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Assembly

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# Overview of Plant Health and Biosecurity in Northern Ireland with specific reference to trees

## 1 Background and context

Public awareness of and interest in plant health and biosecurity issues has risen markedly over recent months as a result of media coverage of the outbreak of ash dieback disease within Northern Ireland.

Whilst the occurrence of these particular diseases in Northern Ireland is relatively recent (2010 onwards) the reality is that plant health and biosecurity issues have been legislated for since 1967 under the auspices of the Plant Health Act (Northern Ireland).

The impact of the recent disease outbreaks affecting trees has meant that there is now a greater interest in assessing the potential threats posed to the local environment, horticulture, forestry and wider agricultural industry by plant diseases and pests. The expanding world trade in plant material, and in particular plants for planting, effectively means that the potential risk for exposure to harmful organisms is a growing threat to our local environment and the associated plant life and economic activity that it supports.

By way of illustration of this point, UK trade statistics for live plants, foliage, branches and other parts of plants have shown a 71% increase since 1999<sup>1</sup>.

Whilst the issue of tree diseases is topical within Northern Ireland there is a need to recognise that the issue of tree disease is only one element of what is the wider and increasingly complex issue of plant health.

This briefing paper provides an overview of the main pieces of legislation covering the area of plant health at both an EU and local level whilst also detailing the existing systems and mechanisms designed to maintain plant health/biosecurity within Northern Ireland.

**It does however need to be restated that this is both a complex and legislatively heavy/specific area and as such this paper does not provide a detailed analysis of significant areas of specific legislation such as that covering the marketing of seed potatoes.**

The paper also looks at the size and nature of forest/wood cover in Northern Ireland whilst detailing the current and potential threats posed to this valuable resource by harmful organisms.

## 2 Legislation

### 2.1 EU

At EU level responsibility for plant health sits within Directorate General (DG) Health and Consumers. In collective terms, the legislation set out within this section of the paper is commonly referred to as the Community Plant Health Regime (CPHR).

#### **EC Directive 77/93/EEC**

The first significant piece of EEC/EU legislation dealing with the issue of plant health was EC Directive 77/93/EEC which came into force in 1977.

This directive created a means for controlling the import of harmful organisms of plants or plant products either into the then EEC or between EEC member states. The Directive included a series of annexes which identified organisms identified as being harmful, as well as identifying the level of prohibition that applied to these organisms in all or some member states.

#### **Council Directive 2000/29/EC**

Council Directive 2000/29/EC of the 8<sup>th</sup> May 2000 replaced and consolidated Directive 77/93/EEC and subsequent amendments. The need to replace and consolidate Directive 77/93/EEC was partly driven by the World Trade Organisation (WTO)

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<sup>1</sup> [Interim Report, Tree Health and Plant Biosecurity Expert Taskforce, 30 November 2012](#)

Sanitary and Phytosanitary (SPS) measures agreement in 1995. The WTO SPS agreement effectively required the signatories to ensure that their plant health (Phytosanitary) measures were in line with the standards set by the International Plant Protection Convention (IPPC).

In recognition of the broadening global trade in plants and plant material and the creation of the Community internal market in 1993, thereafter Directives 77/93 and 2000/29 introduced and continued to utilise 'plant passports', usually in the form of an attached label, for the trade of certain plants and plant products within the EU. The issuing of these plant passports is dependent upon plants and plant products undergoing a plant health inspection which is conducted at the production site and their growing environment for the plants and plant products involved. This focus on the need for plant health checks to be focussed on the point of production applies to all plant material traded within the EU

All importers of plants both into and within EU Member State must be registered with their National Body responsible for plant health.

Directive 2000/29 also requires Member states to carry out occasional checks at the place where plants or plant products are grown, produced, stored, offered for sale or moved. These occasional checks are carried out in addition to the plant health inspection requirement.

Certain plants and plant products from countries outside the EU (3<sup>rd</sup> countries) are subject to a documentary check, identity check and health check on entry into EU territory, whilst the importation of other specific plants or plant matter is totally prohibited. The species to which these requirements apply are set out within the annexes to Directive 2000/29/EC.

With specific regards to live trees, these are counted as being of high risk and as such all live trees imported into the EU from a country outside the EU must be accompanied by a phytosanitary certificate. This certificate confirms that the plant/plant product meets the plant health requirements of the jurisdiction that it is being imported to.

In instances where a plant health inspection identifies plant health concerns/issues, the plants, plant product and growing media may be subject to measures such as treatment, movement under particular control or destruction. In such circumstances Member States are also required to notify the European Commission and other Member States.

Where the presence of harmful organism is suspected or confirmed within a Member State, all Member States are required to do the following:

- Notify other Member States and the Commission;
- Take all necessary measures to eradicate, or if that is impossible, inhibit the spread of the harmful organisms concerned and prevent risk of the spread of the harmful organism concerned in the territory of other Member States;

It is also worth noting that Member States which are subject to an actual or suspected appearance of a harmful organism as a result of its introduction or spread within the EU may receive a financial contribution to cover expenditure incurred in the eradication or containment of the harmful organism.

### **Council Directive 2002/56/EC**

Deals with certification standards for seed potatoes within the EU and as such safeguards the quality of product that can be traded and subsequently planted and grown within Member States.

### **Future EU Plant Health Legislation**

The EU is committed to reviewing the existing Community Plant Health Regime.

The prevention of introduction or spread of plant disease or pests through tighter plant importation and more stringent measures for dealing with diseases/pests is likely to be a key feature.

Whilst detailed proposals are not available at this time it should be noted that the UK's priorities for the reform process fall under the following broad headings:

- A faster more streamlined and consequently responsive regime;
- A greater focus on the assessment and targeting of risk; and
- Increased and enhanced co-operation and co-ordination between national plant health authorities.

## **2.2 Northern Ireland**

Within Northern Ireland the issue of plant health is the responsibility of DARD.

**The Plant Health Act (Northern Ireland) 1967** was the primary piece of legislation that dealt with issues relating to plant health.

The 1967 Act had effect for the control of '*...pests and diseases injurious to agricultural or horticultural crops, or to trees or bushes...*'.

The Act **provided DARD with the power to make Orders to prevent the spread of pests both within Northern Ireland or from Northern Ireland to other jurisdictions.** The types of actions that could be taken under these orders included:

*(a) direct or authorise the removal, treatment or destruction of any crop, or any seed, plant or part of a seed or plant or any container, wrapping or other article or any substance which has on it, or is infected with, a pest or to or by means of which a pest is in the opinion of the Department likely to spread; .*

*(b) direct or authorise the entry on any land or elsewhere for the purpose of any removal, treatment or destruction authorised by the order, or any examination or inquiry so authorised, or for any other purpose of the order; .*

(c) create offences and in particular may— .

(i) prohibit the selling or exposing or offering for sale or the keeping of living specimens of a pest or the distribution in any manner of such specimens; .

(ii) make it an offence to contravene a condition specified in a licence granted by the Department for the purpose of exempting a person from any prohibition or restriction imposed by the order; .

(d) provide for offences against the order to be punishable on summary conviction by a fine not exceeding [F8 level 5 on the standard scale].

(2) Proceedings for an offence against an order under this Act may be instituted at any time within twelve months from the day on which the alleged offence was committed.

### **The Plant Health Order (Northern Ireland) 2006**

The Plant Health Order (Northern Ireland) 2006 effectively implemented the obligations that Northern Ireland had to meet as a result of previously covered EU legislation (Council Directive 2000/29/EC).

### **Subsequent notable Plant Health Order (Northern Ireland) Amendments**

There have been a total of 17 amendment orders to the Plant Health Order (Northern Ireland) up until January 2013 with notable amendments, in respect of trees including:

- **The Plant Health (*Phytophthora ramorum*) Order (Northern Ireland) 2005** – prohibits the introduction and spread of *Phytophthora ramorum*.
- **The Plant Health (Amendment No. 3) Order Northern Ireland 2012** – introduced emergency measures to prevent the introduction and spread of *Chalara fraxinea*.
- **The Plant Health (Wood and Bark) (Amendment) Order (Northern Ireland) 2012** – introduced landing restrictions on ash wood and bark into Northern Ireland.

## **3 Plant health controls – actual system within Northern Ireland**

### **3.1 Responsibilities**

Goal 3 of DARD's draft Strategy 2020<sup>2</sup> contains a commitment to enhance, animal fish and plant health and animal welfare.

DARD is responsible for the delivery of the plant health control systems within Northern Ireland, and the responsibilities within the Department are broken down as follows:

- **Policy** – developed by Food, Farming and Rural Policy Division;
- **Science** – provided by Departmental Scientific Advisor and AFBI; and

<sup>2</sup> [Strategic Plan 2012-20, DARD](#)

- **Delivery** – provided by Agri Food Inspection Branch, Forest Service and Veterinary Service Portal.

In relation to the delivery function, table 1 below sets out the main plant health responsibilities of Agri Food Inspection Branch, Forest Service and Veterinary Service Portal. Of the 3 delivery branches identified, Veterinary Service Portal only operate within the following confines – Belfast, Larne and Warrenpoint Ports, and George Best Belfast City Airport and the International Airport. The work of the Agri Food Inspection Service and Forest Service covers all of Northern Ireland.

Provider	Plant Health Responsibilities	Key Outputs
Agri Food Inspection Branch: 1. Crop certification Plant and Bee Health Inspectorate  2. Plant Health and Horticulture Inspectorate	<ul style="list-style-type: none"> <li>• Seed potato certification</li> <li>• Cereal seed certification</li> <li>• Plant Health</li> <li>• Noxious weeds</li> <li>• Bee Health</li> </ul> <ul style="list-style-type: none"> <li>• Plant Health</li> <li>• Horticulture Marketing Standards</li> </ul>	2012/13 planned target of 5,846 inspections relating to both plant health and horticultural marketing standards  2012/13 planned target of 4,544 inspections relating to both plant health and horticultural marketing standards
Forest Service	Has responsibility for the management and protection of publicly owned forest within Northern Ireland.  In specific plant health terms Forest Service has the delegated role within DARD for implementation of the Plant Health (Wood and Bark) Order (Northern Ireland). Meeting these obligations is carried out with the assistance of Veterinary Portal Inspectors  Checking of wood, wood products and bark from within the EU  In light of October 2012 Plant Health (Wood and Bark) Order, checking ship manifests for ash timber imports	Checks on imported wood, wood products and back from 3 <sup>rd</sup> countries (outside the EU) – 313 clearance certificates issued in 2012-13 to date.
Veterinary Service Portal	Work within the points of entry to Northern Ireland <ul style="list-style-type: none"> <li>• Ports – Belfast, Larne and Warrenpoint;</li> <li>• Airports – George Best Belfast City and International.</li> </ul> Conduct documentary and identity checks on all pre-notified consignments.	

	Conduct checks relating to individual passenger allowances in relation to plants, plant material and food.	
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Table 1: Plant Health Responsibilities within DARD

### 3.2 Checks upon entry to and within Northern Ireland

There are potentially a series of checks to be conducted on plants and plant material entering Northern Ireland.

Materials entering one of our local airports or ports will be subject to differing levels of inspection/check depending on their point of origin and species, as set out in table below. It should be noted that the information outlined in table 2 below relates to commercially imported material only.

Point of Origin	Type of material	Process material is subject to
<b>Other EU Member State</b>	Low risk i.e. not requiring a plant passport	Free movement of material – but materials can be subject to spot checks at any point in production or supply chain. A trace back identification mark is however required on all consignments.
<b>Other EU Member State</b>	Material which hosts the most serious (“quarantine”) pests and diseases	Requires a plant passport to facilitate its movement. Plant passport is issued in country of origin. There is generally no requirement for importers bringing in materials requiring a plant passport to pre notify DARD of the intention to bring in this material. Materials can also be subject to spot checks at any point in production or supply chain. Wood and bark may be moved into Northern Ireland without a plant passport provided it fulfils requirements specified in legislation.
<b>Outside EU (3<sup>rd</sup> country)</b>	All plant materials	DARD must be notified of import by importer/shipping agent 2 days in advance of import. Information must include name and registration number of importer/agent, list of produce, point of entry, time of arrival, country of origin and details of phytosanitary certificate. Documentary and identity checks are made on all consignments. Inspectors then decide on whether to conduct a full plant health inspection

		<p>If content the inspector issues a Plant Health Release Certificate (PHRC). If the inspector has concerns the consignment will be quarantined and sampled for testing.</p>
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Table 2: Plant health process for EU and 3rd country plant/plant material

DARD inspectors also have the ability to conduct spot checks on businesses or premises involved in the growing, supply or importation of plants and plant material within Northern Ireland.

In all instances of importation from countries outside the EU (3<sup>rd</sup> countries) the rate and nature of mandatory or spot checks on plants and plant materials will also be influenced by the perceived risk posed by the material involved. In this regard the UK’s Food and Environment Research Agency (FERA) publishes data as part of the Risk Assessment System (IRAS). This list, which covers items such as cut flowers, fruit, vegetables and wood sets out the inspection levels required for shipments of particular species from particular countries upon their entry to the UK. These inspection rates are reviewed at EU level on an annual basis.

With regards to individual passenger allowances for plants and plant material, DARD, in conjunction with HMRC, has produced an information leaflet<sup>3</sup> outlining what ferry or air passengers can bring into the UK. Passengers must ensure that the items they are bringing into the country are for their personal use and free from signs of pests and diseases. Providing these criteria can be met there are no restrictions on passengers bringing in plants or plant products grown in EU countries, so long as they are not prohibited under criminal law e.g. cannabis. There are however restrictions imposed on items from countries outside the EU with some being limited in terms of weight or quantity and others being controlled, meaning that they require a phytosanitary certificate or a license issued by DARD or the Forestry Commission.

### 3.3 Response to a pest/plant health incident

In the event of a serious pest/plant health incident DARD and AFBI have developed a generic contingency plan template<sup>4</sup>. This contingency plan has two core objectives as follows:

- To ensure that all incidents of a non-indigenous plant pest or disease found in Northern Ireland are managed consistently and promptly in order to contain and/or eradicate the pest or disease. To minimise the risk of either the pest or disease becoming established in order to protect the Northern Ireland cropping, horticulture, and forestry sectors;

<sup>3</sup> [If in doubt leave it out, DARD and HMRC leaflet](#)

<sup>4</sup> [Generic Contingency Plan for Serious Pest/Plant health incidents, DARD and AFBI, updated version April 2012](#)



- To ensure that all relevant members of DARD staff are fully conversant with this procedure so that in the event of a crisis DARD can take effective and immediate action.

This plan has already been put into action in response to the recent sudden oak disease (*P ramorum*), *P lateralis* and ash dieback (*Chalara fraxinea*) tree disease outbreaks within Northern Ireland.

### 3.4 Biosecurity advice/guidance

DARD also promotes adherence to plant biosecurity measures as a means of preventing the introduction or spread of pests and diseases which are harmful to plant life within Northern Ireland.

Examples of this practical guidance include the recent press release urging mountain bikers using forests to clean soil from their bikes and avoid transferring this to other forests<sup>5</sup> and the general guidance on the NI Direct website for users of forests on how to avoid spreading tree diseases<sup>6</sup>.

## 4 Selected examples of wider UK Plant Health/biosecurity work

### 4.1 Pest Risk Analysis

The Department for Environment, Food and Rural Affairs (Defra) takes the lead on the assessment of the risks posed to plant life within the UK by pests and diseases by implementing the Pest Risk Analysis (PRA) process.

Pest Risk Analysis (PRA) is defined under the International Plant Protection Convention as:

*“The process of evaluating biological or other scientific and economic evidence to determine whether a pest should be regulated and the strength of any phytosanitary [plant health] measures to be taken against it”.*

PRAs are written by plant health scientists to inform decisions by plant health policy makers and can vary in length and complexity. They only give a snapshot of the analysis at a particular time, and as a result may go out of date as new information comes to light.

According to the FERA<sup>7</sup> website PRA's have been completed for the 3 tree diseases currently affecting Northern Ireland – sudden oak (*P ramorum*), *P lateralis* and ash dieback (*Chalara fraxinea*).

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<sup>5</sup> [Don't give disease a lift in our forests. Minister tells mountain bikers. DARD press release. NI direct website. 28th January 2013](#)

<sup>6</sup> [Preventing the spread of tree disease. NI direct website. 11th February 2013](#)

<sup>7</sup> [PRAs for consultation on pest risk management. FERA website. 11th February 2013](#)

## 4.2 Tree Health and Plant Biosecurity Taskforce

Defra's Chief Scientific Adviser (CSA), was tasked with convening a Tree Health and Plant Biosecurity Expert Taskforce to support Defra's response to tree and plant disease outbreaks in late 2012. This grouping subsequently met in early November and produced an interim report<sup>8</sup> with a number of key recommendations as follows:

- Develop a prioritised UK Risk Register for tree health and plant biosecurity;
- Strengthen biosecurity to reduce risks at the border and within the UK ;
- Appoint a Chief Plant Health Officer to own the UK Risk Register and provide strategic and tactical leadership for managing those risks;
- Review, simplify and strengthen governance and legislation;
- Maximise the use of epidemiological intelligence from EU/other regions and work to improve the EU regulations concerned with tree and plant biosecurity;
- Develop and implement procedures for preparedness and contingency planning to predict, monitor and control the spread of disease;
- Develop a modern, user-friendly, expert system to provide quick and intelligent access to data about tree health and plant biosecurity;
- Identify and address key skills shortages.

The Taskforce is scheduled to make its final report in Spring 2013.

## 5 Overview information for trees and forestry within Northern Ireland

The **UK is one of the least forested parts of the EU and Northern Ireland is the least forested part of the UK**. Woodland cover within Northern Ireland is estimated to be somewhere between 6.5%<sup>9</sup> and 10%<sup>10</sup> of land area, as opposed to the UK average figure of 13%<sup>11</sup> and the EU average figure of 37%.

In terms of the actual breakdown of woodland type it is worth highlighting that according to the data in figure 1 below, 75% of Northern Ireland's woodland cover is made up of conifers and 25% broadleaf.

The total value of forestry and associated wood processing for the island of Ireland is of the order of €2.2 billion<sup>12</sup>.

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<sup>8</sup> [Interim Report, Tree Health and Plant Biosecurity Expert Taskforce, 30 November 2012](#)

<sup>9</sup> [Northern Ireland Summary, UK National Ecosystem Assessment, October 2011, page 14](#)

<sup>10</sup> [The State of the UK's Forests, Woods and Trees, Woodland Trust, 2011](#)

<sup>11</sup> *ibid*

<sup>12</sup> Áine Ni Dhubháin, Marie-Christine Fléchar, Richard Moloney, Deirdre O'Connor and Tim Crowley, The socio- economic contribution of forestry in Ireland.

FC= Forestry Commission, FS = Forest Service Northern Ireland

Type and ownership	England	Scotland	Wales	Northern Ireland	UK
000's hectares					
<b>Conifers</b>					
FC/ FS woodland	155	447	98	55	755
Non-FC/ FS <sup>2</sup>	256	633	69	10	969
<b>Total conifer</b>	<b>411</b>	<b>1,081</b>	<b>167</b>	<b>66</b>	<b>1,724</b>
<b>Broadleaves</b>					
FC/ FS woodland	59	33	16	6	114
Non-FC/ FS	827	276	121	17	1,241
<b>Total B/L</b>	<b>886</b>	<b>309</b>	<b>138</b>	<b>22</b>	<b>1,355</b>
<b>Total all</b>					
FC/ FS woodland	214	481	114	61	870
Non-FC/ FS woodland	1,083	909	190	27	2,209
<b>Total</b>	<b>1,294</b>	<b>1,385</b>	<b>304</b>	<b>88</b>	<b>3,079</b>

Figure 1: Area of woodland by forest type and owner<sup>13</sup>

## 6 Specific issues relating to existing organisms harmful to trees within Northern Ireland

Table 2 below provides details of organisms harmful to trees which are currently present within Northern Ireland

Organism	Effects	Local Incidence	Local control/eradication efforts
Sudden oak disease ( <i>Phytophthora ramorum</i> )	Fungus like pathogen can attack a range of plants and trees. On Japanese larch trees the disease symptoms include visible wilting of young shoots and foliage. Later in the growing season symptoms include withered shoot tips with yellowing needles, which then become black and the tree may also have bleeding cankers. Causes major damage to trees and plants alike.	Discovered in Northern Ireland in 2010 in Japanese larches. Japanese larch makes up approximately 2,500 hectares (4%) of the publicly owned forest within Northern Ireland. Has affected the following public forests: <ul style="list-style-type: none"> <li>• Bohill;</li> <li>• Glenarm;</li> <li>• Capanagh;</li> <li>• Cleggan;</li> <li>• The Fews;</li> <li>• Woodburn;</li> <li>• Ballyboley;</li> <li>• Tievenadarragh (part of Bohill Forest);</li> <li>• Moneyscalp (part of Tollymore Forest).</li> </ul>	In 2010, 301 hectares in Forest Service sites and 6 hectares in private sites were felled.  In 2011, felling totalled approximately 62 hectares in the public forests and 9 hectares in private ownership.  In 2012, infection affecting 128 hectares of larch trees was confirmed at seven public forest sites – Cleggan Forest, Glenariff, Glenarm, Slievanorra, Tardree, (all on the Antrim Plateau) and Carnagh and The Fews (Co. Armagh). In addition, infection of

<sup>13</sup> [The State of the UK's Forests, Woods and Trees. Woodland Trust. 2011. page 14](#)

			<p>approximately 22 hectares of trees was confirmed at 7 private sites – felling of these sites is ongoing.</p> <p>Since discovery of the disease there has also been a Forest Service led process of aerial survey and on the ground inspection. Biosecurity guidance has also been issued.</p>
<i>Phytophthora lateralis</i>	<p>Infects tree roots and stem bases which come into contact with spores in soil and kills most Lawson cypress trees it infects.</p>	<p>Discovered on Lawson Cypress trees within County Down in 2011.</p> <p>Present in a number of locations including the following public forests:</p> <ul style="list-style-type: none"> <li>• Tollymore</li> <li>• Mourne</li> <li>• Someset</li> </ul> <p>A very small number of trees have also been identified in Castlewellan and Belvoir Forests.</p>	<p>Implementation of control measures is continuing. Infected trees have been felled and biosecurity measures designed to prevent soil movement have been implemented.</p> <p>Public awareness has also been raised through the production of biosecurity guidance and a guide for identifying the presence of the disease.</p>
Ash dieback ( <i>Chalara fraxinea</i> )	<p>Caused by a fungus called <i>Chalara fraxinea</i>. The disease causes leaf loss and crown dieback in affected trees and can lead to the death of the tree</p>	<p>As of the 7<sup>th</sup> February 2013, there were a total of 28 confirmed outbreaks within counties Antrim, Tyrone, L/Derry and Down. Of these 25 are within recently planted sites and 3 are within Nursery/Retail/Trade settings. To date there have been no wider environmental findings.</p>	<p>Eradication measures involve the removal and burning of infected plants and associated debris material.</p> <p>Legislation was introduced on 26 October banning the import and movement of ash plants for planting from infected areas.</p> <p>Further legislation was made on 6 November and importers are now required to demonstrate that wood is free from infection by showing that it comes from an area known to be free from disease, or has been square sawn to removing the rounded surface, or has been dried to less than 20% moisture content.</p> <p>Ongoing surveillance and checks on existing ash stock to detect infection. Biosecurity and identification guidance has</p>

			also been issued and the public have been urged to report potential cases to DARD.
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Table 3: Existing organisms harmful to trees within Northern Ireland – derived from DARD data

## 7 Potential harmful organism threats to trees within Northern Ireland

The information in table 4 below provides an overview of some, but by no means all, of the harmful organisms that pose a potential current and future threat to trees within Northern Ireland.

Harmful organism	Current geographical distribution	Tree Species affected	Effects and Impacts
Asian longhorn beetle	Breeding population of Asian longhorn beetle (ALB) found in the Paddock Wood area of Maidstone in Kent. The existence of this population was confirmed by Forest Research scientists in March 2012	Range of broadleaf species including Maple Poplar, Willow Elm Ash Sycamore	Dieback of foliage during early attack. Sustained attack can lead to tree mortality
Red Band Needle Blight	between 2007 and 2011 the disease has been identified in over 450 new stands (lodgepole pine, Scots pine and Corsican pine), with significant mortality occurring in some lodgepole pine stands, particularly in the east and north of Scotland	Pines	Red banding on and premature shedding of needles. Defoliation on an ongoing basis weakens tree and can lead to tree mortality
Acute Oak Decline(AOD)	Relatively new condition of oak trees in Britain, thought to have started 20 - 30 years ago but on the rise. Most prevalent in the Midlands and South East.	Oak	Affected trees are characterised by symptoms of extensive stem bleeding evident as dark weeping patches on the stem surface between bark plates some of the trees affected with AOD die within 4 to 5 years of the onset of symptoms
Spruce bark beetle	Found within western Britain, a well-established pest that was accidentally introduced from continental Europe	Spruce	most damaging species tunnel to form galleries within the bark of living trees where their larvae feed and develop, ultimately killing the tree
Emerald Ash borer beetle	Asia and North America	Ash	Trees exhibit a general

			yellowing and thinning of foliage, dying branches and crown dieback, typically from the top down. Small trees can be killed in one year, but larger trees can take up to 4 years to die.
Pine Processionary moth	Not established in the UK, but one transient population of larvae (caterpillars) was found in a UK nursery in 1995 on Scots pine plants which had been imported from Italy in 1994	Pine and other conifers	Larvae, or caterpillars, feed on the needles of pine trees and some other conifer tree species. In large numbers they can severely defoliate trees, weakening them and making them more susceptible to attack by other pests or diseases, or to environmental stress caused by drought or excessive moisture

Table 4: Potential harmful organism threats to trees in Northern Ireland<sup>14</sup>

## 8 Observations

- The plant health threat posed to Northern Ireland is increasing and likely to continue to do so due to factors such as increasing world trade and the potential impacts of climate change. These factors also increase the potential risk of the threats that we face diversifying and affecting a wider range of plant species, which could theoretically have adverse effects on our wider environment and agricultural industry;
- The rapid pace of the emergence and spread of harmful organisms presents challenges to the integrity of our current plant health protection systems. There is a real need to be ahead of the game and in this regard the role of risk analysis and scientific research are increasingly critical. Such moves may also help to clarify the stance that needs to be taken in relation to potential plant health threats i.e. prevention, eradication or control;
- The costs of controlling or eradicating plant health threats or organisms may well be higher than the cost of prevention. Whilst prevention may require short term investment in and upgrading of existing resources, this may well be cheaper in the long run;
- The EU review of the Community Plant Health Regime will need to address existing shortfalls and potential threats. In terms of shortfall, more needs to be done in relation to material entering the EU, effectively being naturalised and then being free

<sup>14</sup> Information collated from the Forestry Commission website page dealing with tree pests and diseases - <http://www.forestry.gov.uk/forestry/infd-6abl5v>

to move within the EU. The formal adoption of a fixed time quarantine period upon entry to the EU from a 3<sup>rd</sup> country may help to address this. In relation to potential threats the review may wish to consider issues surrounding the risks posed by the shipping containers that material is imported in and in relation to the use of wood products in dunnage and product packaging;

- Whilst commercial imports appear to pose the greatest risk there are legitimate concerns around port controls for passengers and whether these are sufficient to reduce plant health risks. Any potential changes here however would need to be assessed against the need for a working port or airport which would likely preclude subjecting every single passenger to checks. A further investment in raising public awareness of plant health risks may be an option worth considering;