

# Ozone visible injury recording at UK Level II Light Exposed Sampling Sites (LESS)

- In the vicinity (within ~2 km and ~100 m altitude) of each Level II plot, identify three individuals of each species present in the given locality; more than one LESS site can be associated with each Level II plot if different species are present in significantly different locations.
- Each plant should (ideally) be south facing and exposed to full sunlight for the majority of the day; hedgerows, woodland edges and open rides are ideal, but should not be immediately adjacent (minimum 20 m) to public roads.
- Locations should be noted on an OS map, and where possible, shrubs identified for future reference using labels.
- Very brief site descriptions (of LESS) should be given, including an indication of soil moisture availability (use Level I terminology).
- Visually inspect leaves within reach. If any symptoms similar those given in the attached sheets are evident, please give an indication of the severity of symptoms and the proportion of leaves affected.
- Samples of any observed damage should be taken, bagged (plastic with damp tissue paper inside), labelled and immediately forwarded to the chemical analysis laboratory at Alice Holt, clearly marked 'ozone analysis'.
- Any 'positive' samples should be inspected for obvious disease, insect or mechanical damage; samples showing non-ozone damage should be discarded.
- Surveyors should be aware of natural colouration.
- Except in extreme cases, ozone symptoms are only visible on the upper leaf surface.
- Shading effects, where one leaf has shaded another are often evident.
- Summaries of 'negative' responses should also be forwarded - please use separate sheet.

## UK Level II ozone injury assessment

LII plot no:

Site no:

Date:

Grid ref:

Altitude:

Plant No: 1 2 3

Aspect:

Moisture:

Species: ash sloe willow hawthorn  
wayfaring tree Guelder rose

Site description:

Symptom description:

Severity: 1(slight) 2(mediaum) 3(severe)

Surveyor:

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1



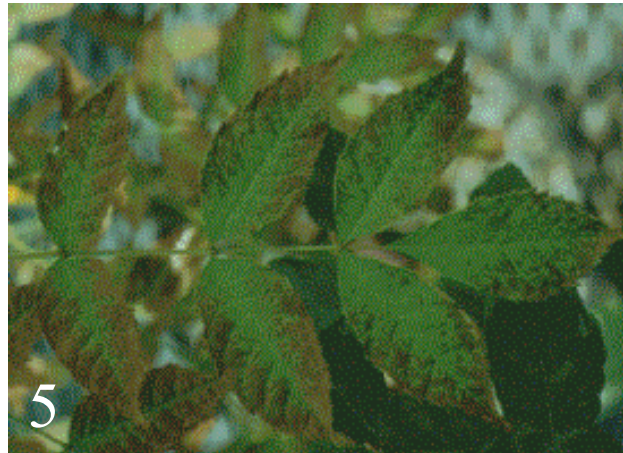
4



7



2



5



3



6

## Ash *Fraxinus excelsior*

1. Small, white inter-veinal spots.
2. Chlorotic mottle.
3. Brown stipple at leaf margin.
4. Inter-veinal brown stipple.
5. Necrotic leaf margins. inter-veinal necrosis
- 6&7. Generalised necrosis.



Wayfaring tree  
*Viburnum lantana*

- 1. Inter-veinal black/brown stippling.
- 2. Inter-veinal red colouration.
- 3&4. Interveinal black/brown stippling.



Guelder rose  
*Viburnum opulus*

Interveinal red colouration,  
preceded by generalised  
chlorosis.



Goat willow  
*Salix capraea*

Interveinal stippling  
preceded by diffuse inter-  
veinal chlorosis.



Hawthorn  
*Crataegus monogyna*

Interveinal black stippling.



Sloe  
*Prunus spinosa*

Interveinal black stippling.