

Title: Update of statutory notification scheme in the Plant Health (England) Order 2005 to include imports of pine planting material: Validation IA IA No: Defra1511 Lead department or agency: Defra Other departments or agencies:	Impact Assessment (IA)			
	Date: 17/09/2013			
	Stage: Final			
	Source of intervention: Domestic			
	Type of measure: Secondary legislation			
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Summary: Intervention and Options			RPC Opinion: GREEN	

Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One-In, Two-Out? Measure qualifies as
-£36,600	-£36,600	£3,500	Yes IN

What is the problem under consideration? Why is government intervention necessary?

Pine trees in GB are at risk from *Dothistroma pini* (a fungus which causes a needle cast of conifers) which is not known to be present in the GB, although is present in some other member states. Its arrival would increase the risk of genetic exchange with *Dothistroma septosporum* (another needle cast fungus), which is already present. Furthermore, there is a risk of introducing pine processionary moth, which is not known to be present in GB and poses a public health risk as contact with the hairs of the caterpillar larvae causes skin rashes and eye irritations. Under current legislation imports of pine trees can only come into the UK from designated disease-free sites. However, we currently have no means of knowing the precise details of consignments arriving in the GB and so there remains a risk that infected trees could be imported.

What are the policy objectives and the intended effects?

The discovery of *Chalara fraxinea* has highlighted the increasing threat to the health of our trees from pests and pathogens which are already present in continental Europe. Following the publication of the control plan for *Chalara*, and the report of the Task Force on Tree Health and Plant Biosecurity on 20 May 2013, we are continuing to review the top risks to tree health and are proposing action to prevent incursion of organisms which would be damaging to tree health. Pine trees have been identified as being at risk from harmful organisms not present in GB. The new measures will introduce a statutory notification scheme for imports from other EU member states of pine trees to strengthen measures already in place in relation to imports of certain other trees.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

Option 0 - Maintain the status quo. This option is not favoured, as it means we would have no means of knowing the precise details of consignments arriving in the GB and so there remains a risk that infected trees could be imported.

Option 1 - Regulation to extend the existing statutory notification scheme to require notification of imports of pine planting material. This is more likely to be effective in securing the desired behaviour because non-compliance will attract a fine of £5,000 under existing plant health legislation. This is the preferred option.

Option 2 - Voluntary notification by importers of pine planting material. It is not considered that relying on voluntary notification will be sufficient. The impact of importing infected trees falls more heavily on other parties (land owners, public authorities, the wider public) than it does on importers, and so the incentive to report voluntarily is weak.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 03/2014						
Does implementation go beyond minimum EU requirements?			N/A			
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.		Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)			Traded: N/A		Non-traded: N/A	

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) that the benefits justify the costs.

Signed by the responsible SELECT SIGNATORY: _____ de Mauley _____ Date: 21/10/2013

Summary: Analysis & Evidence

Policy Option 1

Description: Regulation to extend the existing statutory notification scheme to require notification of imports of pine planting material.

FULL ECONOMIC ASSESSMENT

Price Base Year 2013	PV Base Year 2013	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	High: Optional	Best Estimate: £36,600

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	£0	£4,300	£36,600

Description and scale of key monetised costs by 'main affected groups'

Administration (time) costs to nurseries and other importers: £36,600

Other key non-monetised costs by 'main affected groups'

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional	Optional	Optional
High	Optional	Optional	Optional
Best Estimate	£0	N/A	N/A

Description and scale of key monetised benefits by 'main affected groups'

Other key non-monetised benefits by 'main affected groups'

The overall 'value at risk' for pine is around £180m per year (covering environmental, social and economic value). This policy contributes towards safeguarding that value, although the precise contribution of this policy cannot be quantified.

Safeguards against human health impacts from potential outbreak of pine processionary moth.

Key assumptions/sensitivities/risks

Discount rate (%) 3.5%

The time cost for companies to make notifications for imports of pine trees is based on a high-end wage assumption (based on wages prescribed in ONS ASHE 2012)

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs: £3,500	Benefits:	Net: -£3,500	Yes	IN

Evidence Base (for summary sheets)

Summary

Improved protection is required for pine trees to combat the threat posed by *Dothistroma pini* and *Dothistroma septosporum* (fungi which cause a needle cast of conifers) and pine processionary moth (the hairs of the caterpillar larvae cause harmful reactions in humans and other mammals). Urgent action is needed to minimise the risk of introduction, as winter is the main import and planting season for trees, while they are dormant.

We are proposing to lay in Parliament orders under the Plant Health Act which will, inter alia, add pine to the current statutory notification scheme for imported tree genera from other EU member states. The orders, due to come into force on 31 October 2013, will amend the Plant Health (England) Order 2005, which covers plants (including small trees) and plant produce, and the Plant Health (Forestry) Order 2005, which covers forestry material (i.e. large trees and wood). Similar measures are already in place in Scotland and are being planned by the other Devolved Administrations.

Policy Background and Rationale for Intervention

The Report of the Tree Health and Plant Biosecurity Expert Taskforce published on 20 May 2013 recommended that biosecurity should be strengthened to reduce risks at the border and within the UK. Recommended measures include timely consideration of EU Protected Zone status to protect against new threats before they arrive, notification of the import of high-risk plants and monitoring of threats including pathways into the UK to take rapid action where necessary. A range of actions to address these recommendations is currently being considered.

In the meantime, the UK Plant Health Risk Group (which co-ordinates UK assessment and management of tree and plant health threats, involving representatives from Fera, Forestry Commission and Devolved Administrations), is continuing its monthly review of new and revised threats, including production of risk assessments and consultations on such assessments. Around 10-15 risk assessments are published for consultation each year, with the outcome helping to identify priorities for new or revised measures.

Many harmful organisms affecting tree health are already regulated through the EU Plant Health Regime and the UK makes good use of the EU Protected Zone system, which requires additional measures to be met when moving specified material into designated areas. The UK already has 11 Zones in place for forestry affecting organisms, the most of any Member State. The Plant Health Risk Group has reviewed the UK's Protected Zones, to consider whether additional measures are needed in relation to other organisms which are present elsewhere but not in the UK. This work is contributing to the response to Taskforce recommendations referred to above.

As a result of the ongoing work referred to above, taking account of the recommendations emerging from the Task Force, the Plant Health Risk Group has recommended extending the current statutory notification scheme for imports of certain tree genera to cover pine planting material. This issue has also been identified as a priority during development of a UK plant health risk register, which was one of the recommendations arising from the Task Force.

Stakeholders have supported the need for stronger measures, through a consultation on the initial risk assessment, at the stakeholder workshops which were arranged to help develop the risk register and at a Tree Health Summit held by the Secretary of State on 11 July.

Pine trees are included in the EU Plant Passporting Scheme and there are additional requirements for plants, wood and bark being moved into and within Protected Zones.

The total area of pine at risk is approximately 400 thousand hectares (woodlands cover approximately 3 million hectares in GB in total). Our most important native conifer species is Scots pine and this represents over half of the area of pine (240k hectares). Other important pine species are Corsican pine at 49k hectares and lodgepole pine at 106k hectares respectively. Pines are highly valued as timber species for the sawn construction market as well as having many other uses for its small round wood and bark. It is the main component of the remnant Scottish Caledonian pinewood and pinewoods are a very important habitat and source of food for many native species including the red squirrel. In plantation pine trees are usually felled at 60 years but can be retained for much longer and individual specimens in native pinewoods are known to be over 400 years old.

Dothistroma pini and *Dothistroma septosporum* are fungi which cause a needle cast of conifers. *D. pini* is not known to be present in GB and affects all pine species, many of which are widely planted as forest trees within Britain. *D. septosporum* is affecting pine in GB, especially in the north and north east. The arrival of *D. pini* would increase the risk of genetic exchange, with adverse consequences for pine, including in Caledonian pinewoods.

Although Caledonian pinewoods currently appear to be less susceptible to *D. septosporum*, there is concern that this could change as there is considerable potential for genetic exchange due to the presence of two mating types and at least 99 genotypes of *D. septosporum*.

If *D. pini* were to spread then it would be likely to do so at a similar rate as *D. septosporum*, so all pine could be exposed within 15 years. Trees are weakened and so a total loss to the value at risk would not be expected, but instead a value loss of around 30% due to lower timber yield.

Furthermore, there is a risk of introducing pine processionary moth, which is not known to be present in the UK and poses a public health risk as contact with the hairs of the caterpillar larvae causes skin rashes and eye irritations.

The Plant Health (England) (Amendment) Order 2013 (SI. No. 23) introduced a statutory notification scheme for imports of plane, oak, sweet chestnut and ash trees. This was in response to the threat posed to these genera by certain organisms present elsewhere in Europe coming to Great Britain through the import of infected trees.

The aims of statutory notification are: (a) raise awareness about the threats to these species; (b) provide intelligence about the level of trade; (c) facilitate tracing in the event of problems; (d) allow targeted inspections to be carried out by Fera and the Forestry Commission; (e) generate evidence in support of further measures, if needed. It will not be the intention to inspect every consignment notified, but the information will be helpful in making best use of surveillance resources, to focus on the highest risk plants (in terms of their source, intended destination and use etc). Also, to help target follow up inspections and/or submission of samples for laboratory analysis.

While imports of pine trees from third countries are already subject to statutory notification (through phytosanitary certification requirements), statutory notification for intra-EU trade will mean that anyone importing pine trees (including young planting material and seeds) must notify Fera in advance of their introduction, providing certain limited information about their destination. Without such notification, there is no means of monitoring reliably the import of such plants (irrespective of whether they are plant passported).

The proposed orders will introduce a statutory notification scheme for imports from other EU member states of pine trees to strengthen measures already in place in relation to imports of certain other trees. Most imports of pine trees from outside the EU are already prohibited and those that are permitted are subject to phytosanitary certification. The arrangements for statutory notification (e.g. details to be provided by importers) will be the same as for the genera already included in the scheme. The improved protection for pine trees is part of a wider package of tree health measures being introduced through single amendments to the Plant Health (England) Order 2005 and the Plant Health (Forestry) Order 2005.

Regulation is more likely to be effective in securing the desired behaviour because non-compliance will attract a fine of £5,000 under existing plant health legislation. This is the preferred option. It is not considered that relying on voluntary notification by importers of pine planting material will be sufficient. The impact of importing infected trees falls more heavily on other parties (land owners, public authorities, the wider public) than it does on importers, and so the incentive to report voluntarily is weak.

Scotland has already included pine in their statutory notification scheme in response to this threat, and extending the English scheme would help to address the risk as well as ensuring a consistent approach between England and Scotland.

The case for the UK being designated as an EU “protected zone” is being assessed, which depends on the extent to which the pest could be introduced and capable of establishment. Work to supplement an initial pest risk analysis is being carried out. In the meantime, statutory notification will generate information about the scale of trade and will facilitate targeted inspections. The information generated, plus the enhanced pest risk analysis, will determine whether additional measures are needed (such as those being proposed for plane and sweet chestnut). The proposed approach was supported in a consultation on the initial pest risk analysis.

The rationale for this policy amendment is therefore to address the current lack of information about imports of pine, and therefore help to target surveillance to make a more effective use of resources.

Although we cannot determine precisely the extent to which the addition of pine to the existing statutory notification scheme, will safeguard the benefits outlined below, the following information helps to describe the benefits qualitatively. Pine processionary moth can be a serious defoliator of *Pinus* species in Mediterranean Europe where it occurs in high densities. Controlling for the effects of climate, Laurent-Hervouët (1986) found that defoliation could in severely infested years affect the trees to such an extent that visible growth rings were absent in southern France. However, in Corsica, the pattern of infestation was different, and only affected tree growth in 2 of the 28 years studied (Laurent-Hervouët, 1986). Impacts on *Pinus sylvestris nevadensis* in the Sierra Nevada mountains in southern Spain included reduced tree growth, but severely affected trees also produced fewer and lighter seeds,

thus potentially affecting regeneration of the forest for years to come (Hódar *et al.* 2003). In north-eastern Portugal, the pest was calculated to cause an economic loss of around €100 per hectare in *Pinus pinaster* after heavy defoliation (Arnaldo *et al.*, 2010).

In Portugal there is some evidence that trees weakened by pine processionary moth become more vulnerable to attack by other biotic agents, particularly bark beetles. Additionally, social impacts are caused by the urticating hairs of the older larvae which become detached from the larvae and contaminate the environment more widely. If they come into contact with skin, these setae cause severe rashes in both humans and other mammals due to a toxic protein they contain. If airborne setae are inhaled, they may cause breathing difficulties, e.g., asthma. If the setae enter the eye, severe corneal inflammation can occur (Portero *et al.*, 2012). The larval nest also contains shed hairs that continue to pose a risk to those that handle it for months or even years afterwards.

Options

Option 0 - Maintain the status quo. This option is not favoured, as it means we would have no means of knowing the precise details of consignments arriving in the GB and so there remains a risk that infected trees could be imported.

Option 1. Regulation to extend the existing statutory notification scheme to require notification of imports of pine planting material. This is more likely to be effective in securing the desired behaviour because non-compliance will attract a fine of £5,000 under existing plant health legislation. This is the preferred option.

Option 2. Voluntary notification by importers of pine planting material. It is not considered that relying on voluntary notification will be sufficient. The impact of importing infected trees falls more heavily on other parties (land owners, public authorities, the wider public) than it does on importers, and so the incentive to report voluntarily is weak.

Proportionate Assessment of Direct Costs to Business (OITO Method)

Costs

The introduction of the statutory notification scheme in January 2013, that requires pre-notification of imports from other member states, included imports of plane (38 notifications, from 15 businesses, in 6 months since its introduction), oak (319 notifications from 46 businesses), sweet chestnut (57 notifications from 29 businesses). The proposal is now to add pine to that list.

A time cost of 5-10 minutes per notification was previously estimated, to enter details of consignments onto an online system, or make a phone call to local plant health inspector. In reality, on occasion email notifications are sent instead, but the time cost is not expected to be significantly different. This time cost would be applicable for up to 1000 tree importers (comprised of around up to 500 registered plant passporters who are English nursery businesses importing plants for onward sale, along with other businesses importing plants for their own needs). There may also be additional importers (e.g. landscape contractors) that are importing pine trees outside the nurseries supply chain. If we take the highest number of notifications in the 6 month period from the species above, and multiply this by 2 to estimate a year's worth of notifications (i.e. 319 x 2), therefore around 640 notifications could be required. At a time cost of up to 10 minutes per notification, the total time required could be up to around 100 hours. Multiplied by an upper-bound wage rate of £30 per hour (taken from the top decile of earnings for full time workers in ONS ASHE 2012) and then applying an uplift of 30% to reflect non-labour costs, this results in an hourly cost of around £40. Multiplying this hourly rate by the total estimated hours of additional burden results in an overall cost estimate of around 4,250 per year for the inclusion of pine within the list. If projected forwards over ten years, and expressed as the 'Equivalent Annual Net Cost to Business' (EANCB), as defined in the latest BIS Impact Assessment calculator, the **EANCB is around £3,500**.

This estimate seems sensible, given that the Horticultural Trades Association have confirmed that they expect any additional burden to be minimal, due to the same nurseries typically importing pine as for the existing species covered by statutory notification scheme.

Consideration has also been given as to whether there are likely to be any additional costs associated with (i) follow-up inspections, or (ii) costs to Plant Health authorities for adapting existing systems, maintaining any online systems, or monitoring notifications.

Any follow up inspections carried out would be funded by Government, re-prioritising existing surveillance activities (therefore focussing the existing budget on the highest risk areas). There would be a small burden on business in co-operating with Inspectors during such inspections. An online system is already in place to notify imports of the tree genera concerned (as well as seed potatoes and some ware potatoes, which have been subject to statutory

notification for a number of years). We will continue to work with those in the industry to improve this system and ensure it can be used with minimum burden. Any monitoring and enforcement costs would initially be light touch.

Although there is a risk that by providing more checks and inspections, this could lead to importers taking less care themselves, the aim is that by updating the SNS, that this will make importers more aware of potential risks. The direct intention of this scheme is to provide useful intelligence and facilitating targeted checks, which in turn will help to reduce the risks of importing diseases into the country.

The RPC commented, in their sign-off of the Regulatory Triage Assessment, that further consideration should be given to the impact of increasing prices. However, this measure will not lead to an increase in prices faced by importers, because rather than reducing the supply base through limiting imports, this policy amendment simply adds pine to the statutory notification scheme. In the event that the supply base was reduced, any impact would be expected to be negligible (due to the very low level of trade relative to other tree species).

In total, the EANCB is estimated at around £3,500.

Benefits

The social and environmental values at risk for pine that this statutory notification scheme will contribute towards safeguarding are in the order of £180m per year for England in 2012 prices (comprised of approximately £130m for the value of recreation, landscape, biodiversity, air pollution absorption and carbon sequestration, and approximately £50m for the value of timber).

The method for calculating the social and environmental values is set out in Willis et al. 2003 in a report to the Forestry Commission entitled 'The Social and Environmental Benefits of Forests in GB'. In summary, the values are estimated based on the 'stated preference' technique, whereby respondents are asked to place a value on various environmental attributes associated with trees. The aggregate values have then been divided-up based on area of pine trees as a proportion of overall trees in the country. The exception to this is for carbon sequestration values, which have been estimated using National Forestry Inventory data and the Woodland Carbon Code lookup tables for the amount of carbon sequestration by particular species, which has then been valued based on the latest DECC guidance.

The method for calculating the value of timber is based on ONS data for GVA of forestry. There will also be additional value, not captured here, associated with the human health impacts of a potential outbreak of pine processionary moth – which could be sizeable when compared to the health costs of oak processionary moth (e.g. GP visits, lost GDP from sickness leave etc).

Moratorium on Micro Businesses

The existing statutory notification requirements apply to all businesses, including micro-businesses, importing the specified tree species. The risk of introducing harmful organisms isn't mitigated by the size of the business importing material. The new pine notification requirements will also apply to micro-businesses.