Biosecurity on the PFE

Within the guidance supporting the FC Tree Health and Plant Biosecurity Strategy and associated Action Plan, biosecurity measures are described as 'a series of precautionary steps designed to reduce the risk of transmission of harmful organisms' and must address 'movement pathways' for such organisms. Some key points from this document are -

1. It is everyone's responsibility to take proportionate measures to minimise the risk of transmitting infected material or pests onto or off any site that they visit. **This Instruction is FEE's policy for implementing biosecurity on the PFE** and all staff should follow it. It also applies to anyone who carries out activities on behalf of the Forestry Commission, including our contractors, on or off the PFE. This implicitly includes contractors working for our customers.

2. An assessment of whether the risk is 'High' or 'Low' should be done for each operation to determine the biosecurity level required. It is **recommended** that where an Ops 1 has been prepared prior to work then the risk should be recorded in that document. The key point is to ensure that all staff and contractors are aware of the level of risk and biosecurity measures required before entering a site.

3. If a pest or disease is suspected or found then this should be reported to the regional Tree Health Officer, Tree Alert (www.forestry.gsi.gov.uk/treealert) or the Tree Health team (tree_health@forestry.gsi.gov.uk / 0300 067 4042/4151).

The spread of pests and disease

Other than host availability, the movement of infected material is the most significant biosecurity factor on the public forest estate. Infected material includes water, organic material, soil and live plants. This material is can be moved via two main dispersal pathways:

Natural Pathways

- Wildlife
- Rain
- Wind and mists
- Water courses

Human Activity Pathways

- Moving infected plants
- Moving infected material on tools, machines, vehicles, boots and clothing

Natural dispersal pathways are impractical to manage but minimising the movement of infected material by human activity is more achievable. This is significant on the PFE because **human activity has the capability to spread pests and diseases faster and further than natural pathways can**.

Whilst we cannot control the extensive human activity movement pathways created by public access we can however exercise control over the lesser but significant pathways created by forestry machine / workforce / vehicle and plant movements. On the Public Forest Estate the following descriptions of biosecurity risk suffice.

Importance to PFE

All the pests listed as High Risk below constitute a significant risk to forestry and the PFE.

Other pests and diseases are important but are essentially endemic and the consequences of continuing transmission are unlikely to have a significant additional effect unless otherwise stated by the Plant Health Risk Group; whilst they may be important to the PFE they are generally deemed Low Risk from a forest biosecurity perspective. That said, there are no Zero Risk areas, so if in doubt seek advice.

Classifying Risk

High risk pests and diseases

- Those for which special biosecurity procedures require a chemical or physical disinfection of equipment, vehicles and clothing.
- Those which are subject to EU or domestic legislation requiring eradication, control or monitoring of outbreaks, that are not naturalised or endemic, and are designated formally by the Plant Health Risk Group as a high risk to the sustainability of the PFE or any part of it. Currently:
    - Ash Dieback (Hymenoscyphus *fraxineus, formerly* Chalara *fraxinea*);
    - Phytophthora ramorum (P. *ramorum*);
    - Oak Processionary Moth (Thaumetopoea *processionea*);
    - Asian Long-horned Beetle (Anoplophora *glabripennis*)
    - Acute Oak Decline;
    - Sweet Chestnut blight (Cryphonectria *parasitica*);
    - Oriental Chestnut Gall Wasp (Dryocosmus *kuriphilus)*; and
    - Plane Wilt (Ceratocystis plantani).

High risk sites and activities

- Specialist or targeted operations intended to deal with high risk pests and diseases present on defined sites.
- Normal off-road forest operations on defined sites where a high risk pest or disease has been identified, or is suspected pending confirmation by Plant Health.
- Use of any plants with indeterminate origins or suspected health issues.

Low risk sites and activities

- Normal day to day forest operations anywhere where contact with high risk pests and diseases is unlikely.
- Normal off-road forest operations on any site that is not subject to controls required for a high risk pest or disease.
- Road vehicle access over stoned, drained roads around defined sites that are subject to controls for high risk pests or diseases.
- Use of plants from FC nurseries or otherwise sourced by PSSB

PFE biosecurity practice

Prior to entering the PFE

A key biosecurity control for the PFE is the cleanliness of machines and vehicles as they arrive on a site after working in other woodlands where biosecurity may not have been specified by the landowner. To manage this particular movement pathway, staff should (at Gateway 2 of the pre-commencement process) make sure the contractor is aware that the machines must be reasonably clean of debris and mud before they arrive on site.

Essentially the practices detailed below under the headings "before leaving the work site" should be applied before leaving the previous site too.

On the PFE

Where any high risk factor (pest, site or activity) is present, FC staff and contractors must use appropriate 'High risk' biosecurity. 'Low risk' biosecurity measures should be adopted at all other times and places. The biosecurity practices for staff and others working on the PFE are as follows:

'High Risk' biosecurity practice

1. Visit high risk sites and activities last if possible.
2. Park road vehicles off site if possible.
3. Before leaving the work site:
   - Brush soil and organic debris off footwear, waterproof clothing, tools and equipment and, when required, disinfect these items before getting into vehicles.
   - Road vehicles must stay on hard, stoned, drained roads. Brush away any build-up of mud and organic debris on vehicles, lorries and machines paying most attention to wheels, wheel arches, footwells and flatbeds. Clean regularly.
   - For off-road vehicles accessing the infected crop or land, brush or wash away mud and organic debris (see Washing Down section below). When required, disinfect / treat as prescribed paying most attention to wheels, tyres, tracks, chassis and places where debris collects.

'Low Risk' biosecurity practice

1. Only take necessary vehicles, kit and equipment onto site. Occasionally wash (see Washing Down section below) or clean all items well.
2. Before leaving the work site:
   - Brush or knock off soil and organic debris on footwear, tools and equipment.
   - Brush or knock off heavy build-ups of mud and organic debris on vehicles, lorries and machines, paying most attention to wheels, wheel arches, footwells and flat surfaces.

'Endemic' areas

Some diseases like *Chalara* are 'high risk' but they already widespread in some geographic areas and across entire forests. In such cases, the outward movement of infected material into non-infected areas is the main risk to guard against, not the internal movement between individual sites that are already infected.

Therefore in areas where any disease is deemed to be 'endemic' (HoLM must take all decisions of this nature) only low risk biosecurity need be applied by staff and contractors when moving around inside that area during the working day. When planning to move outside an 'endemic' area, the appropriate biosecurity for the disease concerned (including disinfection if required) must be applied before leaving.

Regardless of whether a disease is deemed endemic or not, on sites subject to a SPHN the specified biosecurity must always be applied when leaving each site.

Washing down

Ideally vehicle and equipment washing down should take place at a proper facility where water and washings drain into a grey-water treatment network. A good brush-down before transport directly to the washing facility is essential. For some larger forestry machines this may not always be practical and **it is now acceptable to wash down in the forest** under certain conditions. We have confirmed that this practice is outside the scope of ISO14001 and no permit is required from EA **provided the following measures are taken**.

- Washing in the forest is permitted where an alternative site is not feasible and it is necessary to meet biosecurity policy. For routine maintenance and repair purposes, washing should always be done at a proper facility and not in the forest.
- Before washing, wipe areas of the machine that are heavily contaminated with oil or grease using oil-absorbent cloths or mats. Place these in a sealed bag for waste disposal.
- Have an oil-specific spill kit to hand at all times and deploy if there is evidence of oil, grease or fuel contamination in the run off. If Spill-Kit materials are used during washing, replace these before starting the next site.
- The UKFS standard for protecting water must be met. Keep at least 10m away from any surface water, and prevent any washings from running into them.
- Work on a surfaced forest road or track. Do not wash machines on the forest floor.
- Do not use detergents or solvents.
- Focus on areas where soil and organic material are likely to have accumulated and use the minimum amount of water to complete the task.
- If possible, use hot water or steam washers. If possible use a lower pressure and a brush, rather than high pressure washers that spray water for some distance.

Pests and diseases currently present in England and most likely to be found in woodland or forestry environments, including the susceptible species, pathway materials and disinfectant requirements.

Diseases	Most Susceptible Species:	Pathway Materials	Disinfection Required?
Acute oak decline	Pedunculate oak (*Quercus robur*) Sessile oak (*Quercus petraea*)	Chip, Logs, Sawdust, Soil, Water	Yes
Chalara dieback of ash	All *Fraxinus spp.*	Soil, Foliage	Yes (On leaving an endemic area. See page 4)
Chestnut blight	European sweet chestnut *(Castanea sativa)* American sweet chestnut *(Castanea dentata)* Pedunculate oak (*Quercus robur*) Sessile oak (*Quercus petraea*) Holm oak *(Quercus ilex)*	Chip, Logs, Sawdust, Soil, Water	Yes
Dothistroma needle blight	Corsican pine *(Pinus nigra)*, Lodgepole pine *(P. contorta)* Scots pine *(Pinus sylvestris)*	Chip, Soil, Foliage (needles)	Yes (On leaving an endemic area. See page 4)
Phytophthora alni	Alder *(Alnus spp.)*	Chip, Logs, Sawdust, Soil, Foliage, Water	Yes
Phytophthora austrocedri	Juniper (*Juniperus communis)*	Chip, Logs, Sawdust, Soil, Foliage, Water	Yes
Phytophthora kernoviae	Beech *(Fagus sylvatica)* Tulip tree *(Liriodendron tulipifera)* *Magnolia spp.* Holm Oak *(Quercus ilex)* *Pieris spp.* Cherry laurel *(Prunus laurocerasus)* Variegated holly *(Ilex aquifolium)* Pedunculate oak (*Quercus robur*) Rhododendron (*Rhododendron ponticum)*	Chip, Logs, Sawdust, Soil, Foliage, Water	Yes

Phytophthora lateralis	Lawson cypress *(Chamaecyparis lawsoniana)* Pacific yew *(Taxus brevifolia)* Western red cedar *(Thuja plicata)* Eastern white cedar *(Thuja occidentalis)*	Chip, Logs, Sawdust, Soil, Foliage, Water	Yes
Phytophthora ramorum	Larch spp. (*Larix spp.*) Sweet chestnut (*Castanea sativa*) Red Oak (*Quercus rubra*) Turkey oak (*Quercus ceris*) Holm oak (*Quercus ilex*) Beech (*Fagus sylvatica*)	Chip, Logs, Sawdust, Soil, Foliage, Water	Yes

Pests	**Most Susceptible Species:**	**Pathway Materials**	**Disinfection Required?**
Great spruce bark beetle	Spuce (*picea spp.*)	Logs, Chip, Foliage	No
Oak Processionary Moth	Oak (*Quercus spp*.)	Logs, Chip, Foliage	No
Oriental chestnut gall wasp	*Castanea spp.*	Foliage	No
Pine tree lappet moth	Pine (*pinus spp.*) Sitka spruce (*Picea sitchensis*) Norway spruce (*Picea abies*) Douglas fir (*Pseudotsuga menziesii*)	Logs, Chip, Foliage	No