Rapid Pest Risk Analysis (PRA) for: *Phytophthora austrocedri*

June 2015

STAGE 1: INITIATION

1. What is the name of the pest?

Phytophthora austrocedri Gresl. & E.M. Hansen*.* First described as a new species by Greslebin and Hansen (2007). Also incorrectly referred to as *Phytophthora austrocedrae.*

Common names of the pest:
None

Taxonomic position:
Kingdom - *Chromoalveolata*; Phylum *Heterokontophyta*; Class – *Oomycetes;*
Order – Peronosporales; Family – Pythiaceae; Genus – *Phytophthora*

Special notes on nomenclature or taxonomy:
Phytophthora austrocedri is a recently described new species and the name '*austrocedri'* refers to *Austrocedrus*, the genus of conifers first recorded as a host of this pathogen in Argentina.

P. austrocedri is in clade 8 of the Cooke *et al*. (2000) molecular phylogeny of the *Phytophthora* genus, which includes *P. syringae* and *P. lateralis* (the latter is another pathogen of the Cupressaceae). It is a homothallic species characterized by semi-papillate sporangia and oogonia with amphigynous antheridia. Phylogenetic analysis of the ITS rDNA sequence of *P. austrocedri* indicates that *P. syringae* and *P. obscura* are its closest relatives. Both species are known to occur in Europe and America, although *P. syringae* is widespread and findings to date of *P. obscura* are rare. Within *P. austrocedri*, two genetically distinct genotypes have been recognised; one (the 'Argentinian genotype') was first reported in Argentina and is the only genotype known to occur there, the other (the 'British genotype') was first reported in Britain and, to date, is the only genotype to be found in the wider environment in Britain, with the 'Argentinian genotype' found occasionally on individual nursery or ornamental garden plants of *Juniperus communis* (common juniper) in England and Wales (Denton *et al*., 2009; Beatrice Henricot, personal communication). The very limited genetic diversity of the pathogen in Argentina (Vélez *et* al., 2013) and in Britain as found to date (Green *et al*., unpublished) suggests that it has been introduced into these two countries from an unknown origin. *Phytophthora austrocedri* is also characterised by its low optimum temperature for growth (15-17.5 ^{o}C) and very slow culture growth rate: 1-2 mm/day for the Argentinian genotype (Greslebin *et al*., 2007) and <0.5 mm/day for the British genotype (Green *et al*., 2012); measured on V8 agar.

2. What initiated this rapid PRA?

This rapid PRA is an update of an earlier PRA initiated as a result of the first findings of *P. austrocedri* in Britain by Forest Research (FR) scientists. In March 2011, during surveys of *Chamaecyparis* for *P. lateralis*, foliage browning was noticed on two mature *C. nootkatensis* trees in a public park in East Renfrewshire, Scotland. *P. austrocedri* was isolated from a basal stem/root lesion on one of these trees http://archives.eppo.org/EPPOReporting/2011/Rse-1106.pdf. Also in the Glasgow area but at a separate private garden site, *P. austrocedri* was isolated from an aerial bark lesion (i.e. a lesion not connected to a root infection) on the stem of a recently planted sapling of *C. lawsoniana*.

In November 2011, *J. communis* trees showing symptoms of dieback apparently associated with lower stem and root necrosis were investigated on a heathland site at Upper Teesdale, northern England. As a result of detailed examination by FR scientists, infection by *P. austrocedri* was confirmed in six trees from different locations on the site through both isolation and molecular diagnosis; samples comprised root and stem phloem lesions. Molecular diagnosis was based on *Phytophthora* specific ITS rDNA sequences amplified from symptomatic tissue; these sequences matched 99% with those of two *P. austrocedri* isolates from Argentina deposited in Genbank (Accession numbers DQ995184, DQ995184) thereby confirming species identity (Green *et al*., 2012).

Subsequent enquiry revealed that *P. austrocedri* had previously been identified as being present in symptomatic *J. communis* plants by the Royal Horticultural Society Advisory Service (Wisley); once from a garden in mid Glamorgan (Denton *et al*., 2009) and also during nursery surveys (B. Henricot, personal communication). Identification was based solely on the amplification of *Phytophthora* specific ITS rDNA sequences from symptomatic tissue and matching these sequences with those of *P. austrocedri* deposited in Genbank. Detailed records of the affected nursery plants (e.g. plant size, tissues affected, symptoms, dates of findings and location of affected plants) are not currently available.

Since the first findings of *P. austrocedri* in Britain in 2011, surveys have shown that the pathogen is now present on juniper at close to 100 geographically separate wider environment sites in Scotland and northern England. Given the widespread nature of *P. austrocedri* infections, this rapid PRA is being conducted to inform policy as to whether or not statutory action is still appropriate for *P. austrocedri* and to recommend future actions.

3. What is the PRA area?

The PRA area is the United Kingdom of Great Britain and Northern Ireland.

STAGE 2: RISK ASSESSMENT

4. What is the pest's status in the EC Plant Health Directive (Council Directive 2000/29/EC) and in the lists of EPPO?

P. austrocedri is not listed in the EC Plant Health Directive.

P. austrocedri is not listed by EPPO (http://www.eppo.org/QUARANTINE/quarantine.htm), although it was highlighted by the EPPO Reporting Service in 2009 (http://archives.eppo.org/EPPOReporting/2009/Rse-0901.pdf)

5. What is the pest's current geographical distribution?

Prior to the recent findings in the UK, it had been established that *P. austrocedri* is the causal agent of a disease known as ***mal de ciprés*** (MDC) which results in mortality of *Austrocedrus chilensis* in forests of western Argentina (Patagonia). *A. chilensis* (Cordilleran or Chilean cypress) is an endemic tree in the Cupressaceae found in southern Argentina and Chile. It forms pure and mixed stands with *Nothofagus* spp. and has a distribution covering approximately 160,000 hectares. Affected forests include those in the southernmost extreme near Corcovado, Chubut, 43° 43'S, to the northern extreme near Villa Pehuenia, Neuque´n, 38° 54'S.

Phytophthora has long been suspected as the causal agent of MDC but this was not confirmed until 2007 (Greslebin *et al.* 2007). The disease starts in the root system and symptoms include the formation of lesions with resinous exudates on the bases of stems, as well as necrotic lesions on root collar and roots of *Austrocedrus chilensis.* High levels of mortality are associated with MDC; some trees die very rapidly, in others progressive defoliation leads to death after several years (Greslebin and Hansen, 2010). It is also reported that MDC is associated with certain site conditions, notably high soil moisture and poor drainage (Baccalá *et al*., 1998; Filip and Rosso, 1999; La Manna and Rajchenberg, 2004).

In addition to isolations made from symptomatic root and bark tissue of *A. chilensis*, *P. austrocedri* has also been recovered from forest soils (Greslebin and Hansen, 2010).

There has only been one other confirmed finding of *P. austrocedri* outside Argentina and Britain; the pathogen (Argentinian genotype) was isolated from *Juniperus horizontalis* 'Glauca' at an import nursery in Germany in 2001 (Werres *et al*., 2014).

Current known records of *P. austrocedri* are shown in Table 1.

Table 1. Recorded findings of *Phytophthora austrocedri*

North America	No record
Central America	No record
South America	Argentina (Patagonia)
Caribbean	No record
Europe	UK (England, Scotland, Wales), Germany (isolated from *Juniperus horizontalis* in a plant nursery)
Africa	No record
Asia	No record
Oceania	No record

Following the confirmed findings in Britain in 2011, surveys conducted by Forest Research staff in 2012 and 2013 found *P. austrocedri* to be causing dieback and mortality of *J. communis* at 19 geographically separate sites in Scotland and northern England (Green *et al*., 2014). During 2014 and 2015, further surveys investigating sites with disease symptoms and using qPCR to detect *P. austrocedri* (Mulholland *et al*., 2013) in bark and root lesions have revealed that the pathogen is widespread on *J. communis* in the northeast Grampians of Scotland and in Cumbria, with scattered infected sites elsewhere in northern Britain. Close to 100 geographically separate *J. communis* sites are now confirmed to be infected with *P. austrocedri*.

6. Is the pest established or transient, or suspected to be established/transient in the UK?

The pathogen can now be considered established in Scotland and northern England. It has not yet been reported on *J. communis* in the wider environment south of Yorkshire and surveys of natural *J. communis* stands conducted across Wales in 2014 failed to find infected plants. The requirement of *P. austrocedri* for a cool growing temperature (15-17.5 ^{o}C optimum temperature) may limit its distribution to cooler parts of Britain.

7. What are the pest's natural and experimental host plants; of these, which are of economic and/or environmental importance in the UK?

Known natural hosts are listed in Table 2 but Koch's' Postulates have only been fulfilled for two natural hosts - *Austrocedrus chilensis* (Greslebin and Hansen, 2010) and *Juniperus communis* (Green *et al*., 2012). All of the natural hosts known in Britain come from the family Cupressaceae, and are listed in Table 2.

Table 2. Known natural hosts of *Phytophthora austrocedri*

Host		Family	Symptom/ location of detection	Location	Date sampled	Reference
Scientific name	Common name					
Austrocedrus chilensis	Chilean cedar	Cupressaceae	Root, basal lesions, decline	Western Argentina	2007	Greslebin *et al*., 2007
Callitropsis (syn *Chamaecyparis*) *nootkatensis*	Nootka cypress	Cupressaceae	Basal stem/root lesion	West Scotland	2011	S. Green, unpublished FR data
Chamaecyparis lawsoniana	Lawson's cypress	Cupressaceae	Aerial phloem lesion	West Scotland	2011	S. Green, unpublished FR data
Juniperus communis	Common juniper	Cupressaceae	Basal stem/root lesion	Northern England	2011	S. Green *et al*., 2012
Juniperus sp	Juniper	Cupressaceae	Unknown	Wales	*c.* 2009	Denton *et al*., 2010
Juniperus sp	Juniper	Cupressaceae	Unknown	Nursery, Unknown	2010	B. Henricot, pers comm
Juniperus horizontalis	Creeping juniper	Cupressaceae	Unknown	Nursery, Germany	2000	Werres *et al*., 2014

Naturally susceptible economically and/or environmentally important hosts are present in the UK. They include:

- *C. lawsoniana* (Lawson cypress) which although not grown as a forestry species in the UK is planted in amenity situations and is considered an important conifer in the UK ornamental nursery plant trade; one estimate states that the species accounts for a '*significant portion*' of the £29 million garden centre sales of conifers per year (Sansford, 2006). This figure includes imports.

- *C. nootkatensis* is occasionally planted as an ornamental tree in the UK, but the series of hybrids of this species and the Monterey cypress (*Cupressus macrocarpa* (syn *Callitropsis macrocarpa*) recognised as Leyland cypress (*Cupressocyparis leylandii*), are fast-growing and much planted for hedges and screens making them an important element of conifer production in the UK ornamental nursery plant trade.

- *Juniperus horizontalis* (creeping juniper) is a low growing shrub native to northern North America. Numerous different cultivars of this species are grown as ornamental plants in gardens across the UK and are commonly found in the nursery plant trade.

- *Juniperus communis* (common juniper) is a component of semi-natural upland woodlands as well as upland and lowland heathlands, forming an important component of a range of semi-natural vegetation types (Broome, 2003). There are two subspecies: dwarf juniper (*J. communis* subsp *nana*) and tree juniper (*J. communis* subsp *communis*). It is one of Britain's three native conifer species and is a long-lived shrub/tree which provides structural permanence on sites where it is established. It is also an important food plant for many invertebrates and birds.

The distribution of *J. communis* in the British Isles (excluding gardens and amenity plantings) is shown below; it occurs on a variety of soil types, both acid and alkaline, including brown earths, gleyed soils, ironpans and some peaty soils. It is a priority species in the UK Biodiversity Action Plan (Anon., 2007) due to a decline in its distribution and general lack of population viability and regeneration.

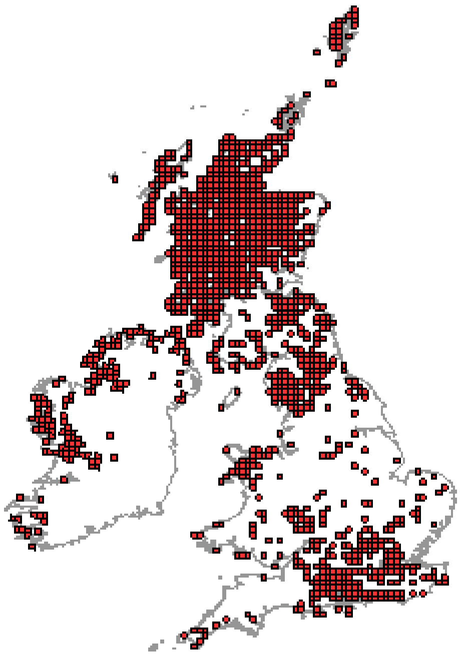

Figure 1: Red shading indicates presence of *Juniperus communis* within 10km squares over the British Isles (Figure taken from the National Biodiversity Network - http://data.nbn.org.uk/gridMap/gridMap.jsp#topOfMap)

8. What pathways provide opportunities for the pest to enter and transfer to a suitable host and what is the likelihood of entering the UK/PRA area?

A major pathway via which *P. austrocedri* is likely to move (by analogy with other Phytophthora spp.) is on 'plants for planting' of known natural hosts (e.g. *Austrocedrus chilensis, Chamaecyparis* spp. and *Juniperus* spp.) from countries where *P. austrocedri* is known to occur. Import of these host species from non-European countries is prohibited, however, the isolation in 2001 of *P. austrocedri* (Argentinian genotype) from *J. horizontalis* 'Glauca' in a plant nursery in Germany that imported plants (Werres *et al*., 2014) strongly suggests that the pathogen may be moved into the UK on infected *Juniperus* spp. from Europe, and vice versa.

Greslebin and Hansen (2010) and Elliot *et al.* (submitted) detected *P. austrocedri* in the soil of forests and woodlands in Argentina and Britain, respectively, where infected trees were located. Thus not only does the pathogen have the potential to be moved in infested soil from infected sites to other areas where it may pose a threat, but imported soil, either in containerised plants or bulk soil, will also represent a pathway by which *P. austrocedri* can enter the UK.

In addition to *A. chilensis* and *J. communis*, host plants such as those within the family Cupressaceae including *C. lawsoniana* and *C. nootkatensis* may represent pathways for entry. Pathogenicity tests on other species of cuppressaceae (*Thuja occidentalis*, *Thuja plicata, Sequoiadendron giganteum*, *Sequoiadendron sempervirens*, *Cuppressocyparis leylandii*) indicate that these species are not hosts of *P. austrocedri* (Green *et al*., 2014) and are thus unlikely to act as pathways for transmission. It should however be noted that a nursery inspection by APHA in 2014 reported *P. austrocedri* infecting *Cuppressocyparis leylandii* cultivar Gold Rider (Jane Barbrook, personal communication), However, in this case the host species was not absolutely confirmed.

There are no specific phytosanitary requirements for *P. austrocedri* in the EC Plant Health Directive (Anon., 2000) that would directly influence further entry of the pathogen into the UK or movement within the UK.

As the pest has already entered the UK, further entry is likely.

	Very unlikely		Unlikely		Moderately likely		Likely		Very likely	
Host plants for planting:	Very unlikely		Unlikely		Moderately likely		Likely	X	Very likely	
Soil:	Very unlikely		Unlikely		Moderately likely		Likely	X	Very likely	

These ratings are given with high confidence

9. How likely is the pest to establish outdoors or under protection in the UK?

Based upon the records of findings of *P. austrocedri* listed under 5, 6 and 7, the pest is already established outdoors in the UK (Scotland and northern England). Establishment under protection is likely because *P. austrocedri* has been found infecting nursery plants and Greslebin and Hansen (2010) and Green *et al*. (2014) showed that young host plants under protection can be readily infected and killed by the pathogen.

The pathogen's growth range of 10 to 20ºC (Greslebin *et al*., 2007; Perez-Sierra *et al.* unpublished) indicates that *P. austrocedri* is suited to the UK climate. As vegetative growth of the pathogen is inhibited above 25ºC (and possibly between 20 and 25ºC), higher summer temperatures in the UK could limit the ability of *P. austrocedri* to complete its life cycle although the production of oospores by this homothallic species could potentially allow persistence and survival under non-optimal conditions. Suitable humidity and/or moisture conditions for sporulation and zoospore production are also likely to occur in the UK, as closely related *Phytophthora* species including *P. syringae* sporulate readily under UK conditions or under conditions similar to those present in parts of the UK.

Outdoors:	Very unlikely		Unlikely		Moderately likely		Likely		Very likely	X
Under protection:	Very unlikely		Unlikely		Moderately likely		Likely	X	Very likely	

These ratings are given with high confidence.

10. If the pest needs a vector, is it present in the UK?

P. austrocedri does not require a vector for dispersal.

11. How quickly could the pest spread in the UK/PRA area?

It is not known when *P. austrocedri* entered the UK; but the first fully documented record including isolation of the pathogen was in 2011. As it has now been found at numerous geographically separate locations in the natural environment in Britain, with several of these sites showing symptoms since at least the early 2000's, it is reasonable to assume that the pathogen could have been present in Britain since the 1990s or earlier. Natural spread is likely to occur via movement in water and soil, and possibly via animal and/or human activity. The presence of water courses and areas of standing water are likely to favour pathogen spread at a site (Green *et al*, 2014). Human and large mammal activity, for example movement of grazing livestock from site to site, may also assist in the introduction and spread *of P. austrocedri* through transfer of soil contaminated with the pathogen's spores. The potential for aerial sporulation and dispersal is unknown but *P. austrocedri* has been isolated from, or its DNA detected in, aerial stem lesions on *J. communis* at several wider environment sites in Britain (Green *et al*., 2014) and it was isolated from an aerial lesion on C*. lawsoniana* in Scotland. Further work is needed to determine whether this is true aerial dispersal or the result of inoculum splashing up from infected soil or host debris. It should be noted that the Argentinian genotype of *P. austrocedri* produces non-caducous sporangia and aerial lesions have not been reported on *A. chilensis* infected by *P. austrocedri* in Argentina. In Britain, DNA of the pathogen has been found in *J. communis* berries collected from a number of sites (Armstrong *et al*., unpublished data). Since berries are eaten by birds and collected by humans for supplementary planting schemes, infected berries may be another potential route of spread of *P. austrocedri* both within the UK and between countries.

Distribution in planting stock is unknown, but there are several confirmed findings of *P. austrocedri* in nursery plants or private gardens in England and Wales (B. Henricot, personal communication; J. Barbrook, personal communication) and in Scotland (A. Schlenzig, personal communication). Thus nursery planting material represents a potential route of transmission into the wider environment, causing death of *J. communis, C. lawsoniana* or other species within the Cupressaceae. Whilst *J. communis* and *C. lawsoniana* are not important forestry species in Britain, *J. communis* is highly valued as an important constituent of the woodland ecosystem and is listed as a priority species in the UK Biodiversity Action Plan, and *C. lawsoniana* is a valued ornamental in the UK nursery plant trade.

Over the past 10-15 years there has been much interest in the expansion and re-introduction of *J. communis* through planting because of its decline over the last century on many sites (Broome, 2003; Broome *et al*., 2008; Graham, 2007; McBride, 2005). This has involved the collection of berries from local sites which are raised into plants in nurseries and subsequently planted back out onto the local site. It is possible that the pathogen may have been introduced onto some sites via infected young *J. communis* plants.

Natural spread:	Very slowly		Slowly		Moderately	X	Quickly		Very quickly	

In trade:	Very slowly		Slowly		Moderately		Quickly	X	Very quickly	

These ratings are given with high confidence.

12. What is the pest's economic, environmental or social impact within its existing distribution and its potential future impact?

Since *P. austrocedri* is already widely distributed on juniper in northern Britain, its current and future economic and social impact can be rated as small to medium, whereas its environmental impact is rated large.

In Patagonia (western Argentina) mortality associated with MDC (mal de ciprés) has been noted throughout the natural range of *A. chilensis*, with symptomatic trees recorded in the majority of sites that have been evaluated (43 out of 47 sites scattered across 140,000 ha of forest: southern extreme 43° 43'S, to the northern extreme 38° 54'S). *Austrocedrus chilensis* is valued for its ecological function, the quality of its wood and its scenic importance (Greslebin and Hansen, 2010) although the values of these various functions and losses due to MDC have not been quantified.

In Britain, *P. austrocedri* represents the biggest single threat to the future survival of *J. communis* and therefore its environmental impact is rated as large. This is in addition to a general decline in the extent and condition of *J. communis* in Britain over the past century, especially on upland sites (McBride, 2005) where its importance is tied in with nature conservation and game management. *J. communis* is also a key food plant for a wide range of invertebrates and birds and has a unique and specialised group of associated insects, fungi and lichens. Its long term decline over the last century has been attributed to overgrazing, burning, afforestation and other land use changes.

Economic:	Very small		Small	X	Medium		Large		Very large	
Environmental:	Very small		Small		Medium		Large	X	Very large	
Social:	Very small		Small		Medium	X	Large		Very large	

These ratings are given with high confidence.

13. What is the pest's potential as a vector of plant pathogens?

P. austrocedri is a plant pathogen with no capacity to act as a vector of other pathogens.

14. What is the area endangered by the pest?

Climatically-favourable areas where the known hosts occur include woodlands, gardens, parklands and heathlands. Geographically the north and west of the UK is likely to be more favourable than the south and east because of cooler, wetter conditions, but not necessarily exclusively so; distribution will also depend upon the presence of natural hosts and suitable soil and moisture conditions. Sites with high soil moisture and poor drainage are likely to be at increased risk based on observations of *J. communis* in in Britain (Green *et al*., 2014) and

A. chilensis in Argentina (Baccalá *et al*., 1998; Filip and Rosso, 1999; La Manna and Rajchenberg, 2004).

STAGE 3: PEST RISK MANAGEMENT

15. What are the risk management options for the UK?

(Consider exclusion, eradication, containment, and non-statutory controls; under protection and/or outdoors).

Exclusion and Eradication
Current records suggest that *P. austrocedri* has a widespread distribution in the wider environment in northern Britain. Therefore attempts to exclude or eradicate the pathogen by regulation would have only a limited effect as the greatest risk of spread is from infected plants, water and soil within the UK. *P. austrocedri* has also been identified on young plants in nurseries where statutory eradication may be possible (see below).

Containment
Currently for heavily infected sites in the wider environment a strategy of containment is recommended in order to protect other sites where the pathogen has not established. This involves measures to limit human or livestock-assisted spread such as preventing the removal of plant material from infected sites, cleaning and disinfecting footwear and tools, restrictions on livestock movement following removal from site and, where appropriate, putting in place notices asking members of the public to keep to paths. It is not possible to put in place effective measures to prevent natural spread via water or movement via soil with wild animals. This will mean that the efficacy of containment measure will always be limited.

Statutory
Statutory control of *P. austrocedri* should be undertaken in the plant trade in order to protect EU member states and to lessen the risk of transmission to other host species. This would require destruction/sterilisation of infected plants and soil.

Non-statutory controls
P. austrocedri is already widely established in northern Britain although the full extent of its distribution is unknown. Non-statutory controls with the aim of conserving juniper could include:

- Targeted selection of juniper sites for conservation measures. Based on current knowledge these would include sites on freer draining soils away from watercourses where the impact of *P. austrocedri* is likely to be low.
- Greater use of rejuvenation of juniper through natural regeneration at these sites to avoid bringing new plants from nurseries on site.
- Propagating juniper from healthy shoot cuttings rather than berries which current evidence suggests may harbour the pathogen.

16. Summary and conclusions of the rapid PRA.

This rapid PRA shows:

Potential for further entry is: Likely
Potential for further establishment is: Very likely

Economic impact is expected to be:

Small, based on current known host range.

Environmental impact is expected to be:

Large, due to the host being of high ecological significance within the UK.

Social impact is expected to be:

Medium, based on societal value of juniper as a native conifer.

Endangered area:

Extensive, and including sites with high biodiversity values that are already vulnerable. The importance of juniper is recognised and it has been assigned its own species action plan in the UK Biodiversity Action Plan process (Anon., 2007).

Risk management:

Practices are available to manage the risk (see 15) which are largely based on managing other *Phytophthora* pathogens but would require evaluation to measure their effectiveness in relation to *P. austrocedri*.

Key uncertainties and topics that would benefit from further investigation:

- Improved understanding of the epidemiology and distribution of the pathogen in Britain including key dispersal mechanisms and distance of spread
- An understanding of the relative risk of propagating juniper by berries or cuttings to inform restoration programmes
- Understand climatic, edaphic and hydrological factors affecting pathogen establishment and spread in order to identify 'low risk' sites that could be targeted for conservation measures
- Examine the genetic structure of *P. austrocedri* populations in Britain to confirm its status as an introduction and to determine whether 'source' populations and routes of spread can be identified
- Determine whether healthy juniper trees located within areas of heavy infection have natural resistance to the pathogen. If so these individuals could form the basis of a resistance breeding programme for site restoration.
- Clarify pathogenicity of *P. austrocedri* on Leylandii cultivar 'Gold Rider' following the unconfirmed finding of this pathogen on this host

The results of this research could be used to review the PRA.

17. Is there a need for a more detailed PRA?

Yes [ ] **No** [X]

If yes, select the PRA area (UK or EU) and the PRA scheme (UK or EPPO) to be used.

PRA area: UK or EU? [ ] PRA scheme: UK or EPPO? [ ]

18. Given the information assembled within the time scale required, is statutory action considered appropriate / justified?

Given the widespread nature of *P. austrocedri* in northern Britain, and the fact that it is not possible to put in place effective measures to prevent natural spread via water or movement via soil with wild animals, routine statutory control in the wider environment is no longer considered appropriate. This means that notice for containment in the wider environment will cease. However, non-statutory advice on best practice for landowners with sites where juniper may be at risk would be helpful (see section 15). To protect other EU member states, and to prevent the risk of infection of other host species, statutory action would be justified on nursery plants for movement.

[*For completion by the Plant Health Risk Group*] *(put a tick in the box)*

Yes Statutory action	X	No Statutory action	

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Authors of revised version: Sarah Green[1] and Joan Webber[2]

[1]Forest Research, Northern Research Station, Roslin, Midlothian EH25 9SY

[2]Forest Research, Alice Holt Lodge, Farnham, Surrey, GU10 4LH