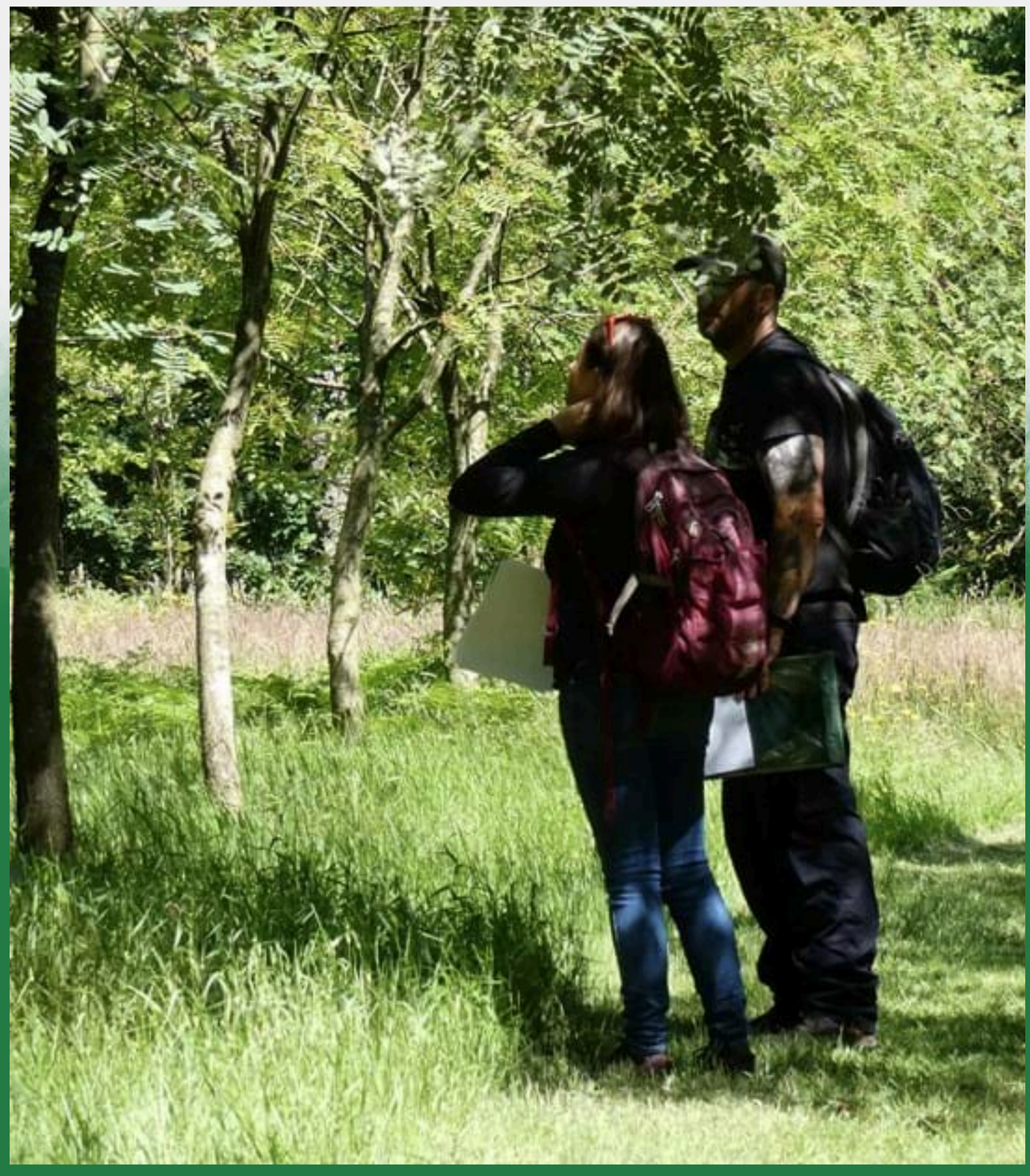
Guidance:

UK tree health report submission

UKGSN



IPSN International Plant Sentinel Network

BGCI

Observatree monitoring tree health

PlantNetwork Connecting gardens, sharing skills

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UK Garden Sentinel Network (UKGSN)

Observatree, PlantNetwork and Botanic Garden Conservation International (BGCI) have joined forces to create the UK Garden Sentinel Network (UKGSN). The UKGSN brings together the UK's network of plant collections (PlantNetwork) with the network of citizen scientists already mobilised through Observatree. Supported by tree health diagnosticians and other plant health experts, the aim is to engage and educate garden professionals, volunteers and visitors in the early detection of pests and pathogens that threaten trees in the UK.

The aim of this collaboration is to raise awareness of tree health, and encourage surveillance and reporting of tree pests and diseases. We will achieve this by sharing readily available information, and providing identification training, diagnostic support and access to the reporting system.

Tree Health Pilot 2024

The UKGSN is excited to announce the launch of the Tree Health Pilot 2024. During this pilot program, **we invite staff, students and volunteers in botanic gardens to participate in the surveillance of specific pests and diseases (great spruce bark beetle, elm-zig-zag sawfly and European mountain ash ring-spot associated virus)** affecting trees across the UK and report their presence or absence via the TreeAlert website. The goal of the Tree Health pilot is to raise awareness of tree health nationwide and to improve our understanding of the distribution of harmful organism throughout the UK.

The Tree Health Pilot will be launched during Plant Health Week, running from the 6th to the 12th of May 2024. **Surveillance activities should take place from May until October.** To follow up, we will be having a feedback session in June open for questions, and an end of season session in autumn.

In the following video, you can watch the recording on the first UKGSN webinar, featuring an introduction to the initiative, a detailed explanation of the Tree Health Pilot, insights into the targeted organisms affecting trees, and step-by-step guidance on the reporting process.

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How to monitor UK tree health?

1 **Explore your botanic garden or arboretum:**

We encourage staff, students and volunteers in botanic gardens/arboreta to go around and explore the your botanic garden/arboretum.

2 **Select three trees to monitor:**

As part of this pilot, we request that you monitor at least three mature trees for specific pests and diseases.
The three trees can be all from the same species or one/two of each, depending of what trees are available at your botanic garden or arboretum. For example you could monitor three spruces; or two elms and one spruce; or one mountain ash, one elm and one spruce.
The tree species that host the monitored target pests and diseases are:

Spruce
Picea sitchensis
Picea abies
Picea orientalis

Elm
Ulmus glabra
Ulmus minor
Ulmus procera

Mountain Ash
Sorbus aucuparia
Sorbus torminalis
Sorbus domestica

3 **Check the health of the threes:**

Approach the tree and look close to find any symptoms of concern that might be caused by the targeted pests and diseases.
Look closely at the base, stem, branches and leaves.
Take photos of the observed trees, this will help in the final diagnosis.

Remember to record this information for your final report:
- location of thre tree
- date of observation
- estimated age of the tree
- estimated size of the tree

4 **Look for the presence or absence of the target pest and diseases:**

For this pilot activity, we are focusing of three target pest and diseases. Find more information about them on Page 5.
Look for the presence of their symptoms. If no symptoms are found, documenting the absence of these specific pests and diseases is also important.

Great spruce bark beetle

Elm zig-zag sawfly

European mountain ash ringspot associated virus

5 **Submit your reports and photographs through TreeAlert:**

You can access TreeAlert here. For more information and guidance on how to register to TreeAlert, go to Page 6.
Remember to submit your reports as UK Garden Sentinel Network!
The reporting of the absence of the target pest and diseases is crucial for the understanding of the distribution of harmful organisms in the UK.

If NO signs of the target pests & disesases are found:
Submit a 'healthy tree' report.
More information on Page 8.
Note: Even if the tree shows other symtoms, submit it as a healthy tree report the absence of the target pests and diseases.

If ANY SIGNS of the targeted pests & diseases are found:
Submit a general report.
More information on Page 9.
Note: To report any of the target pests or diseases, submit a general report and specify the pest or disease you have identified.

6 **Submissions will be reviewed by diagnosticians at Forest Research.**

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Pests & Diseases of interest

The Tree Health Pilot will focus on three organisms with easily identifiable symptoms. They are already present in the UK, but their exact distribution in the country is still unknown.
The pests and diseases of interest are:

Great spruce bark beetle

Primary host: Spruce (*Picea* spp.)

Symptoms:

- tree dieback
- copious resin bleed on truck
- resin tubes like ‘volcanoes’
- presence of larvae or ‘frass islands’ beneath the bark

Click for more information and identification guide

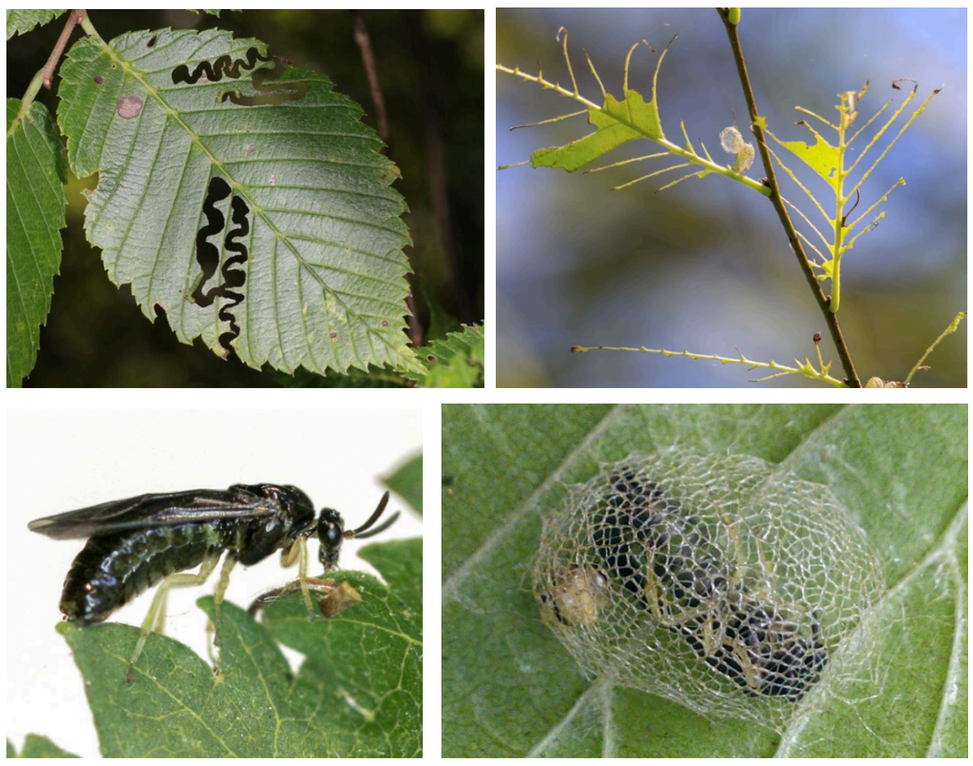
Elm zigzag sawfly

Primary host: Elm (*Ulmus* spp.)

Symptoms:

- zigzag feeding trace between lateral leaf veins
- feeding traces merge and produce leaf-skeletons
- filigree cocoons underside the leaves

Click for more information and identification guide



European mountain ash ringspot-associated virus

Primary host: Rowan / Mountain Ash (*Sorbus* spp.)

Symptoms:

- starts with chlorotic speckling on leaflets
- mottling of leaf tissue
- develops into ‘oak leaf’ patterning and ringspots on leaflets

Click for more information and identification guide

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Report submission: TreeAlert

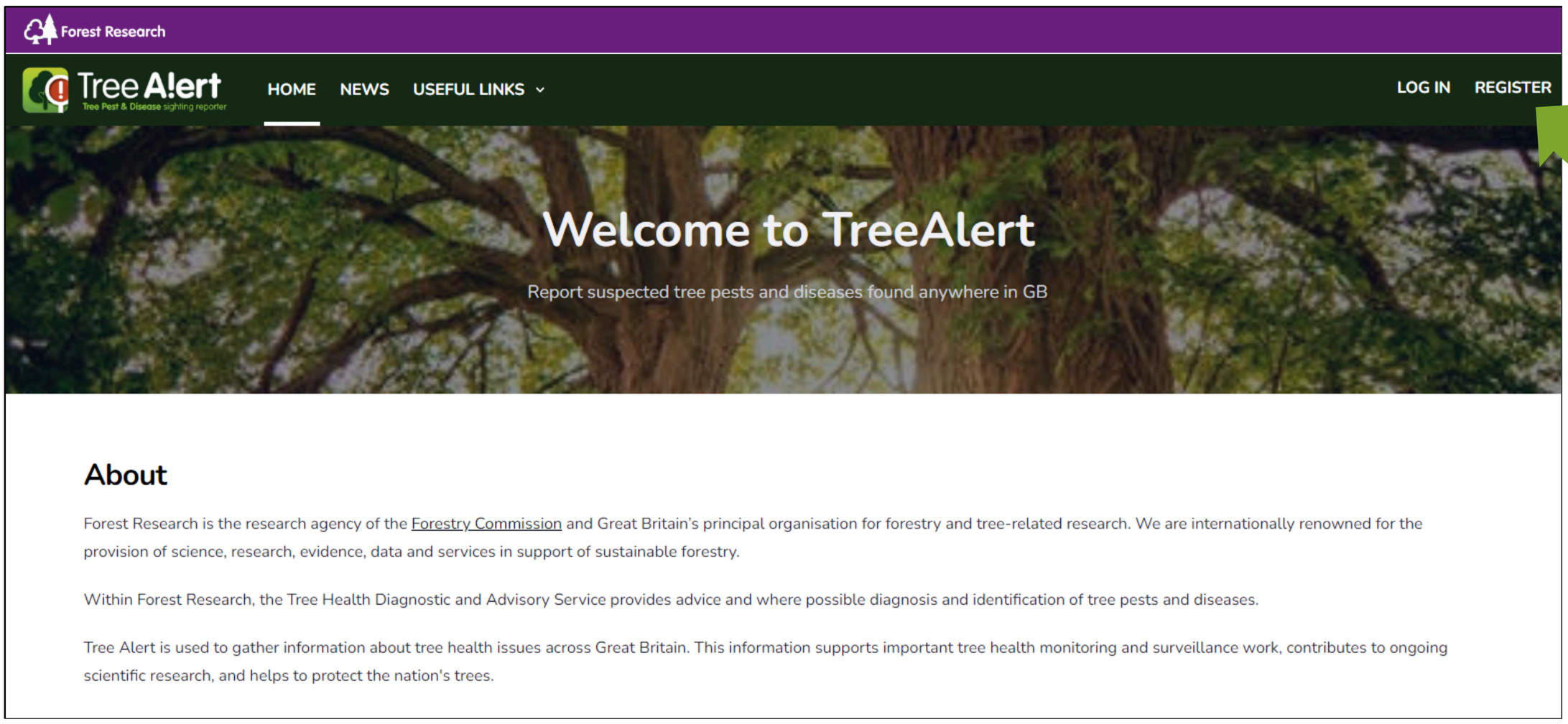
TreeAlert is the official tool for reporting on tree health in Britain (Tree Check is used in Ireland).

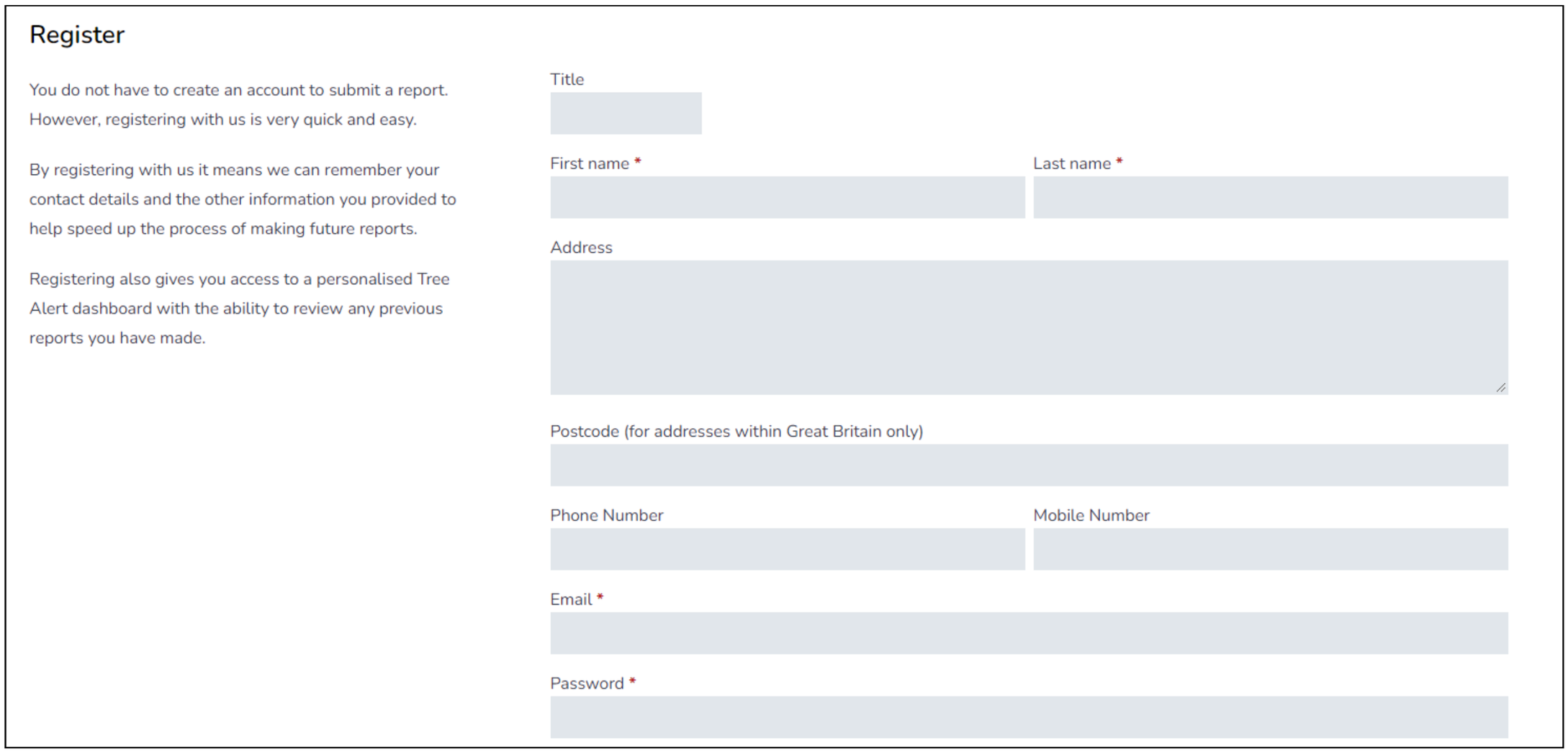
Scan the QR code or
Click here to access
TreeAlert

The system was originally designed to capture reports of tree pests and diseases, and this remains its primary aim. But recent investment in the system also allows registered users to submit information on trees that appear to be free of visible signs of pests or disease and are considered to be ‘healthy’ trees. These healthy tree data allow us to identify where pests and diseases are thought to be absent, but also tells us where the healthy host trees are located in relation to symptomatic trees. Both pieces of information help tree health professionals to understand the current distribution of pests and diseases, their rates of spread and identify areas either at risk or that remain free of any pest or disease. The ability to record information on healthy trees is only available to someone who has registered with TreeAlert and is logged in.

Registration

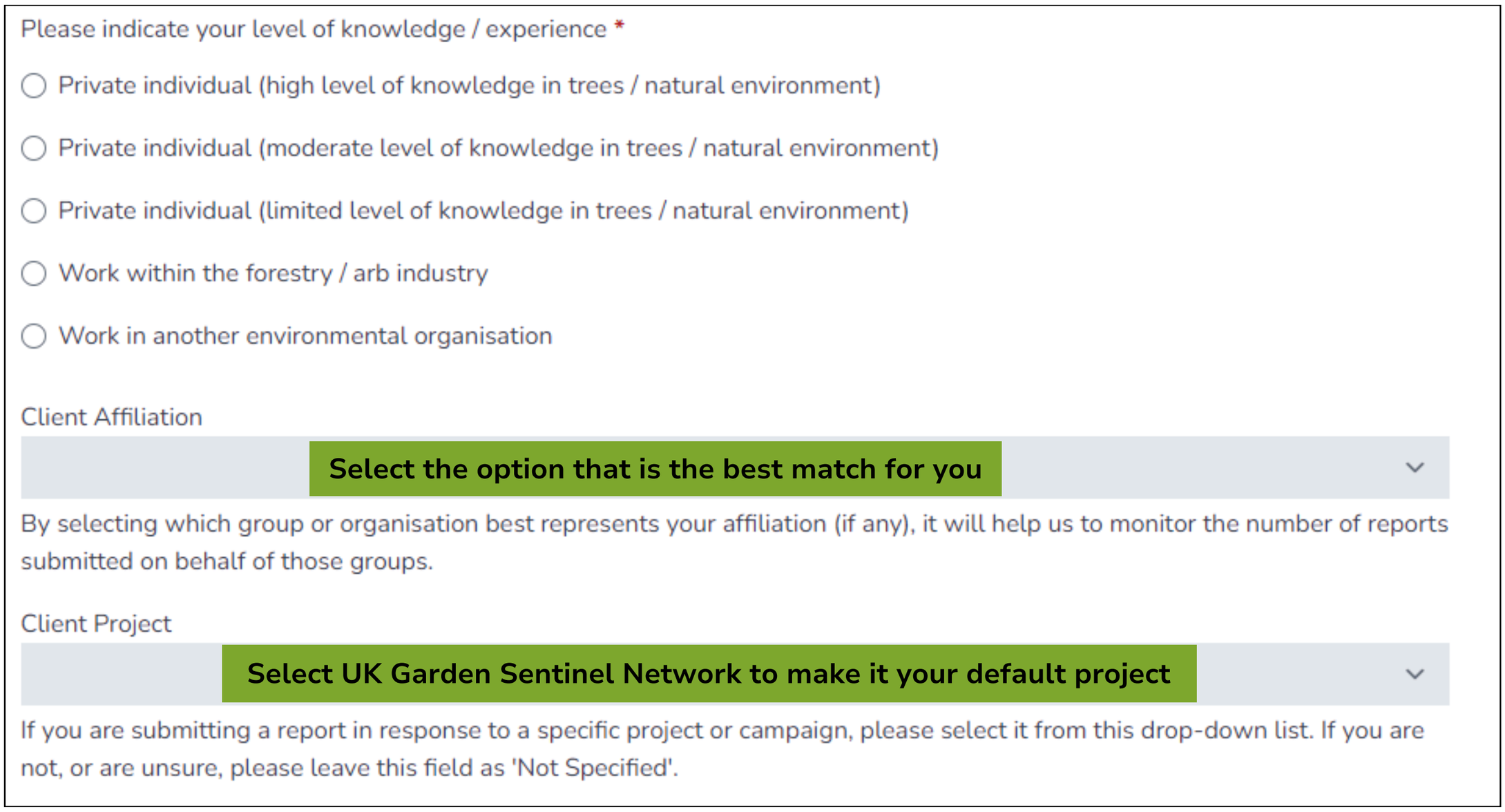
Registration with the system is recommended as the user can create a profile that holds basic information about them and provides them with their own Dashboard. This makes future submissions faster, auto-filling information such as any affiliations, unlocks functions such as healthy tree reporting and allows the user to see information on their previous submissions. Personal information provided are only used for the purposes of tree health surveillance, monitoring, and research.





In the registration process, users are asked to:

- indicate their level of knowledge about trees and tree health;
- select an affiliation that best reflects their profession, organisation or membership, Please select the Client Affiliation (from the dropdown list) that is most appropriate;
- select a Client Project. Please select **'UK Garden Sentinel Network'** if your submissions via TreeAlert will be as part of this project.

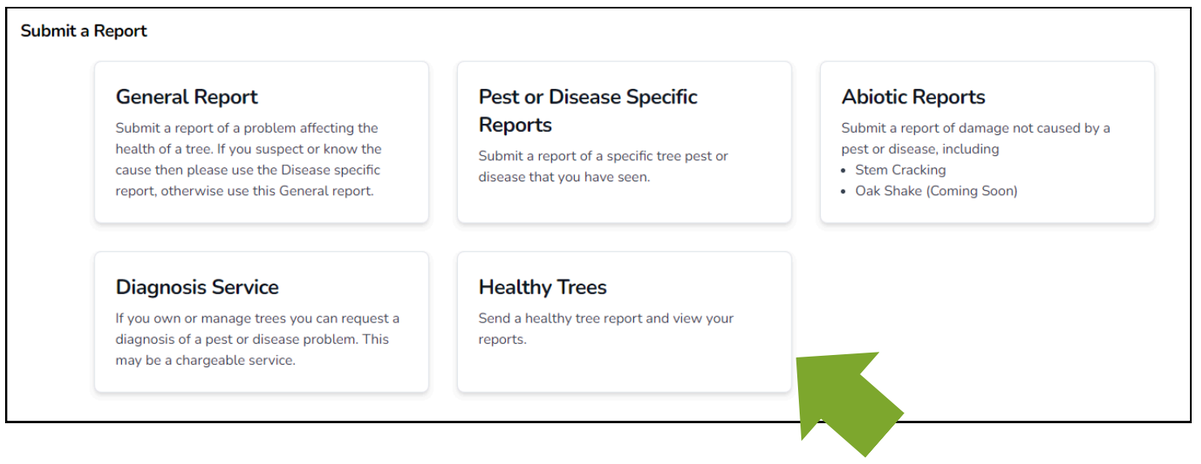


It is possible to change these affiliations and projects during individual report submissions, but these the choices made in your profile will become your default entries and will be prepopulated for any reports that you submit.

Healthy tree submission

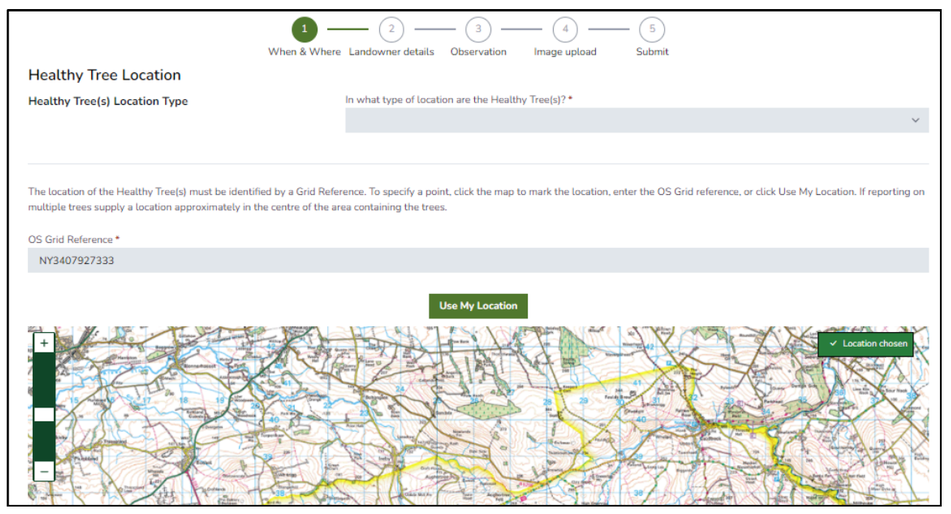
If you inspect one of the host trees (i.e., spruce, elm or mountain ash) and find **NO evidence** of a target pest/pathogen (i.e., great spruce bark beetle, elm-zig-zag sawfly or European mountain ash ring-spot associated virus), submit a **'Healthy Tree Report'**.
Note: For this pilot, a 'Healthy Tree Report' should indicated the tree is free from any of the three target pests and diseases, even if other heath issues are shown. Reporting the absence of the three target pests and diseases is essential for understanding the distribution of these harmful organism across the UK.

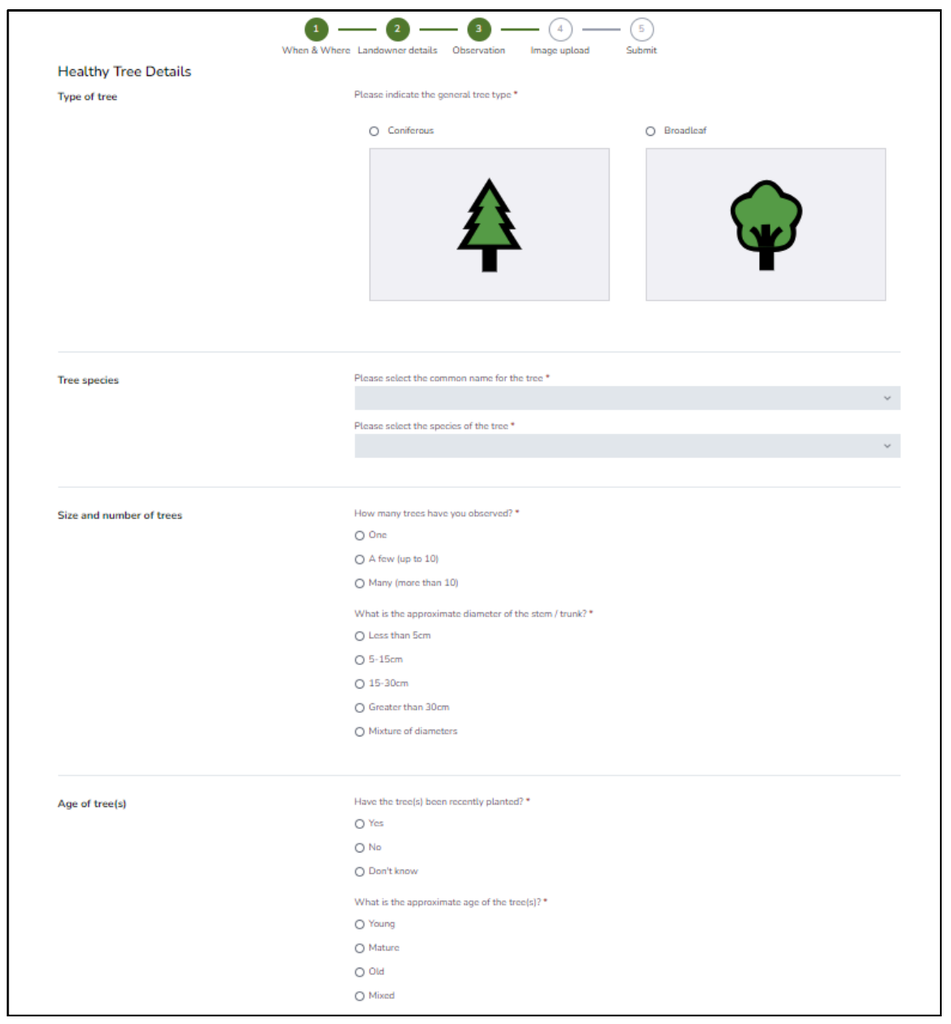
To submit information of trees that appear to be free of the target pests or pathogens, select the 'Healthy Trees' option. These records are not verified and are assumed to be correct.

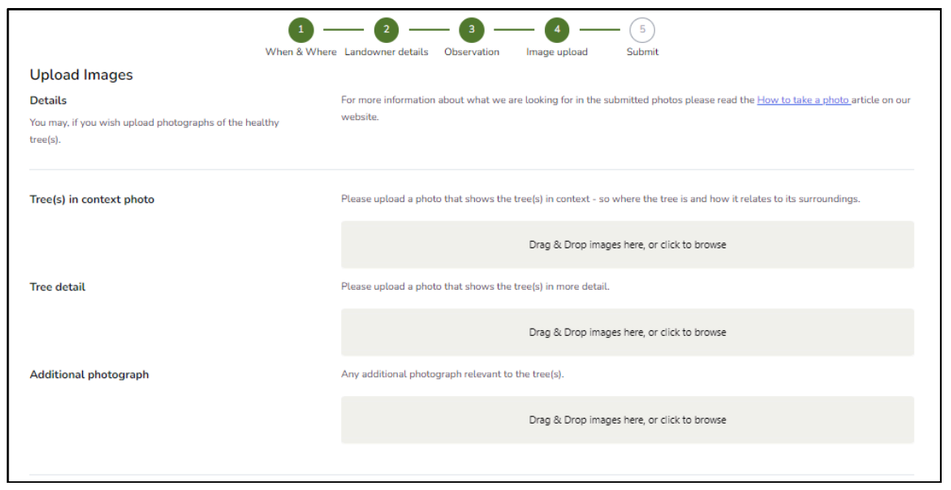


To submit a 'Healthy Tree Report', select to submit a New Report. For the submission, the following information will be necessary:

- Date on which the observation was made.
- Location of the tree (select location by clicking map, entering a grid reference or using the location of the smartphone or similar device) and its surrounding environment (such as, garden, hedgerow, woodland, etc.).
- Details of the landowner, if possible,
- The species, and basic estimates of its size / age.
- Finally, there is an option to attach photographs of the tree.







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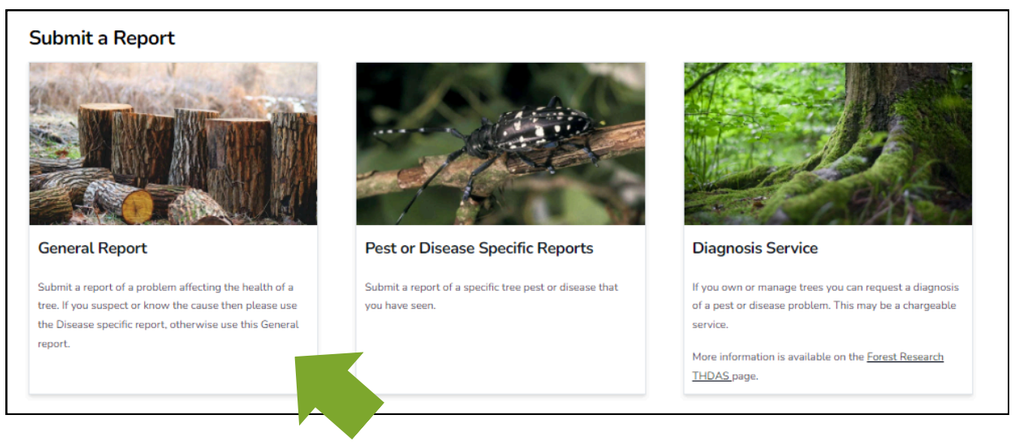
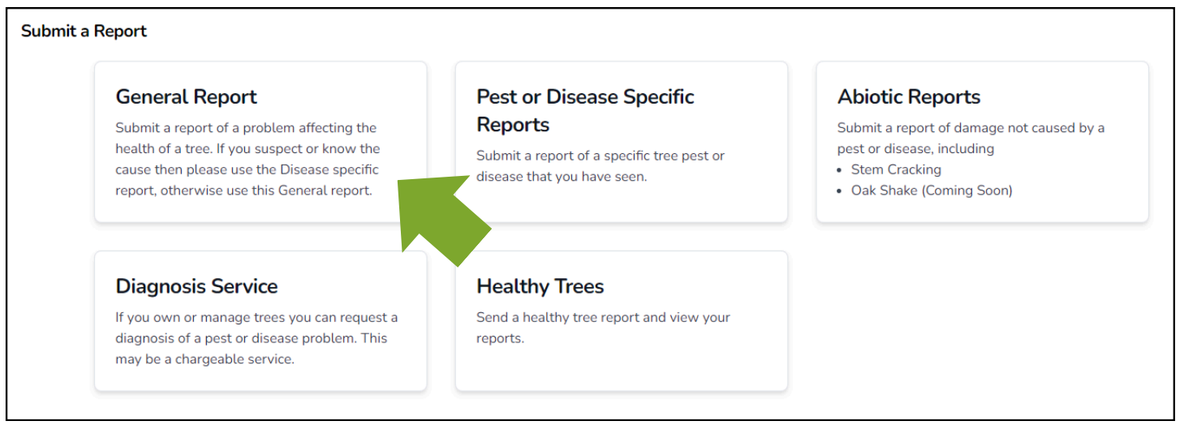
Pest or disease submission

If you inspect one of the host trees (i.e., spruce, elm or mountain ash) and find **evidence** of a target pest/pathogen (i.e., great spruce bark beetle, elm-zig-zag sawfly or European mountain ash ring-spot associated virus), submit a **'General Report'**.
Note: Anyone can submit a report of a tree pest or disease, regardless of whether or not they are registered and logged onto the system. Those not logged in start the submission process from the website's homepage, while logged-in user start from their Dashboard.
To submit a report of a tree pest or disease, select the "General Report" option. During the data submission, the user will can update their details. Please ensure that '**UK Garden Sentinel Network' is used for any submission under this project**. This will allow us to track which data result from this pilot.





These tree health reports are passed on to diagnosticians within Forest Research who will attempt to confirm any suspected pests or diseases or identify any unknown causes. Please provide as much information as possible to help the diagnosticians. Users will be informed of the findings of their enquiry and registered users will be able to view their previous submissions from their Dashboard.

The following data requirements are similar to those for healthy trees and include:

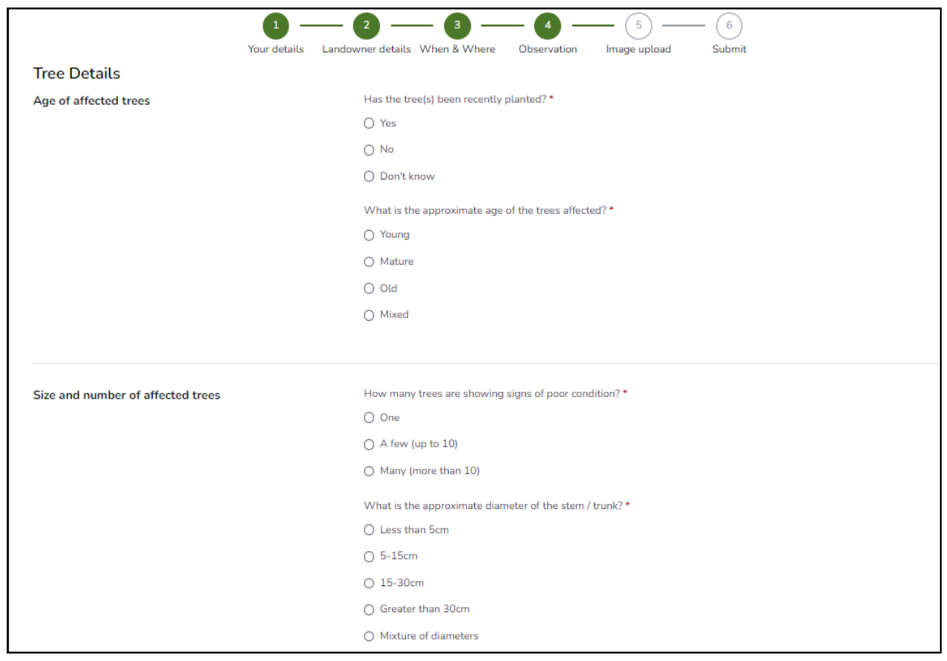
- Information on the date of observation, tree location, location type and landowner.

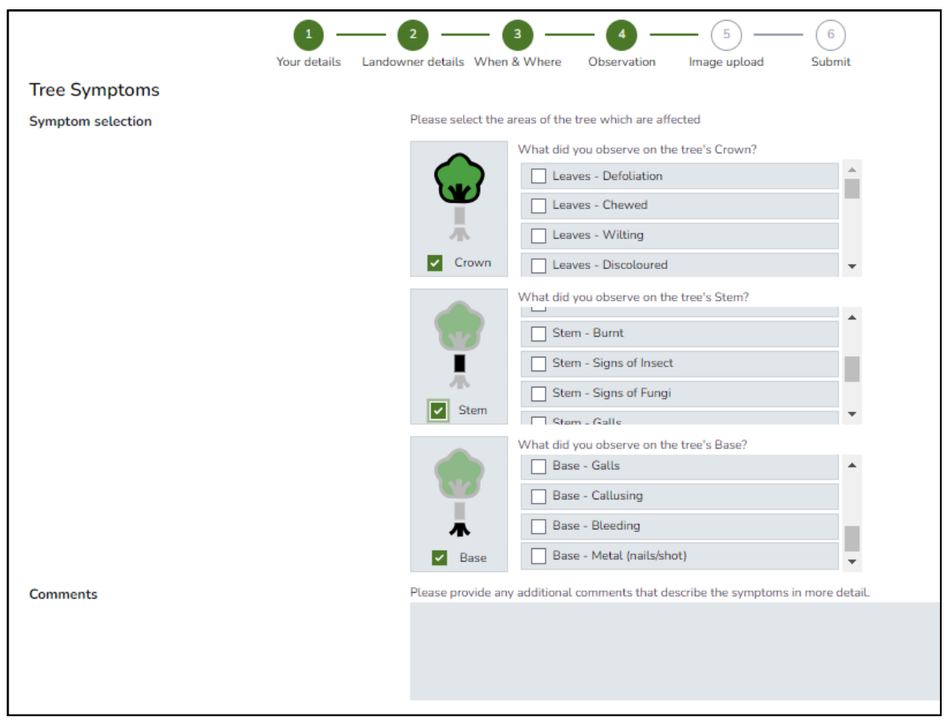
- Additionally, information about the tree's approximate age and size are required. It is possible for a report on any individual tree to be used to represent a number of similarly affected trees in the same location.

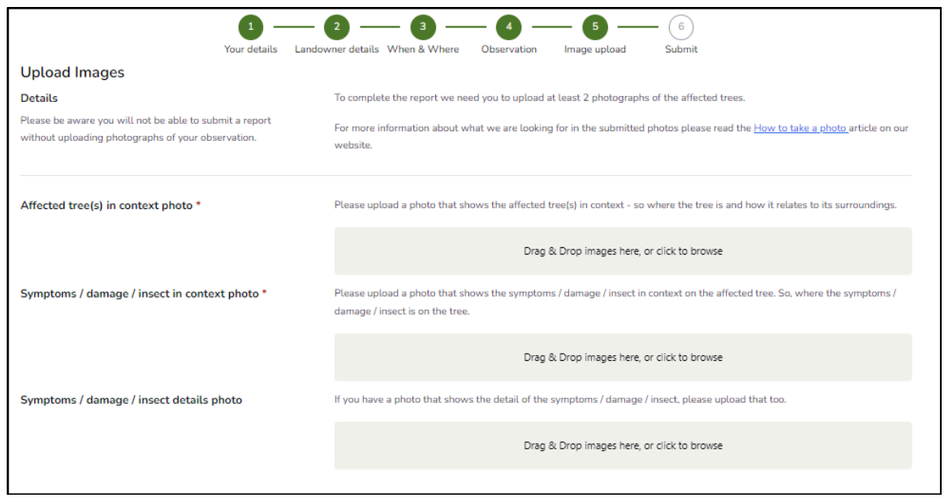
- The species name, or if not possible the genus are requires. Further information is then required on the signs and symptoms displayed on the crown, steam and base of the tree.

- Finally, three photos are required that show: 1) the tree in context, 2) the signs of ill-health in context, and 3) the signs and symptoms in more detail.

- Diagnosticians may seek to contact you for further information or to request that some samples are taken.







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IPSN
International Plant Sentinel Network

BGCI

Observatree
monitoring tree health

PlantNetwork
Connecting gardens, sharing skills

UKGSN

Thank you for participating in the UKGSN initiative.
This document has been created with the aim of helping volunteers submit their reports for the UKGSN Tree Health Pilot 2024.

For more any questions, please email us:
treealert@forestresearch.gov.uk