnabod nodwyddau gwaelodol yn fuan fod yn anodd. Dylai'r rheiny sy'n cynnal arolygiadau neu archwiliadau edrych am nodwyddau bach sy'n ffurfio triongl ger bôn coeden. Gall y rhain ddod yn fwy ac yn fwy datblygedig wrth i'r haint ddatblygu. Wrth inni ddod i ddeall mwy am y mater hwn, mae'n bosib y bydd y canllawiau yn newid. Fodd bynnag, ar hyn o bryd, mae'n ymddangos yn synhwyrgall y dylid gwirio am nodwyddau gwaelodol yn ystod unrhyw archwiliadau manwl o goed ynn. Os caiff nodwyddau gwaelodol eu cofnodi, dylid cyflawni'r gwaith diogelwch coed priodol.

ARGYMHELLION AROLWG

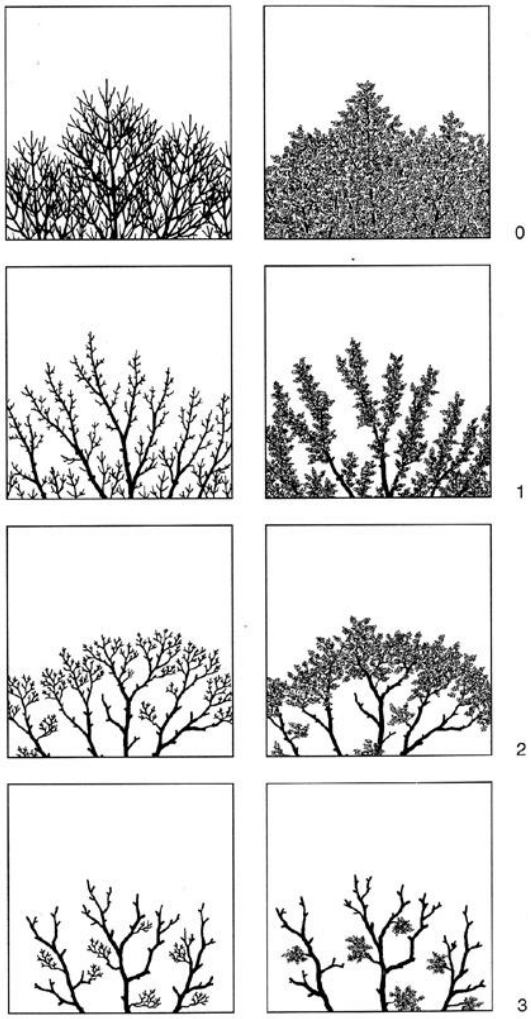
Rydym erbyn hyn yn argymell yn genedlaethol i bobl ddefnyddio'r pedwar Dosbarth Iechyd hyn wrth gynnal unrhyw arolygiadau yn y dyfodol. Felly, dylai pob coeden ynn caiff eu harolygu gael eu dosbarthu i un o'r pedwar Dosbarth Iechyd yr Onnen:

- **Dosbarth Iechyd 1 yr Onnen**– 100%–75% o ganopi yn weddill
- **Dosbarth Iechyd 2 yr Onnen**– 75%–50% o ganopi yn weddill
- **Dosbarth Iechyd 3 yr Onnen**– 50%–25% o ganopi yn weddill
- **Dosbarth Iechyd 4 yr Onnen**– 25%–0% o ganopi yn weddill

Mae modd cymharu fersiwn Suffolk yn uniongyrchol gyda'r gwaith yn ymwneud â bywyd coed gan Roloff (2001)[13] a fydd yn fodd o gymharu data Prydain gyda data Ewrop os caiff cofnodion cywir eu llunio.

Mae cyfuno arolygu niferoedd y coed ac asesu eu hiechyd yn ddefnydd effeithiol o adnoddau. Bydd hyn yn gyfle i fudiadau ddeall am helaethrwydd coed ynn ynghylch eu cyflwr iechyd cyfredol.

Yna fe ddylid defnyddio unrhyw arolygiadau dilynol er mwyn monitro newidiadau rhwng Dosbarthiadau Iechyd dros amser. Bydd hyn yn fodd o ddysgu mwy am effaith a chyflymder lledaeniad gwywiad yr onnen. Mae monitro dros amser hefyd yn hanfodol gan fod adroddiadau yn dangos mewn ychydig o flynyddoedd bydd modd i goed adfer cyflwr eu canopi, yn enwedig yn ystod hafau poeth a sych pan na fydd y tywydd yn ddelfrydol i ffwng sborynnu. Fodd bynnag, ar y cyfan, fe fydd iechyd y coed yn parhau i ddirywio yn sgil yr haint yn y coed. Felly mae'n hanfodol, er os ydy'r cyflwr yn gwella, eich bod yn parhau i'w harolygu.



Ffigwr 5: Dosbarthiadau Bywioldeb *Fraxinus*
Mae Lluniau 1 a 2 yn ddosbarth Bywioldeb Ewropeaidd
0 sy'n cyfateb i Ddosbarth Iechyd 1 Prydain.
Lluniau 3 a 4 = Dosbarth Iechyd 2.
Lluniau 5 a 6 = Dosbarth Iechyd 3.
Lluniau 7 ac 8 = Dosbarth Iechyd 4.
Wedi'u defnyddio gyda chaniatâd 'A. Roloff 2001: *Baumkronen*. Cyhoeddwr: Ulmer, Stuttgart/GER

[13] Gwelwch A. Roloff 2001: *Baumkronen*. Cyhoeddwr: Ulmer, Stuttgart/GER

GOBLYGIADAU RHEOLI CYFUNDREFN DOSBARTHIAD IECHYD YR ONNEN

Ynghyd a chynnig dull ar gyfer cofnodi cyflwr iechyd coed ynn, mae'r system Dosbarthiadau Iechyd Coed Ynn hefyd yn cynnig framwaith ar gyfer trafodaeth am yr ymarferiadau rheoli hanfodol er mwyn rheoli'r dirywiad mewn coed ynn er lles diogelwch y cyhoedd. Fel enghraifft, cafodd pedwar llun cyfeirnod Suffolk eu cyflwyno i 120 o swyddogion coed Awdurdodau Lleol. Bu inni eu holi ynghylch eu penderfyniadau rheoli yn sgil y lluniau cyfeirnod. Dyma'u hymatebion:

	Inspect in line with tree management policies	Increased inspection and possible work	Detailed and specialist inspection and/or work	Fell or remove
Ash Health Class 1	100%			
Ash Health Class 2	95%	5%		
Ash Health Class 3	5%	85%	10%	
Ash Health Class 4			80%	20%

Table 2: Management response to canopy decline

Mae'r data hwn yn awgrymu wrth i ddirywiad yn iechyd yr onnen ddod yn fwy amlwg, caiff y penderfyniadau ac ymarferion rheoli ynghylch y goeden honno eu haddasu. Mae asesu a monitro newidiadau yn iechyd eich poblogaeth o goed ynn yn hanfodol er mwyn asesu'r union drafferthion rheoli y mae a bydd yn rhaid i'r mudiadau fynd i'r afael â nhw. Er mwyn helpu staff gyda phenderfyniadau rheoli yn dilyn arolwg, bu i Gyngor Norfolk ddatblygu Siart Rediad Archwilio Priffyrdd, gallwch fwrw golwg arni **yma**.

Cam 2: Ymgysylltu gyda chydweithwyr ynglŷn â gwywiad yr onnen a'r angen am gynllun

Unwaith caiff data coed lleol ei gasglu a'i ddefnyddio er mwyn diweddaru modelau ariannol (gwelwch **Flwch 2 ar dudalen 21**), dylid trefnu cyfarfod(ydd) rhwng gwahanol fudiadau ynghylch gwywiad yr onnen er mwyn hysbysu'r gweithwyr a rheolwyr am y materion. **Gwelwch Flwch 8** gan Swydd Gaerlŷr.

BLWCH 8 Ymgysylltiad Cyngor Swydd Gaerlŷr gyda chydweithwyr

Yn ystod haf 2017, bu i Dîm Rheoli Adrannol yr Amgylchedd a Chludiant Cyngor Swydd Gaerlŷr ddwyn i ystyriaeth gwywiad yr onnen a'r goblygiadau ynghlwm. Bu cynrychiolwyr o'r Adran Gyllid, Gwasanaethau Eiddo, yr Adran Yswiriant, yr Uned Trawsnewid a'r Adran Adnoddau Dynol yn bresennol hefyd er mwyn dysgu am y goblygiadau ehangach i'r Cyngor. O ganlyniad i'r cyfarfod, cafodd gwywiad yr onnen ei drosglwyddo i'r Tîm Rheoli Corfforaethol a'i ychwanegu at gofrestr risg corfforaethol y Cyngor. Cafodd tîm prosiect gydag aelodau o wahanol adrannau ei sefydlu er mwyn datblygu sut bydd y Cyngor yn ymateb i wywiad yr onnen.

Bu i'r tîm gyhoeddi eu Cynllun Gweithredu Gwywiad yr Onnen ym mis Gorffennaf 2018 (**gwelwch y Cynllun**), gyda dros £5 miliwn wedi'i neilltuo i ymdrin â gwywiad yr onnen yn y sir. Cafodd y Cynllun ei gymeradwyo mewn cyfarfod Cyngor llawn ym mis Gorffennaf 2018 ac mae recordiad ar **YouTube** (eitem ar wywiad yr onnen yn cychwyn ar 1 awr 35 munud).

Diben yr ymgysylltu hyn ydy ceisio am gefnogaeth reolaethol i gynhyrchu'r Cynllun Gweithredu Gwywiad yr Onnen a mynd rhagddi gyda cham nesaf y broses – datblygu'r Cynllun Gweithredu Gwywiad yr Onnen ei hun.
Yn ystod y cyfarfodydd hyn, bydd angen ichi fwrw golwg ar y risgiau cyfundrefnol ar **dudalen 15** ynghylch effeithiau iechyd a diogelwch, economaidd, amgylcheddol ac effeithiau i'r enw da. Wrth drafod gyda Chyfarwyddwyr Awdurdodau Lleol yn ystod cyfnod datblygu'r Pecyn Cymorth hwn, bu pryderon ynghylch effeithiau gwywiad yr onnen amrywio rhwng mudiadau, ond y pryderon mwyaf cyson oedd:

1. Effaith ar iechyd a diogelwch
- Marwolaethau neu anafiadau posib yn sgil damweiniau yn ymwneud gyda gwywiad yr onnen
- Mwy o broblemau iechyd a diogelwch yn sgil llai o goed ynn ar y ffyrdd, ar dir wedi'i feddiannu neu ei reoli fel parciau gwledig, ystadau tai, ysgolion, llwybrau beicio, llwybrau meirch a llwybrau cerdded

2. Effaith ar yr economi
- Mwy o gyfrifoldebau yn sgil marwolaethau neu anafiadau o ganlyniad i ddamweiniau yn ymwneud gyda gwywiad yr onnen
- Lefelau staff annigonol i ymgymryd â'r gwaith gofynnol gan achosi costau uwch i recriwtio a chadw'r staff angenrheidiol
- Mwy o gostau uniongyrchol ac anuniongyrchol yn sgil gwywiad yr onnen fel mwy o staff, gweithrediadau rheoli ychwanegol a'r effaith posib ar wasanaethau a chyllidebau eraill

3. Niwed i'r enw da
- Risgiau gwleidyddol ac i'r enw da yn sgil sylw negyddol yn y wasg a/neu feirniadaeth gyhoeddus o'r gwaith i reoli gwywiad yr onnen
- Perthnasau gyda phwysau posib gyda thirfeddianwyr a rheolwyr wrth i wywiad yr onnen ledaenu a bod mwy o gostau i'r perchnogion preifat

4. Effaith ar yr amgylchedd
- Newidiadau i'r dirwedd gan effeithio ar dwristiaeth a chyfleoedd adloniant.

Yn dilyn y cyfarfod hwn, mae'n bosib y bydd angen ichi wneud y canlynol hefyd:
- **ceisio am gefnogaeth wleidyddol ar gyfer y Cynllun Gweithredu Gwywiad yr Onnen**
- **penodi hyrwyddwr neu eiriolwr Cynllun Gweithredu Gwywiad yr Onnen, sef Cynghorydd, Cadeirydd Pwyllgor neu Arweinydd Cyngor, Cyfarwyddwr neu uwch reolwr os yn bosib.**

Bu inni ganfod, wrth ddatblygu'r pecyn cymorth hwn, ei fod yn help mawr i fanteisio ar gefnogaeth gwleidyddol mor fuan â phosib wrth i fudiadau fynd ati i lunio cynlluniau yn ymwneud â gwywiad yr onnen. Mae'r gefnogaeth wleidyddol hon fel arfer yn hanfodol er mwyn gofalu bod modd manteisio ar adnoddau ac amser y swyddog. Felly, bydd angen ichi gynnig crynodeb digonol i wleidyddion lleol ynghylch gwywiad yr onnen. Gwelwch adroddiad Pwyllgor Cyngor Sir Norfolk ynghylch gwywiad yr onnen, wedi'i ddyddio **Medi 2016**, **Hydref 2016**, a **Thachwedd 2017**.

Mae'n bosib y bydd angen ichi fabwysiadu'r Cynllun Gweithredu Gwywiad yr Onnen yn ffurfiol hefyd, gall olygu'r canlynol:
- **derbyn cadarnhad gan y Cabinet neu'r Pwyllgor perthnasol**
- **cyhoeddi'r cynllun ar wefan y Cyngor**
- **cyfuno'r cynllun gyda dogfennau polisi eraill y Cyngor neu gyfeirio at y cynllun ynddyn nhw e.e. Cynlluniau Bioamrywiaeth Lleol neu Gynlluniau yn ymwneud â'r Dirwedd**
- **datblygu unrhyw fframweithiau neu Ddogfennau Cynllunio Atodol.**

Cam 3: Creu Cynllun Gweithredu Gwywiad yr Onnen

Unwaith y bydd cefnogaeth rheoli er mwyn llunio Cynllun Gweithredu Gwywiad yr Onnen, bydd angen i fudiadau neilltuo amser staff a/neu adnoddau er mwyn datblygu'r Cynllun Gweithredu Gwywiad yr Onnen. **I'ch helpu chi gyda llunio'r Cynllun Gweithredu Gwywiad yr Onnen, bu inni gynhyrchu templed gallwch ei lawr lwytho yma gydag awgrymiadau o ran y strwythur a'r cynnwys.** Yna, gall pob mudiad fynd ati i addasu'r templed fel sy'n briodol.

CYDRANNAU I'W HARGYMELL MEWN CYNLLUN GWEITHREDU GWYWIAD YR ONNEN

Bydd union natur y Cynllun Gweithredu Gwywiad yr Onnen yn dibynnu ar anghenion y mudiad a'r trafferthion maen nhw'n eu hwynebu. Wrth i fudiadau fynd ati i gynhyrchu mwy o Gynlluniau, caiff y **cynllun templed** ei goethi. Dyma grynodeb o'r rhannau isod:

- **Crynodeb Gweithredol o'r Cynllun Gweithredu Gwywiad yr Onnen**

- **Cynllun Gweithredu Gwywiad yr Onnen: blaenoriaethau, deilliannau ac allbynnau**

- **Gwybodaeth am wywiad yr onnen: bioleg, ymlediad a'r effaith dichonol**

- **Buddion coed a choetiroedd ynn**

- **Cyngor rheoli: opsiynau ar gyfer rheoli gwywiad yr onnen**

- **Effeithiau dichonol yn sgil gwywiad yr onnen yn eich ardal, fel i:**
-- Y dirwedd a bioamrywiaeth
-- Tirfeddianwyr lleol, rheolwyr tir a pherchnogion cartrefi
-- Mudiadau gwasanaethau cyhoeddus ac isadeiledd lleol

- **Adfer wedi effeithiau gwywiad yr onnen**
– ail-ddatblygu coedwigoedd gwydn

- **Effeithiau posib gwywiad yr onnen ar waith eich mudiad a mudiadau eraill yn eich ardal**
-- Effaith ar iechyd a diogelwch
-- Effaith ar yr economi
-- Niwed i'r enw da
-- Effaith ar yr amgylchedd

- **Mae'r Cynllun Cyflwyno yn ymwneud â: gweithrediadau blaenoriaethol, amcan gostau, prif bartneriaid darparu a datblygu gweithdrefnau newydd yn ymwneud â rheoli coed, er enghraifft defnydd o siswrn torri coed.**

Cam 4: Sefydlu grŵp gweithredu'r cynllun yn fewnol a/neu yn allanol

Unwaith caiff y cynllun ei ddatblygu a'i gymeradwyo, bydd angen ichi sefydlu grŵp llywio mewnol a/neu allanol i fynd ati i weithredu'r Cynllun. Gallwch wneud hyn drwy sefydlu grŵp gwaith newydd (**gwelwch Flwch 9**).

BLWCH 9 Fforwm Gwydnwch Devon ynghylch Gwywiad yr Onnen

Yn dilyn cyhoeddiad **Cynllun Gweithredu Gwywiad yr Onnen Devon**, cafodd Fforwm Gwydnwch Devon ynghylch Gwywiad yr Onnen ei sefydlu er mwyn goruchwylio rhoi'r cynllun ar waith. Dyma amcanion y fforwm:

- **Cynnig gweithdrefn gryfach gyda mynd i'r afael â gwywiad yr onnen**
- **Cynnig cysondeb**
- **Osgoi dyblygu / adnoddau yn mynd i wastraff**
- **Gofalu bod gwybodaeth yn cael ei rannu'n well gyda holl rhanddeiliaid gwywiad yr onnen.**

Yn dilyn y cyfarfod cyntaf ym mis Gorffennaf 2016, cafodd **amcanion y grŵp eu cytuno**.

Cafodd Is-grwpiau eu sefydlu i weithredu ar y cyd ar y meysydd canlynol:

- **Rheoli Risg Gwywiad yr Onnen**
- **Lleihau Effaith Amgylcheddol Gwywiad yr Onnen**
- **Cyfathrebu.**

Cafodd brand adnabyddus ei ddatblygu fel ei fod yn ymddangos bod unrhyw gyfathrebu gyda rhanddeiliaid yn deillio o ffynhonnell unedig. Cafodd y **pennawd llythyr** ei gymeradwyo ym mis Hydref 2016 er mwyn i aelodau'r Fforwm fedru cyfathrebu gyda rhanddeiliaid allanol.

Yn sgil datblygu Fforwm Gwydnwch Devon ynghylch Gwywiad yr Onnen, cafodd gweithdrefn ar y cyd ei hwyluso er mwyn rheoli gwywiad yr onnen yn Devon. Bu i hyn sicrhau fod y paratoadau er mwyn mynd i'r afael gyda gwywiad yr onnen yn gyson rhwng asiantaethau gan osgoi unrhyw waith wedi'i ddyblygu neu adnoddau'n mynd i wastraff.

Bu i Devon fwrw golwg ar effaith hirdymor gwywiad yr onnen ar y sir a bu iddyn nhw gyflwyno cynllun amnewid tri o goed ynn yn lle un, gan blannu tair coeden am bob un coeden hŷn.

Dyma'r adnoddau bu i'r grŵp eu llunio:
- **Canllaw ar gyfer gwarchod rhywogaethau a chynefinoedd wrth fynd i'r afael gyda gwywiad yr onnen**
- **Strwythur gwefan gwywiad yr onnen**

Ymysg aelodau'r fforwm mae'r canlynol: Ardal o Harddwch Naturiol Eithriadol Devon, Canolfan Cofnodion Bioamrywiaeth Devon, Cyngor Sir Devon, Cyngor Dosbarth Dwyrain Devon, Cyngor Dosbarth Gogledd Devon, Cyngor Sir Plymouth, Cyngor Dosbarth Teignbridge, Cyngor Torbay, Cymdeithas Meddianwyr Tir Gwledig, FWAG SW, Grŵp Gwrychoedd Devon, Gwarchodfa Bïosffer Gogledd Devon, Gwasanaeth Arfordiroedd a Chefn Gwlad Torbay, Lloegr Naturiol, Mynwentydd Byw Devon, Network Rail, Parc Cenedlaethol Dartmoor, Parc Cenedlaethol Exmoor, Priffyrdd Devon, Priffyrdd Kier ar gyfer HE, RSPB, Treeconomics, Undeb Cenedlaethol yr Amaethwyr, Western Power Distribution, Y Comisiwn Coedwigaeth, Y Cyngor Coed, Y Gymdeithas Goedyddiaeth, Ymddiriedolaeth Natur Devon, Ystadau Clinton Devon, Yr Ymddiriedolaeth Genedlaethol, Yr Ymddiriedolaeth Coetiroedd

CYNLLUNIAU GWYWIAD YR ONNEN PRESENNOL AWDURDODAU LLEOL
Hyd y gwyddwn ni, mae fersiynau o'r Cynllun Gweithredu Gwywiad yr Onnen wedi'u datblygu yn y siroedd canlynol : **Devon**, **Caint**, **Caerlŷr**, **Dwyrain Sussex, Gorllewin Sussex, Dwyrain Lindsey a Test Valley**. Caiff cynlluniau gweithredu hefyd eu datblygu yn Norfolk, Cernyw a Suffolk. Wrth i fwyfwy o gynlluniau gael eu cyhoeddi, byddwn yn ehangu'r adran hon.

RHAN 3: SUT MAE MYND I'R AFAEL GYDAG AC YMATEB I WYWIAD YR ONNEN

Unwaith caiff Cynllun Gweithredu Gwywiad yr Onnen (ADAP) ei ddatblygu, bydd yn rhaid ymdrin â chyfnod gweithredu Ffigwr 1 (tudalen 7), er mwyn ymateb i wywiad yr onnen. Felly bydd angen canolbwyntio ar weithredu (e.e. torri coed) i fynd i'r afael â'r problemau yn sgil gwywiad yr onnen.

Yn ystod y cyfnod hwn o wywiad yr onnen, (gwelwch **Ffigwr 1**), sy'n debygol o bara am flynyddoedd maith, bydd opsiynau rheoli penodol yn newid a chaiff ymarfer gorau ei ddatblygu a'i addasu. Byddwn yn rhannu enghreifftiau diweddar ac ymarfer gorau wedi'i ddatblygu trwy'r pecyn cymorth hwn. Rydym yn annog unrhyw fudiad i gysylltu gyda ni er mwyn cynnig adborth neu enghreifftiau o ymarferion amgen.

CAM GWEITHREDU 1 - DATBLYGU CYNLLUN CYFATHREBU I GYNULLEIDFAOEDD MEWNOL AC ALLANOL
Mae angen i ystod eang o randdeiliaid mewnol ac allanol fod ynghlwm er mwyn mynd i'r afael â gwywiad yr onnen yn effeithiol. Bydd cynllun cyfathrebu yn gofalu fod modd i'r holl bartneriaid fanteisio ar yr wybodaeth angenrheidiol i fedru gweithredu'n effeithiol. Fe ddylai'ch cynllun cyfathrebu adnabod yr holl randdeiliaid mewnol ac allanol, beth sydd angen iddyn nhw ei wybod a sut byddwch yn eu hysbysu. Bu i Grŵp Gwydnwch Tirwedd ac Ecolegol (LERG) Fforwm Gwydnwch Devon ynghylch Gwywiad yr Onnen ddatblygu strategaeth cyfathrebu sy'n adnabod sut dylai gwahanol fudiadau partner gyfathrebu gyda rhanddeiliaid perthnasol wrth ymwneud â rhannau allweddol yr ymateb. Fe ddylen nhw drafod sut i adnabod ac ymateb i wywiad yr onnen i ysbrydoli'r gymuned ehangach i weithredu, i ddatblygu dealltwriaeth o'r clefyd drwy rannu gwybodaeth. Gallwch fwrw golwg ar y ddogfen **yma.**

CAM GWEITHREDU 2 - DEALL COLLED YR ONNEN A BIOAMRYWIAETH
Mae coed ynn yn cefnogi nifer sylweddol o rywogaethau eraill. Cafodd rhestr o 955 o rywogaethau sy'n defnyddio'r onnen ei lunio, lle mae 45 yn defnyddio'r onnen yn unig, h.y. maen nhw ond yn ymddangos ar goed onn mae'n debyg ac mae 62 yn dra chysylltiedig gyda'r onnen (anaml iawn byddan nhw'n ymddangos ar goed eraill heblaw'r onnen. Gallwch fwrw golwg ar y rhestr o'r rhywogaethau hyn ar daenlen Excel o'r enw AshEcol sydd ar gael yma:

NECR151 rhifyn 1 – Taenlen o fioamrywiaeth sy'n gysylltiedig gyda'r onnen.
Os ydy rhywogaeth prin yn defnyddio unrhyw goed eraill ar wahân i'r onnen, yna mae'n bosib bydd ei boblogaeth yn gostwng os bydd y nifer o goed ynn yn gostwng. Fodd bynnag, mae'n bosib fod modd parhau i gefnogi poblogaethau rhywogaethau sy'n defnyddio coed eraill yn ogystal â'r onnen. Bu asesiad ar bob un o'r 995 rhywogaeth sy'n ymwneud â'r onnen ac a fydden nhw'n defnyddio un o'r 48 math o goed eraill ai pheidio. Mae'r wybodaeth hefyd ar gael ar AshEcol. Er mwyn helpu rheolwyr coetir coed ynn, cafodd gweithdrefn 5 cam ei ddatblygu i'w helpu i adnabod sut i newid dulliau rheoli eu coetir er mwyn cefnogi bioamrywiaeth cysylltiedig â'r onnen pe bai'r nifer o goed ynn yn gostwng.

Mae'r weithdrefn 5 cam hwn ar gael yma: **NECR151 rhifyn 1 – Taenlen ar fioamrywiaeth sy'n gysylltiedig â'r onnen : cyfarwyddiadau**.

Bu i 15 safle astudiaeth achos ledled Prydain roi'r weithdrefn ar waith. Mae modd **lawr lwytho** pob astudiaeth achos **yma**.

CAM GWEITHREDU 3 - DATBLYGU SAFLE CYFFREDIN I WYWIAD YR ONNEN AC YMARFERION CYFREITHIOL PRESENNOL

Mae sawl Awdurdod Lleol ac asiantaethau eraill yn dymuno datblygu dull ar y cyd o fynd i'r afael gyda gwywiad yr onnen, er mwyn gofalu caiff 'ymarfer gorau' ei rannu a'i weithredu. Bu i grŵp Swyddogion Coed Caint baratoi papur sy'n ymdrin â gwaith ar y cyd swyddogion coed Caint yn ymwneud â gwywiad yr onnen. Bu iddyn nhw ddangos ei fod yn bosib cynnal gwaith ar y cyd mewn sir ac mae hyn yn sail ar gyfer trafodaeth gyda grwpiau Awdurdodau Lleol eraill. Gallwch **lawr lwytho'r** ddogfen gyflawn **yma**.

CAM GWEITHREDU 4 - RHEOLI GWYWIAD YR ONNEN MEWN MANNAU Â RISG UCHEL

Fel rhan o waith Fforwm Gwydnwch Devon ynghylch Gwywiad yr Onnen, cafodd model ei ddatblygu o'r opsiynau rheoli ar gyfer coed ynn mewn mannau â risg uchel wedi'u heffeithio gan wywiad yr onnen. Mae'r model yn ymwneud â'r pedwar Dosbarth Iechyd yr Onnen (wedi'u crybwyll ym **Mlwch 5**) ac ymatebion rheoli arfaethedig Devon i bob un. Gallwch **ei lawr lwytho yma**.

CAM GWEITHREDU 5 – PAMFFLED A CHANLLAW/PECYN CYMORTH BIO-DIOGELWCH

Wrth i wywiad yr onnen ledaenu yng Nghaint (gwelwch **Ffigwr 7**) a Suffolk (gwelwch **Ffigwr 8**), cafodd canllaw i'r cyhoedd ei ddatblygu. Mae'r ddwy ddogfen hyn yn enghreifftiau o ddeunyddiau wedi'u cynhyrchu i gymunedau ynghylch gwywiad yr onnen. Dylid datgan cafodd y pamffledi hyn eu cynhyrchu ar gychwyn cyfnod gwywiad yr onnen ac mae'n bosib fod gwybodaeth ac argymhellion wedi newid wrth inni ddysgu mwy am wywiad yr onnen. Hefyd, bu i'r Comisiwn Coedwigaeth gynhyrchu mwy o gyfarwyddyd ar **reoli gwywiad yr onnen mewn coetiroedd.**

Ffigwr 7: Pecyn cymorth Gwywiad yr Onnen Suffolk

Ffigwr 8: Pecyn Cymorth Gwywiad yr Onnen Caint

CAM GWEITHREDU 6 - CYNNIG COFNOD O'R DIRYWIAD MEWN COED YNN

Yn Swydd Henffordd, bu i'r Cyngor Coed gynnal cynllun prawf gyda Wardeiniaid Coed lleol er mwyn datblygu dull i gofnodi a monitro dirywiad coed ynn unigol. Gan fod goblygiadau rheoli amlwg yn sgil y cyflymder newid rhwng Dosbarthiadau Iechyd, mae hyn yn faes gwaith y mae'r Cyngor Coed yn dal i'w ddatblygu gyda
Fera Science Ltd.

Mae'r ddwy ddogfen hyn yn ymdrin â'r weithdrefn sydd wedi'i ddatblygu yn Swydd Henffordd:

- **Llythyr bras o arolwg Swydd Henffordd**
- **Ffurflen Gofnodi Arolwg Swydd Henffordd**

Os hoffai eich awdurdod/asiantaeth wybod mwy am hyn, mae croeso ichi gysylltu gyda **Jon.Stokes@treecouncil.org.uk**.

CAM GWEITHREDU 7 - CLIRIO'R BRIFFORDD

Yn Devon, cafodd y dasg ar y cyd i dorri coed ar y priffyrdd cyntaf ei gynnal ger Bickleigh yn sgil gwywiad yr onnen yn ystod Chwefror 2018. Dros gyfnod o dridiau, cafodd 60 o goed ynn eu torri oherwydd pryderon diogelwch yn sgil gwywiad yr onnen yn yr ardal. Yn ystod y dasg, bu i hyd at naw triniwr coed gydweithio a rhaid oedd cau nifer sylweddol o ffyrdd yn ystod y gwaith. At hyn, bu i'r trinwyr coed gynnig torri coed y perchnogion preifat gyferbyn â'r ffordd am gost . Gallwch fwrw golwg ar gyflwyniad gan y Rheolwr Gweithrediadau ar y Priffyrdd ynghylch 'Rheoli Coed Devon yn ymarferol' **yma** gyda manylion o'r gwersi wedi'u dysgu ar sleid 16.

RHAN 4: ADFER AC ADDASU

Diben y cyfnod adfer ydy i greu coed-wedd sy'n medru gwrthsefyll unrhyw broblemau gyda phlâu a chlefydau yn y dyfodol. Wrth i wywiad yr onnen ddatblygu, bydd angen datblygu ymateb tactegol i'r Cyfnod Gweithredu (Ffigwr 1 ar Dudalen 7) ond hefyd ymateb strategol i broblemau ehangach yn ymwneud â'r goed-wedd yn ystod y cyfnod addasu ac adfer.

Dylai'r cynllunio strategol lleol ymwneud â'r cysyniadau wedi'u crybwyll yn **Strategaeth Gwydnwch Iechyd Coed** Defra (wedi'i gyhoeddi ym mis Mai 2018). Mae'r strategaeth yn canolbwyntio ar gyflawni tri deilliant er mwyn datblygu hydwythedd – (1) gwydnwch, (2) ymateb ac adfer, a (3) addasu. Mae'r strategaeth yn gosod cynlluniau er mwyn lleihau'r risg o beryglon plâu a chlefydau a chryfhau gwydnwch ein coed i fedru gwrthsefyll peryglon. Mae'n pwysleisio ar weithio i wella maint, cyflwr, amrywiaeth a chysylltedd ein coed a choedwigoedd. Hefyd mae pwyslais ar warchod y coed yn well er mwyn lleihau'r risg o beryglon newydd yn ymddangos. Mae'r strategaeth yn hyrwyddo pedwar nod amgylcheddol er mwyn datblygu gwydnwch:

ENVIRONMENTAL GOAL 1: Extent	increasing tree cover
ENVIRONMENTAL GOAL 2: Connectivity	enhancing the linear forest and matrix of trees within other habitat settings
ENVIRONMENTAL GOAL 3: Diversity	increasing the genetic and structural diversity of our treescape
ENVIRONMENTAL GOAL 4: Condition	healthier trees and more dynamic woodlands

Mae'r rhain yn drafferthion sy'n berthnasol ar lefel cenedlaethol a lleol. Wrth i wywiad yr onnen ledaenu, bydd yn dod yn fwyfwy pwysig i reolwyr coed ddatblygu strategaeth goed lleol ar gyfer eu coed-wedd yn y dyfodol.

Fodd bynnag, bu i arolwg yn 2016 o 181 o weithwyr coed proffesiynol (ymchwil Defra i ofalu bod Iechyd Coed wedi'i Ddiogelu'n gadarn at y Dyfodol) a wnaeth reoli oddeutu naw miliwn o goed ar y cyd, ganfod nad oedd bron i hanner yr ymatebwyr yn meddu ar strategaeth goed. Dengys mai Awdurdodau Lleol oedd y lleiaf tebygol i feddu ar strategaeth goed (dim ond 38%). BU i'r arolwg hefyd ddynodi er pan gaiff Strategaeth Goed ei datblygu gan

Awdurdodau Lleol, a wnaeth reoli dau draean o'r naw miliwn o goed, dydy 29% heb eu hadolygu yn ystod y tair blynedd diwethaf a dydy 17% heb eu hadolygu o gwbl.

Mae'r diffyg Strategaeth Goed gyfredol fel arfer yn sgil diffyg cyllideb i greu un, neu ddiffyg penderfyniad cyfundrefnol. Dengys canfyddiadau yn ystod datblygu'r Pecyn Cymorth hwn yr oedd yn rhaid i fudiadau sy'n mynd i'r afael â gwywiad yr onnen ddatblygu/coethi Strategaethau Coed blaenorol. Roedd yn rhaid datblygu'r strategaethau i fod yn rhagweithiol wrth reoli gwywiad yr onnen, yn enwedig mewn perthynas â chynlluniau ar gyfer y cyfnod Adfer. Mae hyn yn faes gwaith sy'n prysur newid y mae'r Cyngor Coed yn ei ymchwilio ymhellach.

PARATOI A DATBLYGU STRATEGAETH GOED

Yng Nghaint, Suffolk a Norfolk,bu angen llunio strategaeth goed yn sgil gwywiad yr onnen – hyn er mwyn ystyried penderfyniadau yn y cyd-destun ehangach o ran dyfodol y dirwedd / coed-wedd. Yng Nghaint, cafodd datblygiad strategaeth goed ei gynnwys yn nrafft cyntaf y Cynllun Gweithredu Gwywiad yr Onnen (ADAP) –**gwelwch yma** a **Blwch 10**.

BLWCH 10 Datblygiad Strategaeth Goed Caint

Yn 2016 bu gwaith cwmpasu rhagbaratoawl ar gyfer Strategaeth Goed Caint, sydd erbyn hyn wedi'i ffurfioli fel gweithred gymeradwy yng Nghynllun Gweithredu aml-asiantaeth Amgylchedd Caint 2017. Erbyn hyn, Fforwm Gwydnwch Caint, Grŵp Cydlynu Strategol ynghylch Gwywiad yr Onnen sy'n gyfrifol yn bennaf dros gynnig y strategaeth goed o fewn y Cynllun Gweithredu. Cafodd fframwaith ar gyfer Strategaeth Goed Caint ei gymeradwyo a chafodd data sylfaenol ei gasglu (2017). Mae disgwyl y bydd y ddogfen derfynol wedi'i chwblhau yn ystod blwyddyn ariannol 2019/20. Bydd y Strategaeth Goed yn cynnig y canlynol:

- **Cynllun penodedig ac adnodd ar gyfer cynllunwyr, rheolwyr tir a rhanddeiliaid eraill y sector cyhoeddus, preifat gwirfoddol i ehangu'r ardal goed a choetiroedd y mae Caint yn gyfrifol amdani**

- **Mwy o ddealltwriaeth a defnydd o wasanaethau amgylcheddol coed a choetiroedd.**

Mae disgwyl caiff y ddogfen ei mabwysiadu fel Dogfen Cynllunio Atodol yn cynnig mwy o fanylion am y polisïau yn y polisi cynllunio lleol cyfredol.

Pan ddechreuodd goed ynn wywo yn Suffolk yn 2012, bu i'r Cyngor Sir gynhyrchu papur Cabinet anffurfiol i amlygu'r risgiau economaidd, amgylcheddol ac i ddiogelwch y cyhoedd posib yn sgil Chalara. Yna, bu i'r Cyngor sylweddoli fod gwywiad yr onnen yn amlygu'r angen am bolisi coed gwlad gyfan i'w fabwysiadu gan Sir Suffolk ynghyd â'r cyffiniau a'r bwrdeistrefi. Ers gaeaf 2018, mae Polisi Coed Suffolk yn ei gyfnod ymgynghori ac y gobaith ydy caiff Polisi Coed Suffolk ei gyflwyno gerbron y Cabinet er mwyn iddyn nhw wneud penderfyniad yn 2019.

STRATEGAETH ADFER

Wrth i effeithiau ar led gwywiad yr onnen wneud difrod mawr, yn ogystal â thactegau tymor byr sy'n ymdrin â cholli coed ynn, bydd yn hanfodol dwyn i ystyriaeth cynlluniau adfer tymor hirach. Hefyd bydd angen dwyn i ystyriaeth sut i ddiogelu coed-weddau gwerthfawr Prydain ar gyfer cenedlaethau'r dyfodol. Bydd angen plannu gwydn a meddwl yn weledigaethol ynghyd â Chynlluniau Gweithredu er mwyn mynd i'r afael â'r bygythiadau uniongyrchol i bob cymuned.

Yn Devon, bu i is-grŵp y Fforwm Gwydnwch ar y Tirwedd a Hydwythedd Ecolegol gynnal adolygiad o goed onn yn nhirwedd Devon. Bu i'r is-grŵp hefyd fynd ati i ddatblygu negeseuon ac egwyddorion allweddol yn ymwneud â'r dirwedd, byd natur a chynnal a chadw'r cyfalaf naturiol ac adfer.

Maen nhw'n datgan bod "peryg i'r onnen, oherwydd ei helaethrwydd llwyr, effeithio'n sylweddol ar ansawdd y dirwedd, ar y bywyd gwyllt sy'n dibynnu ar goed, ar gyfaint y dŵr ffo yn sgil storm ac ar dymereddau trefi a dinasoedd yn ystod yr haf pe bai'n gwywo'n gyfan gwbl. Bydd ei wywiad hefyd yn effeithio ar gyfansoddiad y pridd, cymunedau cennau'r coed arbenigol a chynnyrch coed llydanddail mewn coetiroedd."

Bu iddyn nhw ddatblygu **wyth egwyddor allweddol er mwyn ail-blannu coed ynn**:

1. Ewch ati i weithredu ar unwaith i leihau effaith gwywiad yr onnen ar y dirwedd – ewch ati i blannu coed newydd a gofalu am goed presennol yn well.

2. Defnyddiwch y fformiwla 3/2/1/: o leiaf 3 coeden newydd os bydd un goeden sylweddol yn gwywo, 2 am goeden ganolig ac 1 am goeden fach.

3. Hyrwyddo adfywio naturiol pan fo'n bosib, yn enwedig mewn coetiroedd.

4. Tyfu'r coed priodol yn y mannau priodol yn y dulliau cywir ac ôl-ofalu amdanyn nhw'n gywir.

5. Plannu ystod eang o goed i ddatblygu tirwedd wydn. (Does dim modd i un rhywogaeth yn unig gymryd lle yr onnen. Fodd bynnag, mae aethnen, y wernen, y fasarnen fach, y fasarnwydden, y fedwen, y gerddinen a'r llwyfen sy'n gwrthsefyll y clefyd, yn ogystal â'r dderwen frodorol, yn meddu ar nodweddion tebyg.)

6. Wrth ddewis rhywogaethau, ewch ati i ddwyn ystyriaeth ffactorau'r ardal fel pa goed sy'n nodweddiadol i'r ardal, y math o bridd, gofynion rheoli, pwysau lleol ac ati.

7. Ar gyfer bywyd gwyllt, y dirwedd a thanwydd coed, dewiswch rywogaethau brodorol, neu'r rheiny sy'n gyffredin ar Ynysoedd Prydain fel y fasarnwydden, y goeden ellyg gwyllt, y goeden afalau bach sur neu'r helygen wen. Mewn mannau trefol, mae'n fwy derbyniol i ddefnyddio rhywogaethau o fannau eraill y byd.

8. Lleihau'r risg o gyflwyno clefydau newydd gan blannu coed sy'n tarddu o ac wedi'u plannu (UKSG) ym Mhrydain.

Bu i'r Fforwm hefyd gynhyrchu nifer o nodiadau canllaw defnyddiol gallwch fwrw golwg arnyn nhw isod:

- Plannu Coed yn lle'r Onnen : dewis y coed priodol
- Canllaw er mwyn gwarchod rhywogaethau a chynefinoedd
- Cynyddu hydwythedd coed-wedd Devon
- Beth ydy buddion yr onnen?

3. Casgliadau

Dim ond saith mlynedd wedi'i adnabyddiaeth swyddogol ym Mhrydain, bu i wywiad yr onnen ddechrau effeithio'n sylweddol ar goed-wedd y wlad. Fodd bynnag, mae'n dal yn rhy fuan i ddeall a fydd unrhyw goed yn medru gwrthsefyll y ffwng, y gwirionedd ydy mae'n debyg caiff 90% o'r 2 biliwn o goed ynn ym Mhrydain eu heintio yn y blynyddoedd nesaf.

Mae'r risgiau posib i iechyd a diogelwch pobl ynghlwm â choed ynn meirw a heintus, ynghyd â'r effeithiau economaidd ac amgylcheddol sylweddol, yn golygu ei fod yn hanfodol derbyn nad oes modd i unrhyw un sy'n rheoli coed neu'r dirwedd fynd ati i drin gwywiad yr onnen ar sail 'busnes fel arfer'.

Fel cenedl, ni allwn ni fforddio bod yn oddefol a chaniatáu i wywiad yr onnen ddigwydd heb inni ei ystyried yn ofalus, ystyried ein gweledigaeth ac ymyrryd yn rhagweithiol. Mae gormod yn y fantol. Diben y pecyn cymorth pedwar rhan hwn ydy cynnig fframwaith Cynllun Gweithredu profedig a phwrpasol er mwyn mynd i'r afael â'r broblem.

Mae'r Cyngor Coed yn credu fod gwywiad yr onnen yn gyfle i ddatblygu coed-weddau newydd gwydn ledled Prydain. Ar hyn o bryd, mae llai na un traean o Awdurdodau Lleol yn meddu ar strategaethau coed gweithredol. Fodd bynnag, bydd datblygu Fforymau Gwydnwch lle bydd mudiadau amgylcheddol a mudiadau coed lleol yn rhan ohonyn nhw, yn golygu bydd grwpiau priodol er mwyn cefnogi Awdurdodau Lleol i ddatblygu strategaethau coed manwl unwaith y bydd yr ymateb i wywiad yr onnen ar waith. Mae rhwydwaith Wardeiniaid Coed gwirfoddol y Cyngor Coed hefyd yn help i swyddogion coed Awdurdodau Lleol i fynd ati i fonitro ac ail-blannu yn ystod y blynyddoedd nesaf.

Bydd cyfathrebu, cydweithio ac ymwneud yn weithredol gyda chymunedau yn annatod i lwyddiant y gwaith rheoli gwywiad yr onnen. Rydym yn credu dylid meithrin ac annog adnodd gwerthfawr gan y Fforymau Gwydnwch newydd a'r Wardeiniaid Coed, er mwyn mynd i'r afael â heriau gwywiad yr onnen a chydweithio er mwyn datblygu strategaethau coed ar gyfer y dyfodol.

4. Diolchiadau, nawdd ac ymwadiad

Mae'r adroddiad hwn wedi'i ddatblygu a'i gyhoeddi gan y Cyngor Coed a Fera Science Ltd, ond buasai wedi bod yn amhosib heb gyfraniad sawl Awdurdod Lleol ac asiantaethau eraill.

Hoffai'r Cyngor Coed ddiolch i'r holl bobl wnaeth roi o'u hamser i gyfrannu ffeithiau, ffigyrau a barnau.

Ymysg y bobl hyn mae staff ac aelodau gwirfoddol y mudiadau a chynghorau canlynol:

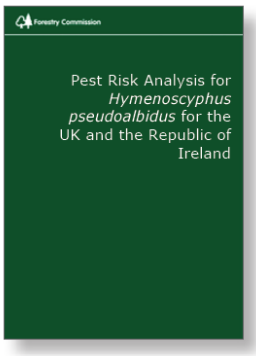
- **Fforwm Gwydnwch Gwywiad yr Onnen Devon**
- **Grŵp Gwrychoedd Devon**
- **Cyngor Sir Dyfnaint**
- **Cyngor Bwrdeistref Fareham**
- **Fera Science Ltd (Asiantaeth Ymchwil Bwyd a'r Amgylchedd)**
- **Y Comisiwn Coedwigaeth**
- **Ymchwil y Goedwig**
- **Grŵp Swyddogion Coed Hampshire**
- **Canolfan Cofnodion Biolegol Swydd Henffordd**
- **Cyngor Swydd Henffordd**
- **Cyngor Sir Caint**
- **Grŵp Swyddogion Coed Caint**
- **Cyngor Swydd Gaerlŷr**
- **Cyngor Sir Norfolk**
- **Cyngor Sir Suffolk**
- **Fforwm Gwydnwch Sussex**
- **Cyngor Sir Gorllewin Sussex**
- **Grŵp Swyddogion Coed Gorllewin Sussex**

Mae'r adroddiad wedi'i lunio ar y cyd â Fera Science Ltd ac yn sgill cyllid gan Adran yr Amgylchedd, Bwyd a Materion Gwledig.

Mae data'r ddogfen hon yn farn yr awdur a chyfranwyr yn unig. Mae'r Pecyn Cymorth yn adnodd caiff ei ddatblygu'n barhaus a dydy'r awduron ddim yn cymryd cyfrifoldeb dros unrhyw golled yn sgil pobl yn dibynnu ar y cynnwys. I weld detholiad o adnoddau gan y Cyngor Coed a rhai Awdurdodau Lleol, **ewch i'n gwefan**.

5. Mwy o adnoddau ynghylch Gwywiad yr Onnen

(yn nhrefn eu dyddiad cyhoedd)

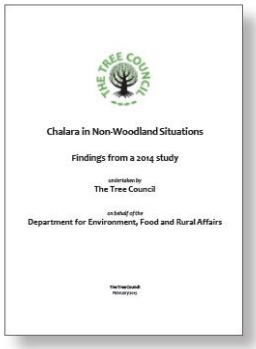


DADANSODDIAD RISG PLÂU AR GYFER HYMENOSCYPHUS PSEUDOALBIDUS (ANAMORPH CHALARA FRAXINEA) AR GYFER PRYDAIN A GWERINIAETH IWERDDON (MAI 2013)

Wedi'i gyhoeddi gan y Comisiwn Coedwigaeth, dyma oedd yr adolygiad sylweddol cyntaf ynghylch gwywiad yr onnen a'r effeithiau posib. Sylwch: Fe gafodd ei gynhyrchu cyn cafodd enw'r ffwng ei newid i fod yn *Hymenoscyphus fraxineus*. Gallwch ei **lawr lwytho yma.**

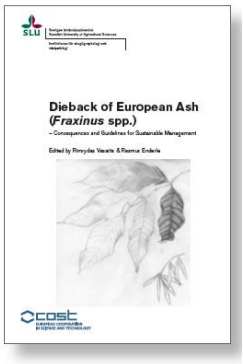
EFFAITH ECOLEGOL DICHONOL GWYWIAD YR ONNEN YM MHRYDAIN (MEHEFIN 2014)

Wedi'i gyhoeddi gan y Cyd-bwyllgor Cadwraeth Natur (JNCC) (rhifyn. 483), mae hwn yn adroddiad technegol yn benodol i'r rheiny sy'n ymwneud â rheoli coed a choetiroedd er bioamrywiaeth a chadwraeth natur. Bydd yr adroddiad yn werthfawr yn arbennig i'r rheiny sy'n dwyn i ystyriaeth opsiynau hirdymor ar gyfer datblygu gwydnwch mewn coetiroedd. Hefyd er mwyn annog addasu i gefnogi bioamrywiaeth yn ystod y newidiadau pan mae gwywiad yr onnen yn digwydd. Canllaw manwl a defnyddio i gyd-fynd gyda'r ymchwil, gallwch ei **lawr lwytho yma**.



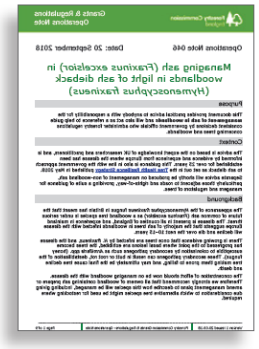
CHALARA MEWN COED SYDD DDIM MEWN COETIROEDD (CHWEFROR 2015)

Adroddiad wedi'i gynhyrchu i Defra gan y Cyngor Coed yn crybwyll y trafferthion gall wywiad yr onnen eu hachosi mewn sefyllfaoedd y tu hwnt i goetiroedd.
Gallwch ei **lawr lwytho yma**.



GWYWIAD YR ONNEN EWROPEAIDD (*FRAXINUS SPP.*) – CANLYNIADAU A CHANLLAWIAU AR GYFER RHEOLAETH GYNALIADWY (2017)

Wedi'i olygu gan Rimvydas Vasaitis a Rasmus Enderle, mae'r cyhoeddiad hwn yn grynodeb o ymchwil wedi'i gynnal fel rhan o'r prosiect FRAXBACK gyda chyllid Ewrop yn ymwneud gyda gwywiad yr onnen. Canllaw manwl a defnyddiol i gyd-fynd gyda'r ymchwil, gallwch ei **lawr lwytho yma**.



NODYN GWEITHREDIADAU Y COMISIWN COEDWIGAETH 046: RHEOLI'R ONNEN (*FRAXINUS EXCELSIOR*) MEWN COETIROEDD YN DILYN GWYWIAD YR ONNEN (*HYMENOSCYPHUS FRAXINEUS*) (MEDI '18)

Mae'r ddogfen hon yn cynnig cyngor ymarferol i unrhyw un sy'n gyfrifol am reoli'r onnen mewn coetiroedd. Bydd hefyd yn gyfeirnod er mwyn helpu arwain penderfyniadau cyson gan swyddogion y llywodraeth sy'n gweinyddu rheoliadau coedwigaeth yn ymwneud â choed a choetiroedd. Gallwch ei **lawr lwytho yma**.

Gwywiad yr Onnen: Pecyn Cymorth ar Gynllun Gweithredu

Cyhoeddwyd yn wreiddiol ym mis Chwefror 2019
Ail Rifyn ym mis Gorffennaf 2019

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Rhif Elusen Gofrestredig 279000

Dyfyniadau: Stokes. J., a Jones, G. (2019).
Gwywiad yr Onnen: Pecyn Cymorth Cynllun Gweithredu.
Cyhoeddiad gan y Cyngor Coed. Y Cyngor Coed, Llundain.
Geiriau Allweddol: Gwywiad yr Onnen, pecyn cymorth, awdurdodau lleol, Y Cyngor Coed

Natural Environment Scrutiny Performance Panel

Work Plan 2021-22

Meeting 1 22nd March 2021	• **Confirmation of Convener** • **Nature Conservation – Project updates** *Invited to attend:* Deborah Hill – Nature Conservation Team Leader Paul Meller – Natural Environment Section Manager Cllr David Hopkins – Cabinet Member for Delivery and Operations • **Agree Work Plan topics 2021-22** • **For information only - Climate Change Action Plan consultation** (link to papers)
Meeting 2 Wednesday May 19th	• **Climate Change Action Plan consultation feedback** • **Climate Emergency Declaration – Council Action Plan Progress** *Invited to attend:* Cllr Andrea Lewis - Cabinet Member for Homes, Energy and Service Transformation Martin Nicholls – Director of Place Rachel Lewis – Directorate Project Manager Suzy Richards – Sustainable Policy Officer
Meeting 3 Tuesday 29th June 2021	• **Air Quality Management** *Invited to attend:* Cllr Mark Thomas – Cabinet Member for Environment Enhancement & Infrastructure Management Tom Price – Team Leader, Pollution Control Victoria Seller - Swansea University, Research Officer
Meeting 2 26th August 2021	• **Ash Dieback** Jeremy Davies – Group Leader Parks and Cleansing Cllr Mark Thomas – Cabinet Member for Environment Enhancement & Infrastructure Management
Meeting 3 Wednesday 6th October 2021	• **Local Flood Risk Management** Stuart Davies – Head of Highways and Transportation Bob Fenwick – Group Leader Highways Maintenance Mike Sweeney – Team Leader, Highways and Transportation Cllr Mark Thomas – Cabinet Member for Environment Enhancement & Infrastructure Management • **Water Pollution** Tom Price – Team Leader, Pollution Control Paula Livingstone – Divisional EHO Cllr Mark Thomas – Cabinet Member for Environment Enhancement & Infrastructure Management

Meeting 4 Wednesday 12th January 2022	• TBC Management of Green Space / Weed & Verge Management
Meeting 5 Tuesday 15th March 2022	• TBC

Cyngor Abertawe
Swansea Council

To:
Councillor Mark Thomas
Cabinet Member for
Environment Enhancement &
Infrastructure Management

Please ask for: Overview & Scrutiny
Gofynnwch am:

Direct Line: 01792 637732
Llinell Uniongyrochol:

e-Mail scrutiny@swansea.gov.uk
e-Bost:

Date 22 July 2021
Dyddiad:

BY EMAIL

Summary: This is a letter from the Natural Environment Scrutiny Performance Panel to the Cabinet Member for Environment Enhancement & Infrastructure Management. The letter concerns the meeting held on 29 June 2021 and the updates received regarding Air Quality Management.

Dear Councillor Thomas,

On 29 June, the Panel met to discuss the Council's current strategies regarding *Air Quality Management*. The Panel are grateful to yourself for attending to discuss the report and answer questions. We also thank Mark Wade, Head of Housing and Public Health, and Tom Price, Pollution Control Team Leader, for their attendance and contributions. We also extend our thanks to Victoria Seller, Research Officer at Swansea University, who attended to present an overview regarding the impact of air quality on human health.

The Panel received an update report regarding air quality in Swansea and the strategies currently implemented by the Council. Our discussions predominantly focused on the following aspects:

Green Infrastructure

It was pleasing to hear about the installation of a 'Green Screen' along Fabian Way in March 2020, along with the $PM_{2.5}$ analyser. We understand this was a collaboration with the Nature Conservation Team, with the aim of mitigating exposure to engine pollution. We would be interested to hear updates regarding the analysis of data surrounding this project, which will take place to assess whether the installation has had an impact on air quality and noise.

Officers highlighted that there remains much scope to engage schools and young pupils in Green Infrastructure projects, acknowledging the need for engagement of

children at a young age, helping to shift traditional behaviours. Members also elaborated on the need to better educate the public regarding consequences of certain behaviours and the impact of such on air pollution.

Air Pollution Monitoring

The Panel heard about the *transboundary effects* on Air Quality in Swansea, including the increased levels of air pollution during lockdown, resulting from wider events beyond localised borders.

Officers explained to us that Swansea Council utilises both automatic and non-automatic monitoring methods when undertaking Local Air Quality Management duties. Panel Members were interested to know more about the technology and available resources supporting the work of the Council's Pollution Control Team.

We heard that traffic flow data is collected and analysed, to help understand air quality measurements across Swansea. The Panel queried whether data is collected at specific times, such as dates of major events. Officers explained to us that, although not currently a focus, the capability exists to look into specific days/events and the effect of higher density traffic on localised pollution measurements. We also understand that Swansea University plan to research the impacts of major events in the area, such as the Wales National Air Show, and any subsequent influence on air quality.

Panel Members raised the issue of engine idling at school collection points and concerns that children are subject to concentrated exposure during these times. You reiterated that buses should not be running too long with idle engines, and it was pleasing to hear that this is a stipulation within contracts of bus providers. Panel Members suggested that bus operators are encouraged to install monitoring technology to measure engine idling times, a suggestion which you took on board as a possibility for inclusion within the next tender process.

The Panel also received a presentation from Victoria Seller, of Swansea University, covering an overview of air quality strategies in Wales. It was concerning to hear that air quality has been linked to a huge range of health issues and is attributable to a large number of early deaths in the UK each year. We also heard evidence that air pollution is linked to deprivation, disproportionately affecting some communities.

It was explained to us that, across Wales, there is a minimal spread of automatic monitor density due largely to the cost of monitors and the time-intensive operating requirements. We heard that in total there are forty automated monitors across Wales.

The Panel also heard that a total of twelve Local Authorities use diffusion tubes, a low cost and effective tool for measuring long term concentrations of Nitrogen Dioxide. We understand that Swansea Council also utilise diffusion tubes, although data collected is limited to mean annual concentrations.

Public Question Time

The Panel is looking to engage the public, and relevant organisations, in its work and was pleased to receive public questions on Air Pollution. Two questions were put forward during our Public Question Time item, both relating to aspects of Air Pollution.

You were asked, and responded to, the following:

1) *Will the council include the monitoring and control of pollution from domestic wood burners as a part of its measures to reduce particulate air pollution*? In response to this question, you highlighted that a city-wide approach to monitoring/enforcement is not achievable at present, however, the Council is making continuous improvements to Air Quality standards and policies, in line with Government guidelines. Officers confirmed that under statutory nuisance provisions, the Council has powers to respond to individual complaints regarding smoke control, and will investigate valid complaints received.
2) *Who in Swansea Council is responsible for developing a strategy to address this serious problem (air pollution)? When will it be given the priority it deserves, in order to save human life and address the costs of taking no action?* In response to this question, you acknowledged this as a wider policy issue and undertook to provide a full written answer in due course. I would be grateful if you could copy Scrutiny into your response.

Impacts of the LDP

The Panel took the opportunity to ask about the policies relating to the Local Development Plan (LDP) and the subsequent increase in traffic/air pollution as a result of an increase in house building. You highlighted a clear and defined need for more housing nationally, acknowledging the balance needed between housing demands and impacts upon surrounding services.

Your Response

The Panel acknowledged the increased workload experienced by the Pollution Control Team during the period of the pandemic response, and thank all those involved for their hard work and commitment.

We are interested in any thoughts you may have on the contents of this letter but, in this instance, we require no formal written response.

Yours sincerely,

Councillor Peter Jones
Convener, Natural Environment Scrutiny Performance Panel
✉ **cllr.peter.jones@swansea.gov.uk**