

## Where does Phytophthora occur?

There are several different species of Phytophthora; some are native but others have been introduced into Australia. It has been found in bushland, farmland, forests and gardens, and across most States. It has been identified throughout the Southern Highlands.

This national problem is a serious biosecurity risk. It is listed as a 'Key Threatening process' under the Commonwealth's Environment Protection and Biodiversity Conservation Act 1999 and the NSW Threatened Species Conservation Act 1995.



2024 produced by:

- Southern Highlands Australian Plant Society
- Botanic Gardens of Sydney
- WinZero
- Wingecarribee Shire Council

Funded By:  
Wingecarribee Shire Council - Environment Levy

## For More Information

*Plan for Trees: A Guide to Farm  
Revegetation*, NSW DPI (2006)

*Phytophthora Management Guidelines*,  
Dept Environment & Water, SA (2006)

*Planting Your Patch*, Local Land Services,  
NSW

*Natural Asset Farming, Creating Productive &  
Biodiverse Farms*, CSIRO (2022)

**Firewise Garden/Shelterbelt Design:**  
Victorian Landcare Gateway

### Further Advice:

- Local Land Services, NSW
- Rivers of Carbon > Resources

## Which vegetation is vulnerable to Phytophthora in the Southern Highlands

Many plants, including native and exotic species, are vulnerable to infection. In the Southern Highlands, exotic conifers, especially those within the *Cupressus* complex, have been severely affected.

This includes varieties such as x *Leylandii* and *Cupressus torulosa*, along with certain pines and cedars.

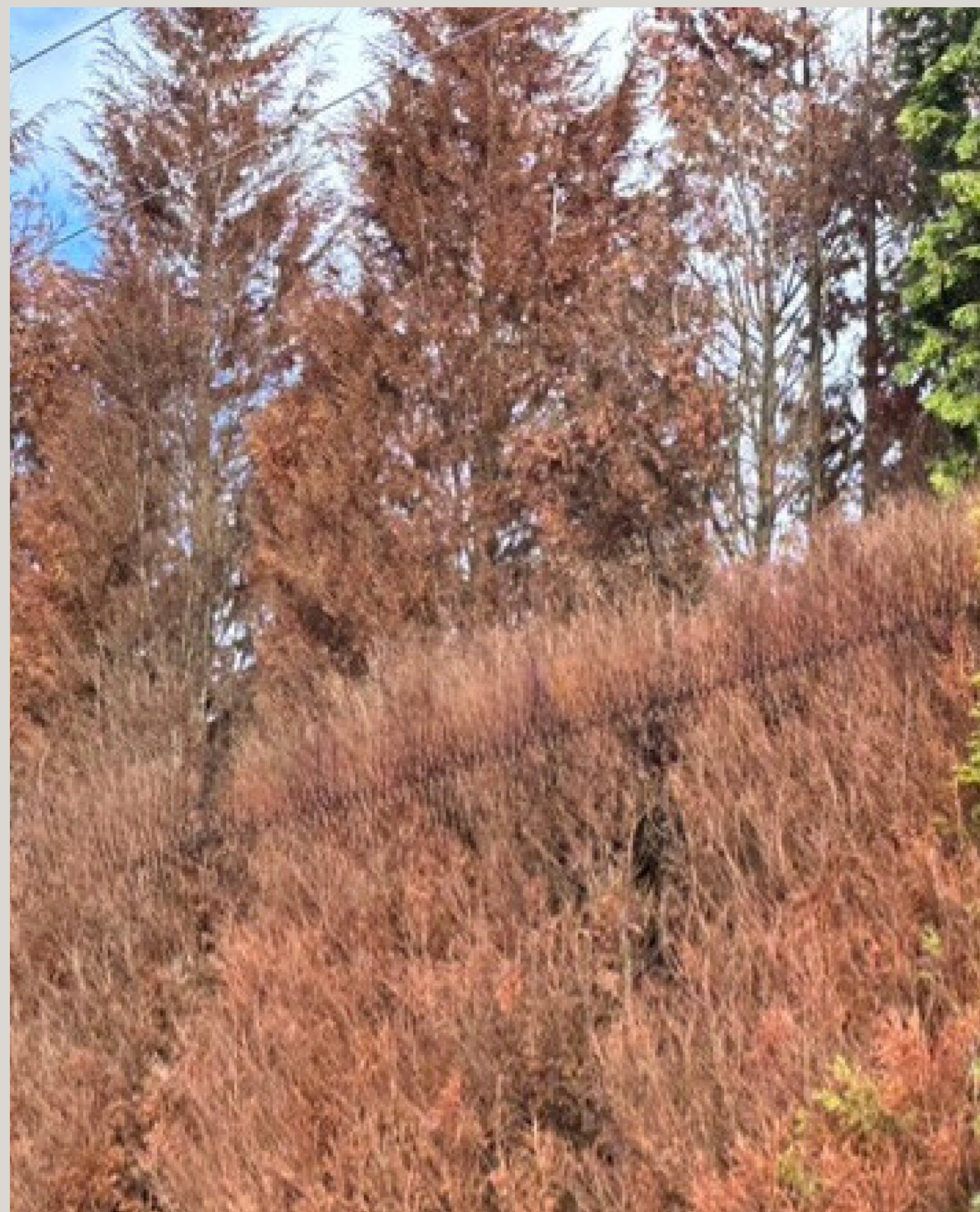
Printed on recycled paper Version 20240619

# Tree Death

## and Phytophthora in the Southern Highlands







## What is Phytophthora?

Phytophthora, a water mould, thrives in warm, moist soils and attacks plant roots, causing rot and preventing water and nutrient uptake, leading to dieback.

Early signs include leaf yellowing or browning. In the Southern Highlands, dieback, evident from dead trees, often results from prolonged stress due to drought, flooding, or poor soil conditions. This stress weakens plants, making them susceptible to pests and diseases like Phytophthora, which is usually fatal to plants but harmless to animals and humans.

## How does Phytophthora spread?

It exists naturally in soil but, when it encounters flowing water, its spores swim along with the water, attaching to roots they encounter. As water moves and pools so, too, do the spores.

Phytophthora-infected soil or root material is often transported by animals or human activities. The organism can hitch a ride on clothes, footwear, tools, vehicle tyres and machinery. It can also be introduced to new areas in imported materials such as soil, plants and mulch.

## How can I stop the spread?

- Test your soil. This can be done at the Plant Clinic, Botanic Gardens of Sydney or the Dept of Primary Industries, NSW.
- Avoid activities in wet areas where Phytophthora is likely active.
- Stick to designated paths to minimise disturbance.
- Limit the movement of plants, soil, and rocks from one area to another.
- Sterilise machinery and equipment before and after use. You can do this by cleaning and then applying a disinfectant approved for this purpose.
- When entering or exiting an area, disinfect footwear, tyres, tent pegs, and tools with a spray of 70% methylated spirits.

## What can be Done?

If trees are affected, wait until they have completely died and the surrounding soil is dry before removal to prevent spreading the pathogen.

Do not attempt to climb dead trees.

Once dead, cut the trunk 1 metre above ground level. The top can be mulched. The stump will decompose naturally over time.

## Replanting Tips

- Carefully select new plants. Choose a range of local and native species.
- For suitable species recommendations contact your local Land Services office.
- Improve soil; sandy and organic soils provide the best drainage.
- Three-row plantings provide the greatest benefits: a tree, a shrub and an herb layer.
- For added protection, spray young plants with phosphite, following instructions for use carefully.

Investment in such perimeter plantings will provide privacy, effective windbreaks, shelter belts and shade. It will maintain soil moisture, stem erosion, reduce the speed of grass fires and provide habitat for birds and insects that reduce pest species.