Department for Environment, Food and Rural Affairs

United Kingdom demarcated area report for *Anoplophora glabripennis* (Asian longhorn beetle); March 2012 – April 2013

Date: 30th April 2013

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Introduction

Anoplophora chinensis (Citrus longhorn beetle) and the closely related *A. glabripennis* (Asian longhorn beetle), are both Annex IAI listed pests in the EU Plant Health Directive 2000/29/EC. As a result they are organisms whose introduction, and spread within, all Member States (MS) is banned.

The EU have also introduced specific emergency measures for MS to implement for *Anoplophora chinensis* (Citrus longhorn beetle) to prevent its introduction and spread within the Union in the form of Commission Implementing Decision 2012/138/EU, hitherto referred to as the Decision. Specific EU emergency measures do not exist for *A. glabripennis*, however, given it is so closely related to *A. chinensis* both the Decision and the UK's contingency plan for that pest also form the basis of the UK response to *A. glabripennis*.

Scope of the report

This report sets out for the Commission and other MS the measures taken to date and any future measures the UK intends to take within the demarcated area for the 2012 outbreak of *A. glabripennis* in the Paddock Wood area of Kent, South East England.

Location of outbreak

The outbreak is in Kent in the south-east of England. It is approximately 2km north of the town of Paddock Wood and 50km south-east of the centre of London. Most of the infested trees have been found in trees alongside a rural road, but some have also been found on a commercial property and some have been found within domestic properties.

Detection of the outbreak

The area where the outbreak was discovered was being routinely monitored by Forest Research following the finding in a private garden of an adult *A. glabripennis* in this area on 2nd October 2009. The private garden was within 100m of a stone importer which was operational in 2009, but stopped trading at this site in 2011. Wood packaging from China was present at a follow-up inspection at the stone-importer's premises but no *A. glabripennis* were found.

In 2012, symptoms of the pest were first observed on the 29th February in a sallow tree (*Salix cinerea*) adjacent to the site of the 2009 finding. In order to determine the cause of the damage a sample was collected on the 8th March 2012 and another two trees showing signs of pest activity were also recorded. Larval activity was noted in this sample on 15th March 2012, *A. glabripennis* was identified by morphological means. The NPPO, the Department for Environment, Food and Rural Affairs (Defra), was notified of the outbreak on 20th March 2012 and the identification confirmed by DNA sequencing on 26th March 2012.

An Outbreak Management Board (OMB) was established on 23rd March 2012. The following were represented on this board: Food and Environment Research Agency (Fera) policy, Forestry Commission (FC) policy, Fera's Plant Health and Seeds Inspectorate (PHSI), FC Inspectorate, Forest Research (FR) scientists, Fera scientists and press officers from both Fera and FC. Representatives from the relevant local authorities are also involved. The OMB met 16 times between 23rd March and 25th July and made decisions on the areas to be surveyed, trees to be removed, communications strategy and the prevention of spread.

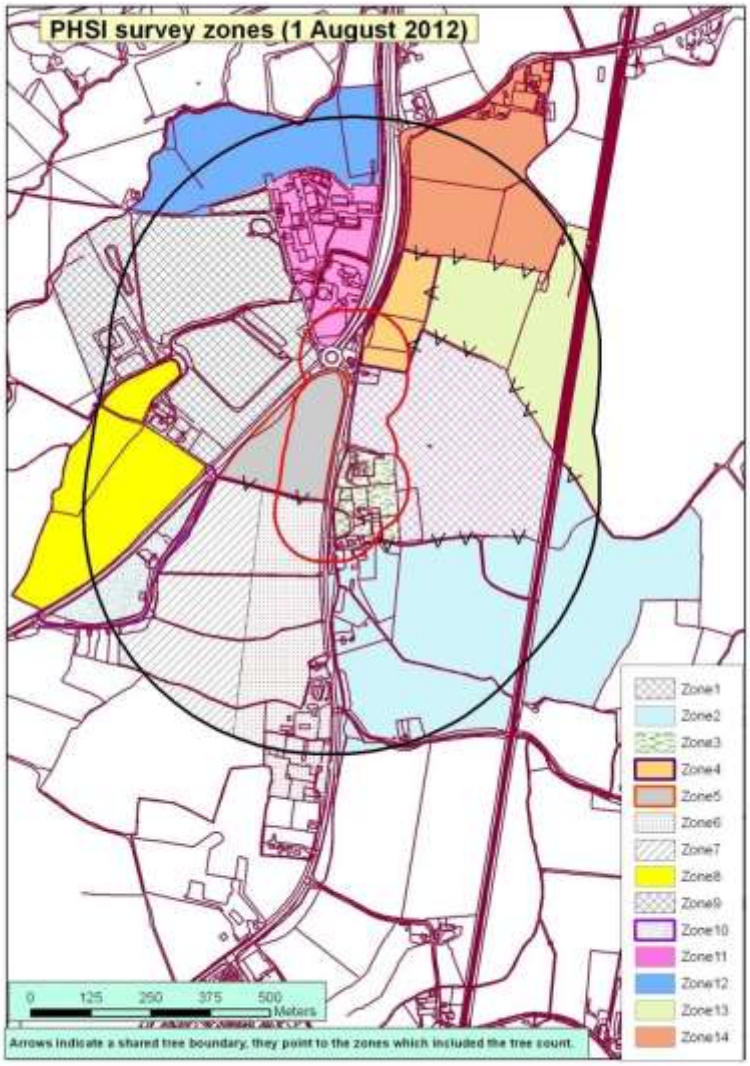
Surveillance

Surveillance in the infested zone (0-100m from infested trees) was carried out by staff from FR with support from the PHSI. Surveillance in the buffer zone was carried out by the PHSI with support from FR and an arboricultural contractor.

- 28 March 2012 - Survey started of infested area and inner buffer zone (100-500m from infested trees). The infested area was adjusted each time new infested trees were discovered. Trees were inspected from the ground with the aid of binoculars. A map of the outbreak site indicating the infested area, inner buffer zone and survey zones is provided in fig. 1 below. In total over 4700 hosts were surveyed within the infested area and inner buffer zone.

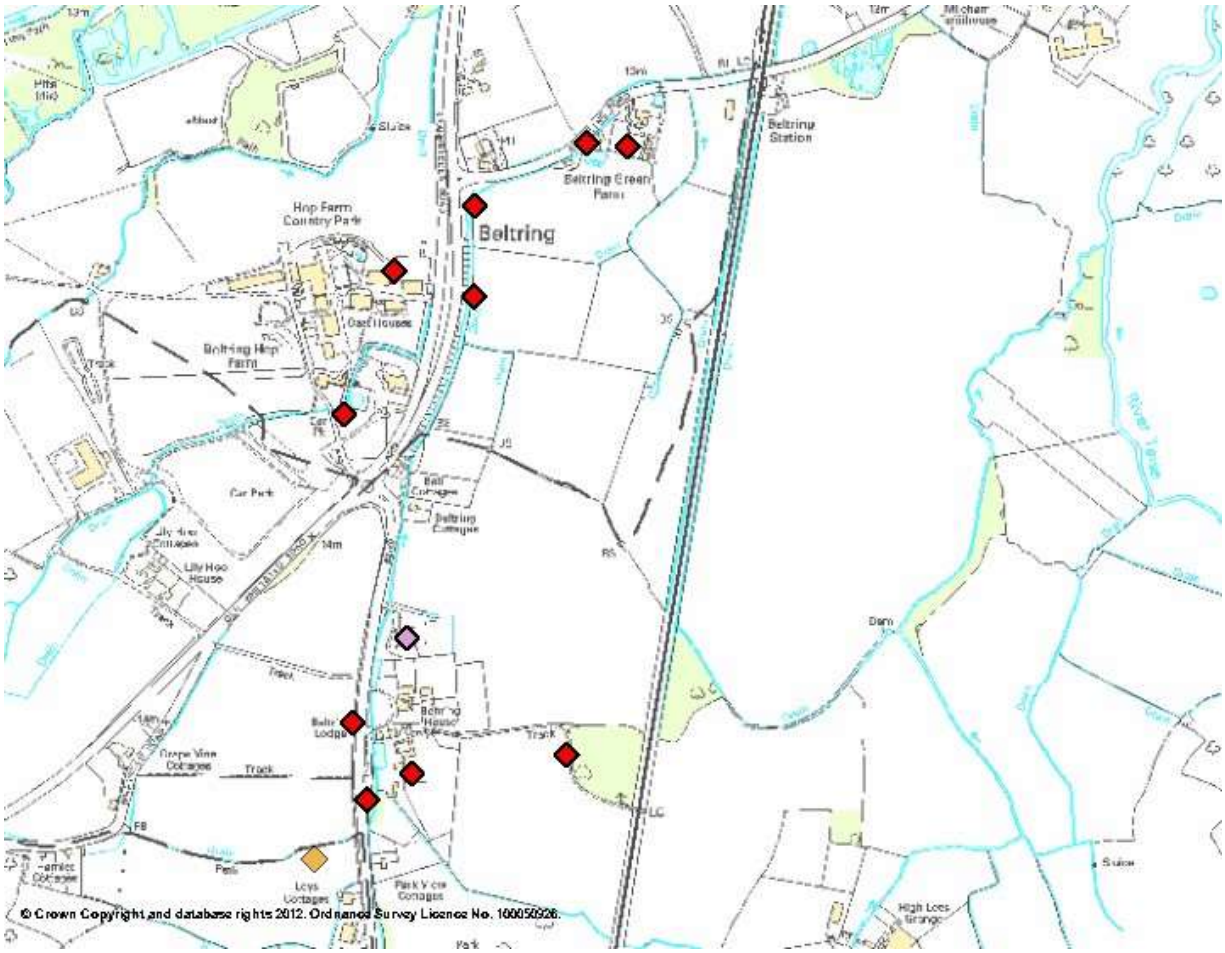
- July 2012 - second ground survey of the trees in the inner buffer zone was carried out.

Fig.1 – Map of the infested area, inner buffer and survey zones



- 14th August 2012 - Ten pheromone traps were established at the site. These were inspected six times and then removed on 12th December 2012. No ALB were found in the traps. No new infested trees were detected. The locations of the pheromone traps are shown in Fig.2.

Fig.2 – Location of ALB pheromone traps



- 22-29th August 2012 The Austrian detection dog team visited and worked on the edges of the infested zone to look for previously undetected infested trees. Seven trees were indicated by the dogs as being potentially infested. Two of these were chopped down at cut up at the time and no infestation was found. Branches were removed from a third tree and this was chopped up, but no infestation was found. Other trees are being kept under close observation.

- November/ December 2012 A third survey of the infested area and inner buffer zone was carried out from the ground. Any trees that appeared to be potentially infested were investigated by tree climbing using arboricultural contractors. The contractors had been involved in the tree removal at the site and hence were familiar with the symptoms of ALB. No new infested trees were detected.

Tree removal and pest findings

All tree removal work was carried out by an arboricultural contractor employed by the Forestry Commission. All infested trees and host trees within 100m of infested trees were felled. The tree removal work began on 16th April and was completed by 3rd August 2012. The trees were cut up into sections during the felling operation and then carefully inspected by staff from FR or Fera. All sections of wood that appeared to be infested were taken within 3 layers of containment to Alice Holt, the Forest Research station near Farnham in Surrey approximately 85km west of the outbreak. These samples were then

kept in quarantine conditions and were processed by 20th September. All the felled trunks and branches that were not taken to Alice Holt were burnt in a smokeless incinerator at the outbreak site as soon as it they had been examined.

For the purposes of tree removal at this site, the following trees were designated as hosts: *Acer* (maples and sycamores); *Aesculus* (horse chestnut); *Albizia* (Mimosa, silk tree); *Alnus* (alder); *Betula* (birch); *Carpinus* (hornbeam); *Cercidiphyllum japonicum* (Katsura tree); *Corylus* (hazel); *Fagus* (beech); *Fraxinus* (ash); *Koelreuteria paniculata*; *Platanus* (plane); *Populus* (poplar); *Prunus* (cherry, plum); *Robinia pseudoacacia* (false acacia/black locust); *Salix* (willow, sallow); *Sophora* (Pagoda tree); *Sorbus* (mountain ash, whitebeam etc); *Quercus palustris* (American pin oak); *Quercus rubra* (North American red oak); and *Ulmus* (elm).

A total of 2166 trees were removed of which 1474 were along field borders, hedges and roadsides. The most numerous Genera of trees removed were *Acer* (523), *Prunus* (331), *Alnus* (317), *Populus* (292) and *Corylus* (221).

A total of 66 infested trees have been detected of which 24 were found to be affected before felling and 42 afterwards. The infested trees were mainly *Acer pseudoplatanus* (41), *Acer campestre* (11) and *Salix sp.* (7). In total 354 live larvae, 34 live pupae and 2 recently eclosed adults of ALB were recovered from the infested trees. The 2 adults emerged in the cool (15 °C) storage conditions of the quarantine facilities at Alice Holt during September. There was no evidence that any adults of ALB had emerged before the samples were brought to Alice Holt or had emerged in the field before the last tree had been felled in the outbreak zone. One 12m tall sycamore tree on the boundary of the original commercial premises possessed 88% of all the exit holes found and contained 40% of the live larvae and pupae found during the outbreak. This tree was heavily covered in ivy (*Hedera sp.*) and although it had a dead top, it had not been recognised as infested when inspected from the ground.

Prevention of spread

Householders within the demarcated areas were asked to suspend any tree surgery work where possible, and when tree surgery work is necessary to take all woody material with a diameter of greater than 2cm to a local authority waste management sites (generally Tunbridge Wells and Maidstone). Green waste from these sites goes to one of two companies in Kent who compost this material (one 'in vessel' composting) to temperatures in excess of 65°c. Some garden owners will burn their own green waste on site.

There are two nurseries within 2km of the infested area. The closest nursery is 380m from the infested trees and has stopped trading in host material. The nursery which is 1500m away is continuing to trade, but plants are being treated with a drench of imidacloprid and foliar insecticide applications. Trees in the area surrounding the nurseries have been inspected and trees on the nursery site were inspected every two weeks during the summer.

Communication with the public and media

Fera and FC have both placed information about the outbreak on their websites. Press releases have led to interviews for national and local radio and newspaper articles, furthermore, two three of the main television broadcasters in the UK, the BBC, and ITV and Channel 4 have featured the story on their regional news programmes. On 12th April, a meeting was held for tree surgeons and other tree professionals and also attended by some local people to provide information about the pest and the outbreak. A second meeting was held for members of the public on 25th April to inform them about the outbreak and explain the reasons for taking action. Leaflets providing information about the outbreak were sent to approximately 6000 local residents in April 2012 with a second leaflet in July 2012, to coincide with the expected emergence period, asking them to look

out and report and finds of the beetle. A web-page was created on the Fera website in August 2012 to allow members of public to report finds of the pest on the internet via computers or mobile phones.

Next steps

Following the autumn 2012 survey, no additional survey was conducted during spring 2013 as there was little perceived benefit due to leaf cover.

Over the course of the emergence period a survey of sentinel trees and wooded areas will be undertaken within the 2km demarcated area. A detailed host mapping exercise will be undertaken to extend the inner buffer zone from 500 to 800m ahead of the detailed survey planned for autumn 2013.

There will also be a new publicity campaign in the summer of 2013, including sending leaflets to all households within the 2km buffer zone to raise awareness and encourage householders to report any possible sightings to the Inspectorate. Subject to agreement, the PHSI will also be sending an Inspector to local schools ahead of the summer break to talk to children about the pest and show them examples of what to look for over the holiday.

The infested zone and inner buffer zone (100m-800m from infested trees) will be resurveyed in the autumn 2013 after leaf-fall. This will include further use of tree climbers. Fig.3 describes the demarcated areas, including the extended 800m inner buffer zone, and identifies the locations of the sentinel monitoring sites to be checked over the summer months.

Fig.3 – Demarcated areas and locations of sentinel monitoring sites.