

# Tree Health and Plant Biosecurity Action Plan

## Progress Report

June 2012



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## Foreword by Lord Taylor of Holbeach

I am very pleased to be publishing this intermediate report of the significant progresses made with the Tree Health and Plant Biosecurity Action Plan. The Secretary of State and I are committed to this area of work and will ensure continued support and engagement to mitigate the serious threats pests and diseases pose to our forests, woodlands and trees.

I would like to thank everybody who has been involved in the creation and implementation of the Action Plan and also everybody working hard to ensure tree and plant health security. I have been encouraged, for example, by the collaboration between official services, landowners and householders in the actions undertaken to thwart the spread of the Asian Longhorn Beetle in the recent outbreak in Kent.

I look forward to meeting as many of you as possible at the Action Plan's anniversary event taking place on Thursday 13 September 2012 at the APF Exhibition, Warwickshire.

## Executive Summary

### Background

The Action Plan was developed in 2011 through a series of workshops with stakeholders following concerns raised about reports of increasing numbers of deaths of trees. The Action Plan, launched by the Secretary of State on 18 October 2011, brings together experts from Defra, Forestry Commission, Forest Research, Fera and the Devolved Administrations and sets out a UK-wide integrated approach towards a strengthened strategy for dealing with serious tree pests and diseases. The Action Plan's tasks have been grouped into four themes; import controls (Theme A), practical actions (Theme B), public and stakeholder engagement (Theme C), and research and evidence (Theme D). Defra has allocated £7 million to support the research theme of the Action Plan over three years (2012/13 to 2014/15) and Forestry Commission has increased their own funding allocation to tree health research by 30% over the next 3-4 years.

### Progress Summary

The theme leaders have recently reported on their actions to the UK Plant Health Strategy Board. **Theme A** has made significant progress with 18 new plant health inspectors at Heathrow and other points of entry to increase levels of inspection. With the establishment of a UK Plant Health Strategic Advisory Forum to coordinate stakeholder input to the EU plant health regime review and to other strategic issues. **Theme B** has implemented practical actions to manage Phytophthora, Oak Processionary Moth, Asian Longhorn Beetle and new and emerging plant pest and pathogen outbreaks across the country. Additionally, work has started on a risk framework to enable strategic prioritisation of practical actions on tree pests and pathogens. **Theme C** has highlighted good progress with a communications and engagement strategy to maintain the profile of plant and tree health issues. Achievements to date include a prize winning biosecurity exhibit at Chelsea

Flower Show 2012, the setting up of a communications working group to better coordinate engagement activity between Fera, FC and Defra, the launch of two films (on *Phytophthora* and biosecurity) and the production of two biosecurity posters. Work has started on publicity campaigns at airports and a training programme. **Theme D** has already launched seven research calls for 2012/13 covering Oak Processionary Moth (detection, control and outbreak management), *Phytophthora ramorum* genotypes, stakeholder mapping and analysis, review of successful control policies and Acute Oak Decline. Annex 1 is a summary of new research supporting the Action Plan, along with relevant recent or on-going research.

## **Theme A (Import Controls) – Martin Ward (Fera)**

### **Strengthen import control activities and protocols**

Levels of plant inspections have increased as a result of 18 new import inspectors being deployed in 2012; 12 to Heathrow and 6 to other ports. From the end of 2010 to the end of 2011 levels of inspection of certified consignments have increased from under 20% to over 70%.

A consultation on plant health import inspection charges was carried out, leading to increased fees on 6th April. This is enabling Defra funding, previously subsidising inspection costs, to be used for other measures to improve plant health security. Plant health task forces with industry representatives have been set up to look at how to reduce costs and increase efficiency of service. These will work closely with a review team looking into import control activities and protocols to improve effectiveness within current resource and regulatory constraints.

Further actions to strengthen import controls include building evidence to inform a consultation on whether to change the passenger baggage allowance and the initiation of pilot studies in the use of new technologies for detection and diagnosis of plant pests and pathogens at points of entry.

### **Review the EU Plant Health Regime and update the UK Plant Health Strategy**

The EU plant health regime is currently undergoing a review with proposals expected in autumn 2012. To maximise preparedness ahead of the proposals, the UK has initiated a study of costs and benefits of the current plant health regime to establish a baseline and inform UK impact assessments and negotiating positions on likely changes to the regime. A UK-wide Advisory Forum, working with the UK policy negotiating team for the new plant health regime, has also been set up. The first meeting of the Forum on 27 April identified 14 stakeholder representatives; from different sectors with a wide range of expertise (a list of Forum members will shortly be published). Forestry expertise is being secured by appointing a representative from the FC Biosecurity Programme Board.

## **Facilitating greater international collaboration**

The UK is working with the Commission and other Member States to enhance collaboration and common approaches to border controls. UK inspectors are participating in EU working groups on electronic plant health certification and consignment tracking. Also, a Fera policy official has been seconded to work for the European Commission's plant health team for two years.

An international standard on management of plant health risks associated with shipping containers is currently being developed. A UK expert has been appointed as assistant steward for the development of this standard. Finally, to support a new improved EU plant health regime, a research project has been commissioned to identify the types and origins of plants which should be subject to risk assessment before new import trades develop.

## **Overall**

A number of important steps have been taken towards a more risk targeted and better coordinated approach to plant health import controls. Implementation of many of these steps will depend on proposals for an improved EU plant health regime which the European Commission will be publishing in the autumn. We are preparing the evidence base and stakeholder networks that will be needed in the negotiations which will follow. We are also piloting use of new technologies for detection of pests and pathogens and IT systems for communication between official plant health services.

## **Theme B (Practical Actions) – John Morgan (FC GB)**

### **Using the socio-economic benefits of healthy plants and trees to prioritise actions**

Work to develop a risk framework to enable strategic prioritisation of practical actions on tree pests and pathogens has begun. The framework will incorporate the internationally recognised risk factors concerned with the probability of each pest entry, establishment and spread and combine these with their socio-economic importance to determine an overall priority rating for action.

A detailed economic appraisal of the impact of Oak Processionary Moth in Britain has been commissioned with a target for completion of September 2012. The Forestry Commission's response to the report of the external independent review group into science quality in Forestry Research has been published. Stakeholder engagement on the review of the Science and Innovation Strategy for British Forestry is currently underway.

### **Understanding and adopting appropriate biosecurity measures by different sectors**

A review of BS3936-4 the specification for forest trees, poplars and willows is currently underway with input from FC and the HTA. The forest nursery sector has provided nominees to join a working group to be led by the FC. The group will introduce measures

at point of receipt to ensure better checks of plants and propagating material to identify infected or infested plants before they go on sale, or into the wider environment. The landscaping sector will be engaged through the group tasked with drafting a new BS on the condition and sale of landscaping trees.

A process of engaging with the different tree sectors to promote biosecurity best practice is underway at three meetings with the forestry sector and a conference for the British Christmas Tree Association. Planning for Forest Health Days in 2012 is also underway.

### **Improving our surveillance strategy for tree pests and diseases**

Fera, FC, Scottish Government and Natural England have combined resources to deal with four newly identified pest outbreaks and interceptions in the last three months. This collaboration builds on experience of working together on *Phytophthora ramorum* and Dothistroma Needle Blight. Efforts to find and diagnose *Phytophthora austrocedrae* on juniper are being led by Fera and NE in England and by FC in Scotland. Two disease outbreaks of *Cryphonectria parasitica* on sweet chestnut have been identified and follow up of plants at risk from this infection have been dealt with by Fera, FC, and Scottish Government. Fera made a significant interception of *Chalara faxinea* on ash plants imported from the Netherlands and followed this up with FC providing assistance in the form of disease recognition. The first outbreak of Asian Longhorn Beetle was detected in Kent by Forest Research in February. Fera and the FC have together devoted more than 1000 hours working closely together in Kent on field surveillance, eradication measures and public engagement. FC will use its helicopter surveillance team to investigate whether aerial surveys can be used for early detection of outbreaks of these pests as well as for *Phytophthora lateralis* on Lawson cypress in 2012.

FC has reviewed its surveillance strategy for dealing with OPM in London and has reallocated its internal resources to provide more survey capacity and to better engage with stakeholders in 2012.

### **Overall**

Nick Mainprize joined the Plant Health Team from Forestry Commission Scotland on 8 May and Nick's first priority is to take forward initiatives to promote and embed measures to address biosecurity by the different sectors.

## **Theme C (Public and Stakeholder Engagement) – David Slawson (Fera)**

### **Establish a coherent, joined-up and collaborative cross-Government approach to public and stakeholder engagement and communications**

Good progress has been made to coordinate engagement activity between Fera, FC and Defra, largely through regular telephone meetings and development of a joint strategy, delivery plan and media diary. The latest information on outbreaks has been provided on

the FC, FR and Fera websites. In the future, it is planned to include key stakeholder partners on the management team.

### **Raise awareness of plant and tree pests and diseases**

A high media profile of plant and tree health has continued with particular interest in the outbreak of Asian Longhorn Beetle in Kent and considerable activity around the RHS Chelsea Flower Show with the silver-award winning Fera-led exhibit, the launch of two Phytophthora films, a countryside poster and two sets of Best Practice Biosecurity Protocols. Future events will include a 1-year progress event of the Action Plan at the CONFOR 'APF' Conference in September 2012 and a plan to return to Chelsea in 2013.

Scoping work has commenced on a publicity campaign for ports and airports and agreement has been reached to share outputs with the European and Mediterranean Plant Protection Organisation (EPPO), thereby extending influence across the Region. A workshop on personal plant imports is planned to address the risk posed by this pathway.

Two films, a short 'Biosecurity film' and a longer 'Phytophthora Film', were launched by Lord Taylor at ICF annual conference on 16 May and are widely available on the Fera, FC and other partner organisations websites. Also, two new biosecurity posters have been published; one for nurseries and garden centres (funded by the Horticultural Trades Association) and one for the public's recreational use of the countryside. Production of a further poster for woodland owners and contractors is due to commence shortly (funded by National Trust). Future work in this section relates to the inclusion of biosecurity as a criterion in schemes such as Green Flag and Heritage Lottery Funding.

### **Informing the public and professionals on ways they can help**

Best Practice Biosecurity Protocols for (a) nurseries, garden centre and landscapers and (b) parks and gardens were launched in May 2012 and training events both for professionals and public have been carried out. RHS and National Trust are acting as role models with their adoption of a "Quarantine Policy" and "Biosecurity Instruction", respectively. Forest Research ran a series of "Forest Health Days" in autumn 2011 and further events are planned this summer. RHS, NT, English Heritage, RBG Edinburgh and Fera are developing a "train the trainers" pilot to produce plant health champions in these partner organisations.

A cadre of professionals and volunteers to act as eyes and ears and the development of a gateway to input data on tree health status are currently being undertaken. Other related work includes discussions on an international plant sentinel network.

### **Overall**

May 2012 has seen the launch of a number of major outputs from Theme C of the Action Plan, notably: the "Stop the Spread" exhibit at RHS Chelsea Flower Show, the launch of two Phytophthora films, the countryside poster and two sets of Best Practice Biosecurity Protocols.

## Theme D (Research and Evidence) – Alan Inman (Defra)

### Defra Research Calls

Seven Defra calls for more applied and immediate research have been launched, supporting specific actions in Theme D and the other Themes of the Action Plan. Call specifications can be accessed from the Defra 'Research Competitions' webpage:

<http://www.defra.gov.uk/evidence/funding/competitions/>. Projects have been awarded against five of the calls (project details will appear on the Defra website after contracting is completed: <http://randd.defra.gov.uk/>).

- Call FFG 1136: Oak Processionary Moth 'Control' (Project TH0102)
- Call FFG 1137: Oak Processionary Moth 'Early Detection' (Project TH0101)
- Call FFG 1139: Oak Processionary Moth 'Outbreak Management' (Project TH0103)
- Call FFG 1142: Phytophthora ramorum genotypes (Project TH0105)
- Call FFG 1143: Stakeholder mapping and analysis (Project TH0104)
- Call FFG 1146: Review of successful control policies
- Call CTX 1201: Causes, distribution and scale of Acute Oak Decline

### Potential LWEC-Type Tree Health Initiative

The Living With Environmental Change (LWEC) programme is leading discussions with the Research Councils and others, including Defra and FC, on the development of a potential common pot for an LWEC-type Tree Health and Plant Biosecurity Research Initiative for more fundamental and strategic research.

### General Underpinning Science Supporting the Action Plan

There are several non-R&D actions which are supporting the wider Action Plan and tree health more generally:

- A List of prioritised pests was established by the Science Expert Group (1 July 2011) and is being kept under review alongside ongoing developments, such as interceptions or outbreaks of new pests and reviews of risk assessments and contingency plans. In response to the first UK outbreak of *Anoplophora glabripennis*, additional research is being directly commissioned to build on that in current transnational projects involving Fera, FR and University of York.
- An 'Expert Advisory Team' has been established for Dothistroma Needle Blight. This has been established by Forest Research and progress is due to be reported Summer 2012. Further 'Expert Advisory Teams' will be considered shortly and an initial list of possible pest candidates has been compiled.
- Preparedness for future threats: The Plant Health Risk Management Workstream (PHRMW) and FR are prioritising a finalised list of future pests for consideration. It

will then oversee reviews on the availability and currentness of risk analyses and contingency plans, more general preparedness (eg SOLAs); and the identification and prioritisation of research needs as appropriate for each priority future pest. The work is being managed via a template that includes a stock-take for each pest (availability of risk assessments and contingency plans etc) and which designates specific actions and plans next steps. Identification of research needs may inform future calls and will feed into the wider mapping out of work.

## **Overall**

Owners have been assigned to all actions, initial Defra calls have begun and new research projects have started. The future programme of work is being mapped out, including, discussions on a possible LWEC initiative for more fundamental research.



## Annex 1 – Research Supporting the Tree Health and Plant Biosecurity Action Plan

### Defra-funded Tree Health and Plant Biosecurity Research (from 1 April 2012)

Defra have a launched a range of research calls for more immediate and applied research supporting the Action Plan. The first projects started in April 2012 as soon as the Defra funds (£7 million over 3 years) became available. Additionally, we are exploring the use of some of the £7 million of Defra funds within a more fundamental and strategic programme of research in partnership with Research Councils and other funders, potentially via the Living With Environmental Change (LWEC) Programme.

Details of Defra projects commissioned to date are given in the table below together with links to the Defra website ([Project Code](#), if contracted; [Call Reference](#), if project/s not yet awarded):

<a href="#">Project Code</a> or <a href="#">Call Ref</a>	Short Title <sup>1</sup>	Start Date	End Date	Cost	Contractors <sup>2</sup>
TH0101	Oak Processionary Moth – Early Detection	02/04/12	31/03/14	248,157	Fera, FR, CEH, UB, G&T, WO
TH0102	Oak Processionary Moth – Control	02/04/12	31/03/15	250,000	ADAS, RBG, UW, BTRL
TH0103	Oak Processionary Moth – Outbreak Management	02/04/12	31/03/13	101,067	ULIC, ULBC, HA, FR
TH0104	Stakeholder Mapping and Analysis	01/05/12	30/09/12	204,688	ULIC, FR, Fera, UWE, UC

<sup>1</sup> Projects primarily address actions identified by the Science Expert Group (Meeting 1<sup>st</sup> July 2011) - [www.forestry.gov.uk/website/forestry.nsf/byunique/infid-8gykmt](http://www.forestry.gov.uk/website/forestry.nsf/byunique/infid-8gykmt)

<sup>2</sup> **AFBI** (Agri-Food and Biosciences Institute, Northern Ireland); **BTRL** (Bartlett Tree Research Laboratory, University of Reading); **CEH** (Centre for Ecology and Hydrology); **DFP** (Department of Forest Protection, Austria); **Fera** (Food and Environment Research Agency); **FR** (Forest Research); **G&T** (Gristwood and Toms); **HA** (Harper Adams); **RBG** (Royal Botanic Gardens Kew); **UB** (Brunel University); **UC** (Cardiff University); **ULBC** (Birkbeck College, University of London); **ULIC** (Imperial College, University of London); **UP** (University of Padova, Italy); **UW** (University of Warwick); **UWE** (University of the West of England); **UY** (University of York); **WO** (White October)

TH0105	Phytophthora ramorum genotypes	01/05/12	31/03/13	98,435	FR, Fera, AFBI
<a href="#">FFG 1146</a>	Control Strategies – Review and Analysis	01/07/12	TBA	TBA	-
TH0107 <sup>3</sup>	Asian longhorn beetle – Improved Detection	15/06/12	31/03/13	109,402	Fera, FR, ULIC, UY, UP, DFP
<a href="#">CTX 1201</a>	Acute Oak Decline – Distribution, Scale & Causes	TBA	TBA	TBA	-

## Current Forestry Commission Research on Tree Health

Research Programme	Work Package	Review date	Funding source
Advice and Scientific Support for Tree Health £1.65m (2012/13)	Dothistroma Needle Blight <ul style="list-style-type: none"> <li>• Disease monitoring, diagnostics and impact</li> <li>• Disease management</li> <li>• Disease epidemiology</li> <li>• Advice, technical transfer and bid preparation</li> </ul>	31 March 2013/2014	Forestry Commission, DEFRA Phytophthora programme, Private charities, USDA Forest Service, EU FP7 REPHRAME project, Small contracts
	Phytophthora Diseases <ul style="list-style-type: none"> <li>• Diagnosis of symptomatic trees</li> <li>• Epidemiological studies</li> <li>• Genetic analysis of <i>Phytophthora</i> genotypes</li> <li>• Provision of advice and analysis</li> </ul>		
	Oak Declines, Acute Oak Decline <ul style="list-style-type: none"> <li>• Identification and pathogenicity of organisms associated with declined oak trees</li> <li>• Distribution, surveying and monitoring of oak decline</li> <li>• Epidemiology and interaction of oak declines</li> <li>• Knowledge transfer, project management and fund raising</li> </ul>		

<sup>3</sup> Single tender action, building on existing European-level transnational projects ([ANOPLORISK](#) and [www.QDETECT.org](#))

	Horse Chestnut Bleeding Canker <ul style="list-style-type: none"> <li>• Genetic analysis and biological characterisation</li> <li>• Infection, survival and contamination hazard</li> </ul>		
	Regulated Forest Pests <ul style="list-style-type: none"> <li>• Surveys and genetic analysis of Pine-tree Lappet Moth</li> <li>• Surveys including improvements of surveillance methods</li> </ul>		
	Advisory and Extension Service <ul style="list-style-type: none"> <li>• Disease Diagnostic and Advisory Service</li> <li>• Pest Identification and Advisory Service Hylobius including advice and alternative pesticide testing</li> <li>• Knowledge transfer and training via Forest Health days</li> <li>• Squirrel research and advice</li> </ul>		
	Scientific Support for Phytosanitary Regulation <ul style="list-style-type: none"> <li>• Research and monitoring</li> <li>• Assessment of risk</li> <li>• Phytosanitary advice</li> <li>• Future threats</li> </ul>		
	Biosecurity, Climate Change and Forest Susceptibility <ul style="list-style-type: none"> <li>• Susceptibility of forests to invasion by exotic bark beetles</li> <li>• Temperature and water stress on disease severity</li> <li>• Climate change and spruce pests</li> </ul>		
Integrated Forest Monitoring £0.356m (2012/13)	Development and management of a GB forest health surveillance system <ul style="list-style-type: none"> <li>• Developing common methodologies</li> <li>• Testing of system and reporting in two directions – evaluation and refinement</li> <li>• Extension of system beyond FC – opportunities for wider sector involvement and citizen science</li> </ul>	31 March 2013/2014	Forestry Commission
	Remote sensing aims to increase certainty about Britain's forest resource <ul style="list-style-type: none"> <li>• Identification of Interpreted Forest Types</li> <li>• Monitoring changes</li> <li>• Estimation of stand parameters</li> </ul>		
	Maintenance and development of the GB Research Forest network <ul style="list-style-type: none"> <li>• Identification of new network; developing management agreements and relevant protocols; installation of monitoring equipment and collection systems</li> <li>• Data acquisition, QA, storage and transmission</li> </ul>		

	<ul style="list-style-type: none"> <li>Development of special projects in Research Forests</li> </ul>		
Genetic conservation and species £0.065m (2012/13)	Support for forest reproductive material regulations	31 March 2013/2014	Forestry Commission
Genetic improvement £0.210m (2012/13)	EU Novel tree contract	31 May 2012	Forestry Commission, EU
	Emerging species <ul style="list-style-type: none"> <li>Research into new species</li> <li>EU REINFFORCE contract</li> <li>Arboreta</li> <li>FC Tree Collection Project.</li> </ul>	31 March 2013/2014	Forestry Commission, EU

### Examples of EU-funded or European Transnational Research Projects (Relevant to Tree Health)

Project	Project Title	Funding source	UK Partners	Status
<a href="#">DIAROD</a>	Determining invasiveness and risk of Dothistroma	EU (COST)	FR, Aberdeen University	On-going
<a href="#">PERMIT</a>	Pathway evaluation and pest risk management in transport	EU (COST)	FR, Aberdeen University	On-going

<a href="#">QDETECT</a>	Developing tools for on-site phytosanitary inspection	EU (FP7)	Fera, RAL, Optisense	On-going
<a href="#">REPHRAME</a>	Development of improved methods for detection, control and eradication of pine wood nematodes in support of EU Plant Health Policy	EU (FP7)	FR <sup>4</sup> , NRI	On-going
<a href="#">ISEFOR</a>	Increasing sustainability of European forests: modelling for security against invasive pests and pathogens under climate change	EU (FP7)	Aberdeen University, FR	On-going
<a href="#">Palm Protect</a>	Eradication and containment strategies and tools against the red palm weevil ( <i>Rhynchophorus ferrugineus</i> ) and <i>Paysandisia archon</i> (palm moth)	EU (FP7)	Fera	On-going
<a href="#">NOVELTREE</a>	Novel tree breeding strategies	EU (FP7)	FR, Edinburgh University	Completed / On-going
<a href="#">IMPACT</a>	Integrated management of forest pests addressing climate trends	EU (ERDF)	FR, Swansea University	On-going
<a href="#">MOTIVE</a>	Models for Adaptive Forest Management	EU (FP7)	FR	On-going
<a href="#">PROCOGEN</a>	Promoting a functional and comparative understanding of the conifer genome- implementing applied aspects for more productive and adapted forests	EU (FP7)	FR	On-going

<sup>4</sup> Other past EU projects involving FR can be found at: <http://www.forestry.gov.uk/fr/inf-d-63jghm>

<a href="#">PRATIQUE</a>	Enhancements of Pest Risk Management techniques	EU (FP7)	Fera, Imperial College	Completed
<a href="#">ANOPLORISK</a>	Anoplophora longhorn beetle detection and risk management	<a href="#">EUPHRESCO</a>	Fera, FR, York University	On-going
<a href="#">CEP</a>	Current and emerging Phytophthoras	<a href="#">EUPHRESCO</a>	Fera, FR, SASA, AFBI	On-going

## Other projects relevant to Tree Health and Plant Biosecurity

*Phytophthora ramorum* / *kernoviae* Projects:

- £1.5 Million Defra research programme supporting the England and Wales Phytophthora Disease Management Programme, plus other FC and Scottish Government and Welsh Government project
- <http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/phytophthora/research.cfm>

Future Proofing Plant Health (Defra Project [PH0441](#))

- Started 2011; Ends 2014

Rural Economy and Land Use (Relu) Programme:

- Growing risks? The potential impact of plant disease of land use and the UK rural economy  
<http://www.relu.ac.uk/research/projects/Third%20Call/Mills.htm>
- Memory and prediction in tree disease control: Lessons from Dutch Elm Disease in Assessing the Threat from Sudden Oak Death  
<http://www.relu.ac.uk/research/projects/Third%20Call/Potter.htm>

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