

**Minutes of the Second Meeting of the
Pine-tree Lappet Outbreak Management Team
10:00 am 15 October 2009
Silvan House, Edinburgh**

Present:

Roddie Burgess (Chairman), Head of Plant Health
Stuart A'Hara, Biologist, Forest Research, NRS
David Barbour, Consultant Entomologist
Charlton Clark, Press Officer, CFS
Hugh Clayden, Sustainable Forest Management, FC Scotland, Silvan House
Joan Cottrell, Head of Genetic Conservation, Forest Research, NRS
Michael Hymers, Forest Management Officer, FE Head Office, Inverness
Roger Moore, Senior Scientific Officer, NRS
Steve Smith, Planning Manager, Inverness, Ross & Skye Forest District
Dr Chris Sydes, Species Policy and Advice Manager, Scottish Natural Heritage
Dave Tracy, Plant Health Regional Manager
Richard Wallace, Development and Operations Advisor, Highland Conservancy
Debbie Erskine (Secretary), CFS

Apologies:

1. Apologies were received from David Jardine, FDM, Inverness, Ross & Skye Forest District. Steve Smith, Planning Manager, IR&S FD was attending in his place.

Agenda Item 1: Welcome and Introductions

2. Roddie welcomed everyone to the second meeting of the Pine-tree Lappet Outbreak Management Team. He added that an additional item, Climate Mapping, would be taken after agenda item 6.

Agenda Item 2: Minutes of the meeting held on 19 February 2009

3. The Team agreed the Minutes of the first meeting.

Agenda Item 3: Matters arising

4. Action points outstanding from the notes of the discussion held in Inverness on 20 November 2008:

- Item 8 – Richard to consult David Jardine about advice on work at sites where a number of Schedule 1 birds were present and report back to the Team.
- Item 17 – Roddie explained that the Exotic Pest Alert had been published but that it needed to be revised.
- Item 19 – Roddie had briefed ConFor on 20 February.

**Action:
Richard - consult David Jardine.
Roddie - revise Exotic Pest Alert.**

5. Action points outstanding from the first meeting held on 19 February 2009:
- Item 11 – Roddie advised he had not written to Entomological Societies as this topic had been discussed at a meeting of all the UK Plant Health authorities and it was planned to deal with this to cover the keeping and releasing of all plant pests, not just tree pests.

Action:
Roddie - pursue with UK Plant Health Co-ordination Group.

6. Hugh reported that Ministers had been made aware of the outbreak. In response to a question from Richard about the further spread of the outbreak, Roddie confirmed that notices should be served to all non-FC landowners within the outbreak area. It was not the practice for the FC to serve Statutory Notice on itself, but FE managers would need to be made aware of the requirements they would need to meet in the same way as the private sector.

Agenda Item 4: Situation Report – Paper 1/Oct 09

7. Roddie reported that, since the meeting on 19 February 2009, no Pine-tree Lappet caterpillars had been found as a result of the Sticky Band Survey of 1,000 trees. Dave suspected that the trees may have been banded too late in spring 2009 and this may have been the reason that no caterpillars were found. 282 pheromone traps had been set up in summer 2009 at 47 sites in a 20km radius of the suspected infestation site and amateur recorders had also set up a number of light traps close to the Kiltarlity area. A total of 98 moths, all males, had been caught (90 in light traps and eight in pheromone traps). In September 2009 six mature pines were felled at each of the seven sites where moths had been caught and one live larva had been found which confirmed that the moths were breeding. Subsequently, the remains of a pupal cocoon were also recovered demonstrating that the moth had been breeding since at least 2008.

8. Roddie stated that, in the woods where moths had been trapped, 1,900 trees had recently been glue banded and that there was already a strong indication of a population establishing as five larvae confirmed to be Pine-tree Lappet had been recovered. Dave added that he had compiled forms for inspectors to complete with details about where the caterpillars had been found on trees.

9. Roger confirmed that further caterpillars had now been caught and that a full range of sizes of larvae had been found and that Butterfly Conservation had said that the weather affected size and that they suspected the development cycle was spread over two years. Dave circulated maps detailing distribution of woodland by ownership and by interpreted forest type and a table of principal species and planting year class, all within a 5km radius of Kiltarlity. He added that there was no real sign of visible defoliation caused by the moths.

10. The Team discussed the various possible pathways including the eggs being imported on forestry machinery or private vehicles, on wood packaging or logs, by accidental or deliberate release. Plants for planting was recognised as the main pathway, but checks on import records going back 10 years had failed to show any plants imported into the area from known infected countries. The majority of plants had been sourced in Ireland. The team concluded that it was unlikely that the

pathway would ever be established.

11. Roddie summarised that there was enough evidence to confirm that a breeding population had established, that the monitoring exercise was now working and that the outbreak area should now be defined as being a zone of 10km radius centred on Kiltarlity.

Agenda Item 5: Pest Risk Analysis (PRA) – Paper 2/Oct 09

12. Roddie thanked Roger for preparing the PRA and distributed a draft joint statement that the Commission and Butterfly Conservation had prepared which summarised the survey and monitoring work undertaken, outlined future action and the respective views of both parties. Roger distributed a revised version of the PRA which had been updated to include the recent survey information about captures of caterpillars and confirmation of a breeding population. He added that the revised PRA had tracked changes so the Team could note the differences between the two versions.

13. Roddie reported that the PRA had been produced using an international European and Mediterranean Plant Protection Organisation (EPPO) template and added that when pests were discovered, import controls had to be scientifically justified. Further information had been published on the International Plant Protection Convention's website www.ippc.int. Roddie asked the Team to submit comments on the PRA by 23 October so that the final version could be published on the Plant Health website.

Action:

All - submit comments on the PRA to Roddie by 23 October.

Agenda Item 6a: DNA Analysis (native - v - non-native) Paper 3/Oct 09

14. Stuart A'Hara and Joan Cottrell from the Species and Genes Conservation Group, Centre for Human and Ecological Sciences, Northern Research Station attended the meeting for this item. Stuart introduced his paper and gave a PowerPoint presentation on the molecular analysis of Pine-tree Lappet.

15. Stuart explained that Scottish and German samples had been compared using microsatellite markers designed for the masson pine moth. It was found that Scottish samples had fewer alleles and lower heterozygosity which can be a result of a small breeding population consisting of a narrow genetic base. The data pointed towards either a recent introduction or a genetic bottleneck of a Scottish population at some point. He added that researchers were working with a very small data set and that a larger number of samples would enable a more robust conclusion to be drawn.

16. Stuart reported that the way forward was to:

- develop microsatellites specifically for the Pine-tree Lappet although this would be expensive, £15k, and time consuming;
- carry out analysis of more samples to get a bigger European picture which would cost £5k for analysing 50 samples each from four countries; and

- look at the sequence of mitochondrial DNA which is maternally inherited and shows historical colonisation routes which would cost £4k for analysing 10 samples each from eight countries.

17. In response to a question from Roddie, Stuart explained that although it would take six to eight months to develop microsatellites for the Pine-tree Lappet, it was the appropriate method for analysing further samples, work which would provide some of the evidence for establishing whether the moth was native or non-native. Chris added that SNH considered that analysis of as many samples as possible should be encouraged.

18. The Team agreed that the research work was essential and Roddie asked Stuart to prepare a proposal outlining details of the research and the costs involved. Roddie confirmed in principle that the research would be funded over two years, from the Plant Health emergency contingency fund. David agreed to liaise with Butterfly Conservation to obtain records of their moth recording history.

Action:

**Stuart/Joan - prepare a proposal for funding over two years.
David - obtain records of Butterfly Conservation's moth recording history.**

Agenda Item 6b: Climate Mapping – Paper 5/Oct 09

19. Roger tabled a paper prepared by D Ray and M Petr, FR, analysing Met Office data in north Scotland for a 30-year period from 1971 to 2000 and two time slice scenarios for 2020 and 2050. He explained that climate was an important factor in the population dynamics of Pine-tree Lappet moth and the study concluded that recent changes in the local climate may have favoured its colonisation. He added that projected changes in the future climate would continue to favour population expansion during the summer and autumn seasons although it may be adversely affected during the winter as wet winters provided conditions for fungal infection which hibernating caterpillars are susceptible to.

20. The Team agreed that the provisional study strongly indicated that climatic changes in the PRA area were likely to lead to successful wider establishment of a breeding population and that, as a consequence, there was a potential for Pine-tree lappet to cause significant damage to a level that required intervention. Roddie thanked Roger for his presentation and confirmed that he would like Messrs Ray and Petr to develop their analysis further, including climate matching with European areas where P-t L was, and was not, a damaging pest.

Action:

D Ray/M Petr - develop their Climatic Mapping model.

Agenda Item 7: Options for Control – Paper 4/Oct 09

21. Roddie introduced the paper which set out the potential options for the control of Pine-tree Lappet in the UK which included chemical/insecticide control, biological control, physical trapping and sanitation felling. Roddie outlined the two available options either:

- continue to monitor the outbreak until further DNA results confirmed

whether the species was likely to be native or non-native: or

- agree an action plan now noting that, as the Forestry Commission could not pay treatment costs these would have to be borne by landowners, both private and FE alike.

22. The Team discussed the monitoring option and agreed that important factors to take into consideration were that:

- further results of DNA testing and climate mapping were required;
- the defined area had not been positively identified and the outbreak could be in areas outwith the 7km radius; and
- there was not enough evidence to convince landowners to take immediate action.

23. Roddie explained that the two action plan options would be to carry out sanitation felling or chemical control. He reiterated that landowners would have to pay eradication costs although in response to a question from Hugh, he confirmed that Ministers could be approached for funding although he considered there was not enough strong evidence to produce a convincing case. Following a lengthy discussion, the Team agreed that important factors to take into consideration were that:

- a meeting with private landowners would be useful;
- there was a considerable short-term cost difference between sanitation felling and chemical control;
- the area was too big to consider blanket sanitation felling;
- the market was already flooded with pine felled as a result of Red Band Needle Blight;
- SEPA and UKWAS might not support chemical control; but
- emergency procedures could nevertheless be put in place; and
- phased sanitation felling, perhaps combined with other forms of control, might be possible once more is known about distribution and rates of spread of Pine-tree lappet.

24. The consensus of the Team was that, based on current evidence, sanitation felling was not an option for 2010.

25. The Team noted that:

- monitoring should continue;
- a time limit would need to be set on how long monitoring could continue to be funded from the contingency fund;

- sanitation felling could cost up to £5m: Roddie would discuss the preparation of an Economic Impact Assessment with Pat Snowdon, Economics, for future consideration by the Team;
- a meeting should be held with landowners and ConFor;
- ConFor should be invited to be represented on the Team;
- the outbreak zone should be defined as 10km radius of Ruttle Wood;
- a consultation paper should be prepared;
- SEPA should be contacted about approval for chemical spraying; and
- a remote sensing procedure should be carried out.

Action:

**Roddie - seek and Economic Impact Assessment.
Roddie - write to ConFor about a meeting with the Team and landowners and future representation on the Team.**

All - note that the radius of the outbreak zone was increased to 10k.

Roddie - prepare a consultation paper.

Michael - contact SEPA about approval for chemical spraying.

Roger - speak to Stewart Snape, Specialist Advisor, about remote sensing procedure.

Agenda Item 8: SNH Update

26. Chris reported that SNH had welcomed formal representation on the Team. A paper had been produced on the status of the Pine-tree Lappet moth for SNH's Scientific Advisory Committee's meeting later in the month. Director SNH was content with the line to take in the paper and had asked for further information. Roddie offered to send Chris a copy of a Polish Forest Service Annual Report confirming action taken there to supplement the paper.

Action:

Roddie - send a copy of the Polish Annual Report to Chris.

Agenda Item 9: Communications and Publicity

27. Roddie informed the Team that Charlton Clark, Press officer, Corporate Communications would contact the Forest District and Roddie about communications and publicity issues.

Action:

Charlton - contact District Office and Roddie about communications and publicity.

Agenda Item 10: Any Other Business

28. Roddie confirmed to David that he could divulge information about the Team's discussions at his forthcoming meeting with Butterfly Conservation, but not the contents of the papers (other than the situation report Paper1) as these were work in progress not yet finalised.

Agenda Item 11: Date of Next Meeting

29. Roddie suggested that the next meeting of the Team should be in February or March 2010.

Action:
Debbie - organise the next meeting for February/March 2010

**Summary of Actions of the
Pine-tree Lappet Outbreak Management Team
10:00 am 15 October 2009
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Agenda Item 3: Matters arising

Richard - consult David Jardine.
Roddie - revise Exotic Pest Alert.
Roddie - pursue with UK Plant Health Co-ordination Group

Agenda Item 5: Pest Risk Analysis (PRA) – Paper 2/Oct 09

All - submit comments on the PRA to Roddie by 23 October.

Agenda Item 6a: DNA Analysis (native - v - non-native) Paper 3/Oct 09

Stuart/Joan - prepare a proposal for funding over two years.
David - obtain records of Butterfly Conservation's moth recording history.

Agenda Item 6b: Climate Mapping – Paper 5/Oct 09

D Ray/M Petr - develop their Climatic Mapping model.

Agenda Item 7: Options for Control – Paper 4/Oct 09

Roddie - seek and Economic Impact Assessment.
Roddie - write to ConFor about a meeting with the Team and landowners and future representation on the Team.
All - note that the outbreak zone was defined as 10k of Ruttle Wood.
Roddie - prepare a consultation paper.
Michael - contact SEPA about approval for chemical spraying.
Roger - speak to Stewart Snape, Specialist Advisor, about remote sensing procedure.

Agenda Item 8: SNH Update

Roddie - send a copy of the Polish Annual Report to Chris.

Agenda Item 9: Communications and Publicity

Charlton - contact District Office and Roddie about communications and publicity.

Agenda Item 11: Date of Next Meeting

Debbie - organise the next meeting for February/March 2010.