# Road Haulage and Processing of Wood taken from sites infected with *Phytophthora ramorum*

## Context

1. Tests have shown that logs from infected larch trees can host *Phytophthora ramorum (P. ramorum),* but the pathogen only sporulates from the foliage (needles).

2. The bark and cambium (and possibly the outer sapwood) of logs cut from infected trees will contain the pathogen. *P. ramorum* can persist on log material, but it can only grow into new, susceptible host plant material if it is in direct physical contact with it.

3. Active sporulation can occur once the pathogen is established on the live, green plant material. Therefore infected logs can only be considered potentially infectious if they are placed in direct physical contact with a susceptible live host plant.

4. In addition, both uninfected and infected logs can become surface "contaminated" and act as "carriers" of infected plant material, such as needles.

## Risks of disease transmission during road haulage of logs

5. If logs are loaded within the woodland and taken directly to an authorised processing site, the risk of logs coming into direct physical contact with a susceptible host plant is low.

6. There is some evidence emerging that the bark of infected trees is shed more easily during harvesting operations compared than bark from uninfected trees. If loose bark is shed during transit, there is a risk that this material might be transferred into the wider environment and contact with a live susceptible host. This risk is assessed as low.

7. Infected plant material, such as needles, carried on logs can be dislodged during transit. There is a theoretical risk that this infected material could enter watercourses from road runoff, and then reach new, live, susceptible hosts growing beside that watercourse. This risk would depend on the weather conditions during transit, and the distribution of potential host plants en route. But this risk is assessed as low.

8. These risks are assessed as substantially less than those posed by retained sporulating host plants. They are also significantly lower than the potential risk of transmission on machinery moving from infected sites to other sites containing susceptible host plants.

## Summary of risk for road haulage of logs

9. In light of our current knowledge of the disease and the potential transmission pathways, our assessment is that the potential risks during road haulage of wood is sufficiently low to permit movement under licence. This is subject to current biosecurity measures being applied within the woodland, for example, only loading logs stacked onto bearers and on to cleaned lorries.

## Risks of disease transmission through processing of logs

10. The pathogen can exist within the bark, cambium and possibly the outer layers of sapwood beneath. During processing, the way in which this outer material is separated, further processed and subsequently used are factors determining the risks of disease transmission.

11. Round logs are "squared" by either a direct chipping process or sawing. Debarking is sometimes done first to create a separate product, often used in the horticultural trade.

12. Because there is no infection in square-sawn timber, subsequent sale and distribution of any products derived from this part of the log are unrestricted, and present no risk of disease transmission.

13. The bark, slabwood or woodchips from the sides of the logs can be burned on site for heat, but are more usually sent onwards to another facility. If this facility subsequently burns the material for heat generation, or puts it through another process which applies high temperatures, such as pelletised fuel or board manufacture, this is deemed a biosecure method of using the material, and reduces the risk of further disease transmission to very low.

14. Most processing sites handling roundwood would also sell some of the bark, slabwood or woodchips into other markets with end uses such as horticultural use, compost and outdoor surfacing. The risk of these products returning into the wider environment and coming into contact with susceptible host plants is high and deemed unacceptable. Consequently, all these co-products must go through a facility that involves burning or otherwise being subjected to sufficiently high temperatures.

15. All processing sites handling roundwood will have a quantity of yard sweepings arising from the stacking and handlings of logs. These must be collected and either added to co-products sent for a biosecure use, or incinerated on site or at an incineration facility elsewhere.

## Risk Assessment

16. The table in Annex 1 sets out an assessment of the risks at each stage from woodland site, road haulage and processing of timber. It explains the assessed risk levels, and the mitigation measures which should be applied. The clearance of infected trees and shrubs is considered necessary to meet the objective of the joint Animal & Plant Health Agency (APHA)/Forestry Commission Programme to reduce the level of inoculum to epidemiologically insignificant levels.

17. The EU Plant Health Regulation (EU) 2016/2031 which came into force on 14th December 2019 requires the use of Protected Zone plant passports for the movement of plant health-regulated forestry material within the EU and within Great Britain, that is, all conifers and Castanea species, including sweet chestnut, with bark. If a business or individual is involved with the movement of plant health-regulated forestry material, they are advised to check whether they are affected by these regulations. If you are affected, you must register as a Professional Operator. See www.gov.uk/guidance/register-as-a-professional-operator-to-issue-plant-passports for details of how to register and become authorised to issue plant passports

Annex 1: Risk Assessment for Road Haulage and Processing of Timber from Sites Infected with *Phytophthora ramorum*

| **Source of Infection** | | **Spread Risk** | **Reasons for Risk level** | **Mitigation to reduce risk** |
|---|---|---|---|---|
| **Sporulating Hosts** (actively producing spores) | Canopy (trees) | Highest | Canopy level sporulation – atmospheric spread over long distances. Larch needles are lightweight and more readily dispersed over distance. No controls possible on dispersal. Needles cast in autumn. | Fell trees to halt sporulation, break the cycle of disease and reduce risk of atmospheric spread. Contain infected foliage on site. |
| | Shrub Layer | High | Sporulation active all year round on evergreen hosts (e.g. rhododendron) | Cut infected material. Burn material to kill spores and reduce levels of on-site inoculum. |
| **Infected Plant Material** (carrying spores) | Cast Needles, Foliage and Lop and Top | Medium to High | Potentially spread out of site by wind dispersal of needles, but largely contained on site.<br><br>Transfer of disease to new host plants by physical contact.<br><br>Largely contained within site, and transfer of disease to new hosts by physical contact | 1. Apply **biosecurity measures** to reduce incidence of infected material moving off site.<br>• Machines – pressure wash before leaving site<br>• Vehicles – park outside woodland boundary if possible, otherwise keep on hard tracks and pressure wash before leaving site to remove all soil and vegetation.<br>• Personnel – brush off and disinfect footwear and clothing (greater likelihood of contact with infected material)<br>• Public – keep to tracks, dogs on leads<br>• Assess risks of organised recreation events at time of planning<br><br>More details of biosecurity measures at: www.gov.uk/guidance/prevent-the-introduction-and-spread-of-tree-pests-and-diseases<br><br>2. Keep stacking areas and road edges clear of felling debris. |

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| Continued… **Infected Plant Material** (carrying spores) | Logs – on site | Low | Only acting as "carrier" of spores<br><br>Timber stacked within site. | Stack logs on bearers – minimise contamination with felling debris during extraction operations.<br><br>Ensure lorries are free of debris before loading. |
| | Logs – in transit to processing outlets | Low | Potential to drop infected material from lorry in transit, but risk of that material coming into direct physical contact with a live susceptible host is low. | Apply biosecurity measures in woodland to minimise presence of contaminated material on lorry.<br><br>**All road haulage of timber off infected sites will only be permitted with a Movement Licence.** |
| | Logs at Processing Site | Low | Contained site with no susceptible host material within boundary.<br><br>Controlled situation for handling logs and products | Anyone processing timber from infected sites must receive authorisation to do so via a licence from a plant health inspector. The licence will state the conditions that must be applied.<br><br>Stack logs separately from other logs if stored on site prior to processing. |

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| **Infected products of timber processing** | Bark, slabwood and woodchips taken from peripheral parts of roundwood | Low (if mitigation measures applied) | No contact of the product with susceptible host back in the environment | **Options:**<br>• On-site burning: products must be stored separately from uninfected material, and then burned on site. Infected and uninfected material can be stored together if both are to be burned on or off site. Any short-term storage on site must be on hard standing.<br>• Off-site burning: products may be sent to a woodfuel outlet for burning. (Note the road haulage condition above).<br>• An alternative process authorised by a plant health inspector.<br><br>**Any road haulage of material to a separate location for burning must be in enclosed transport and only with a Movement Licence.**<br><br>**Prohibited uses:**<br><br>Onward movement of this material into markets that directly or indirectly lead to this material entering horticultural use, composting, mulching or outdoor surfacing is **not permitted**. |
| **Spores in Environment** | On ground, in watercourses | Low | Only localised risk of transfer on to host material | Use biosecurity measures to ensure risk from physical transfer is reduced. |