

Woodworm Identification & Treatment



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Preface

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Woodworm Identification & Treatment

What are Woodworm? Part 1



Part 1

What are Woodworm?

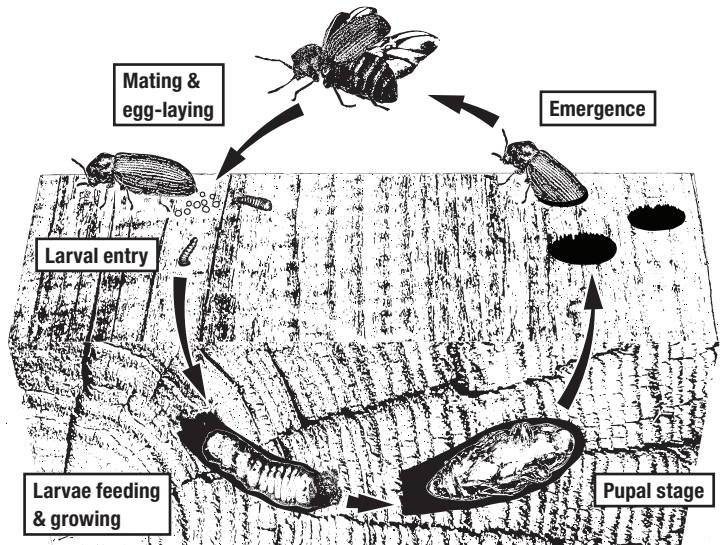
What are Woodworm?

Woodworm is a generic name for the larvae of a group of beetles that complete their life cycle in timber. In nature they play a valuable role in recycling dead timber in the forest, however, when they attack timbers that have been used to make furniture or buildings, they can become an unwanted and often destructive pest.



Woodworm play a vital role in nature by helping to break down dead wood and return the nutrients to the forest floor.

A typical life cycle is shown in the diagram below:



Part 1

What are Woodworm?

1. Eggs are laid in the wood, or in cracks or 'emergence holes' on the timber surface.
2. These eggs then hatch into larvae which bore into the wood and remain inside the wood, feeding for several years and creating a network of tunnels
3. Once the larvae are mature, they form a pupa or chrysalis and eventually emerge from the wood as adult beetles, leaving characteristic emergence holes.
4. The adult beetles mate, then lay their eggs. The adult beetles typically only live for a few weeks after emerging from the timber.

As can be seen from the life cycle diagram, most of the damage is caused during the larval stage. However, the emergence holes (which are often the most visible sign of a woodworm infestation) are caused by the adult beetles emerging from the wood.

Types of Woodworm

Of the many species of woodworm found in the UK, only a handful are able to attack timber in the home (e.g. that used in furniture or house construction). The second chapter of this guide explains how to identify the species of woodworm that are likely to be found in buildings in the UK and outlines the type of remedial treatment (if any) that is usually required to eliminate or control an infestation.

When dealing with a woodworm infestation, it is important to correctly identify the type(s) of woodworm involved as this will affect:

- **Whether or Not Treatment is Necessary**
Certain species of woodworm do not require treatment.
- **The Potential Severity of an Infestation**
Certain species of woodworm can cause widespread damage in a relatively short space of time whilst others can take many years to cause significant damage.
- **The Method of Treatment**
Treating infestations of some species of woodworm may simply involve surface spraying of the timber with a curative woodworm killer (e.g. **SoluGuard® Woodworm Treatment**) whilst treatment of other species may require a more complicated treatment (e.g. involving environmental controls and the injection of **ProBor 50.1 Wood Preservative Paste**).

Part 1

What are Woodworm?

Does the Infestation Require Treatment?

As stated above, not all species of woodworm require treatment. However, even if a woodworm infestation is identified as being caused by one of the species that requires treatment, it may not be necessary to treat if the infestation has already died out. This could be a number of reasons – e.g.:

- Timber has already been treated with a woodworm treatment
- Timber conditions have changed to be inhospitable to the woodworm species that caused the infestation (e.g. starch levels have fallen as timber has aged, or timber has become too dry).
- Killed off by parasites that attack certain species of woodworm – e.g. Steely Blue Beetle (*Korynetes caeruleus*).

It is therefore important to be able to ascertain whether or not a woodworm infestation is still active before considering treatment with a biocidal product such as **SoluGuard® Woodworm Treatment**.

In cases of severe infestation it may be very obvious that the woodworm are still active, however, in other cases further investigation may be required in order to determine whether or not an infestation is still active. These investigations could include:

1. **Presence of Fresh Bore Dust (Frass)** – The presence of fresh bore dust adjacent to or beneath emergence holes can be a strong indication of an active woodworm infestation. However, it is important to remember that the frass will be present in the old bore holes within the wood forever, and, therefore vibration (e.g. that caused by foot traffic) can sometimes dislodge this frass, giving the false impression that the woodworm are still active.



Part 1

What are Woodworm?

- 2. Presence of Live Larvae in Timber** – The strongest indication of an active infestation is the presence of live larvae which may be found in timber that has been removed.

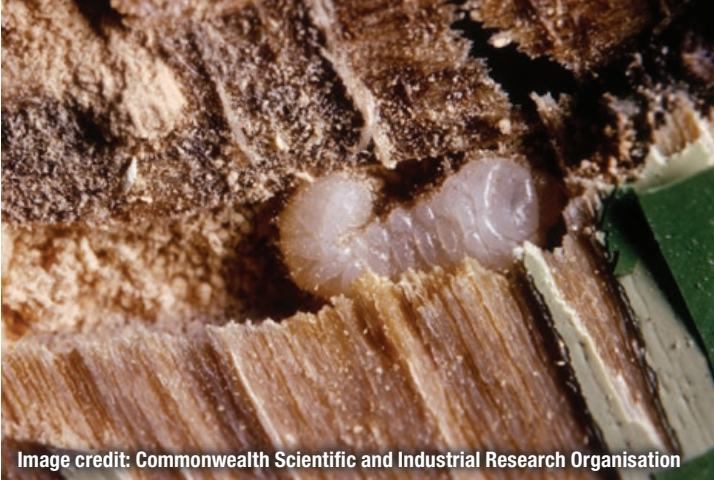


Image credit: Commonwealth Scientific and Industrial Research Organisation

- 3. Presence of Adult Beetles** – During the fly-out season (generally spring/summer) it may be possible to capture and identify live adult woodworm beetles. This is a positive sign of an active infestation. Dead adult beetles may also be found, but these cannot offer conclusive proof that the infestation is still active because dead beetle casings can remain intact for many years. Good places to look for evidence of adult beetles are spider's webs, white surfaces, and window sills (adult beetles of many woodworm species are attracted to the ultraviolet wavelengths found in sunlight).



Image credit: Brick-Tie Preservation

Image credit:
ME Smirnov @
www.zin.ru

4. **Presence of Steely Blue Beetle (*Korynetes caeruleus*)** – This beetle is a predator of The Common Furniture Beetle (*Anobium punctatum*) and Deathwatch Beetle (*Xestobium rufivillosum*) therefore its presence is a strong positive indicator of an active infestation of either of these two species of woodworm.



5. **Monitoring for Presence of New Emergence Holes Using the “Paper Test”** – This involves lining paper being stuck over the surface of timber in areas where active infestation is suspected. The paper can then be monitored periodically over several years. If an adult beetle emerges from the underlying timber it will also cause a hole in the monitoring paper – indicating that the infestation is active.



If there is any doubt about whether or not an infestation is active a specialist timber surveyor with a CSRT qualification or equivalent should be consulted. Call **01403 210204** or email **info@safeguardeurope.com** for details of CSRT-qualified surveyors in your area.

Part 1

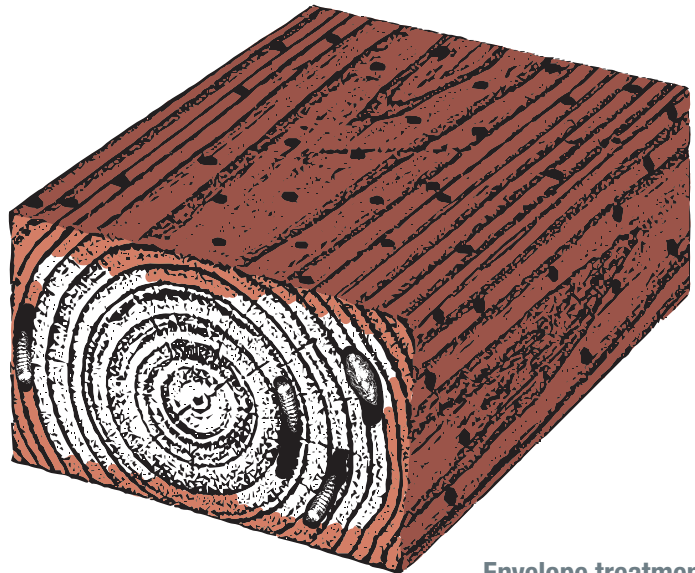
What are Woodworm?

How Can the Infestation be Treated?

- **Envelope Treatment with SoluGuard® Woodworm Treatment**
This consists of applying a curative woodworm treatment such as **SoluGuard® Woodworm Treatment** to all accessible surfaces of the affected timber. Envelope treatments do not penetrate deeply enough into the timber to kill the larvae within the timber; instead they prevent new larvae from boring into the timber and prevent adult beetles from emerging from the timber. This breaks the life cycle of the woodworm and prevents new woodworm infesting the timber, meaning that the infestation will gradually die-out over a few years.



Envelope treatments are relatively cost-effective and can even be done as a DIY project for small areas of light woodworm attack. However, reliance on envelope treatments alone is unsuitable for the treatment of severe woodworm infestations or those involving certain species of woodworm such as House Longhorn Beetle (*Hylotrupes baiulus*) or Deathwatch Beetle (*Xestobium rufivillosum*).



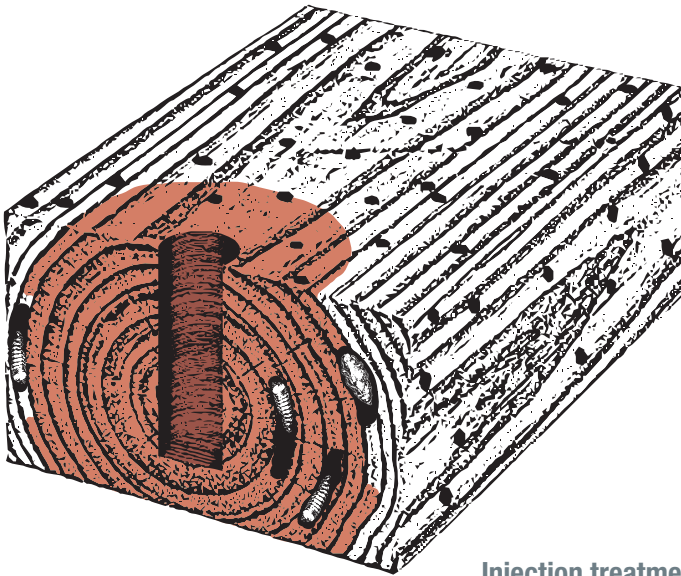
Envelope treatment

Part 1

What are Woodworm?

- **Injection with ProBor 50.1 Wood Preservative Paste**

For the treatment of severe woodworm infestations, or those involving certain species of woodworm, it may be necessary to introduce a biocide deeply into the timber in order to kill active larvae. This can be achieved by drilling holes into the timber at regular intervals and injecting the holes with **ProBor 50.1 Wood Preservative Paste**. This is a job for a specialist timber treatment contractor, as the positioning of the holes relative to the grain of the timber and the structural integrity of the timber need to be considered before treatment can begin.



Injection treatment

- **Alternatives/Additions to Biocidal Treatment**

A number of other measures may be taken to support biocidal treatments. These include filling emergence holes to disrupt egg-laying and reducing moisture content of wood (e.g. dealing with damp issues).

Woodworm Identification

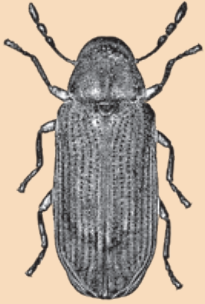
Part 2



Part 2

Woodworm Identification

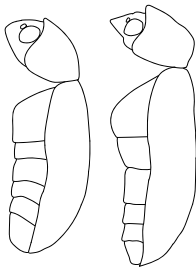
ADULT SPECIMEN



NOTES

Damage can be confused with Ambrosia beetle, Waney Edge Borer and Wood-Boring Weevil.

Furniture beetles are often confused with biscuit beetles and vice-versa.



Biscuit beetle (left) and Common Furniture Beetle (right).

Common Furniture Beetle

(*Anobium punctatum*)

Timbers Attacked

Sapwood of hardwoods and softwoods, plywood, wattling.

Damage

Tunnelling in sapwood tends to run along the grain. Tunnels are relatively short and contain loose bore dust. The bore dust feels 'gritty' and, under magnification, it is uniform in colour and contains lemon-shaped pellets. Exit holes are round, about 1.5 – 2 mm in diameter.

Life Cycle (3+ years)

- **Adult:** Emerge May – August and mate.
- **Eggs:** Laid in cracks, crevices, end grain, old exit holes; white, lemon-shaped.
- **Larva:** Bores straight into wood from egg. Feeds and grows for 3 or more years. Larvae reach 6 mm in length.
- **Pupa:** Develop below the surface of the wood. Pupal stage is 6 – 8 weeks prior to emergence.

Quick Identification

Short tunnels. Lemon-shaped pellets give the bore dust a 'gritty' texture.

Treatment

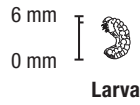
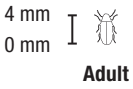
Light infestations can be treated using a surface application of **SoluGuard® Woodworm Treatment**. Heavier infestations may also require **ProBor 50.1 Wood Preservative Paste** to be injected into timber and/or replacement of structurally weakened timbers – this should be carried out by a specialist timber treatment contractor.

Call **01403 210204** or email **info@safeguardeurope.com** for details of suitable specialist contractors in your area.

Part 2

Woodworm Identification

2 mm I ● Exit Hole Size



SEVERE DAMAGE



Severe *Anobium punctatum* damage.



IMAGE OF BORE DUST



Microscope image of *Anobium punctatum* bore dust. Note that it is composed of lemon-shaped pellets that cause it to feel 'gritty' when rubbed between the fingers.

Part 2

Woodworm Identification

ADULT SPECIMEN



NOTES

Damage can be confused with Common Furniture Beetle damage. Waney Edge Borer must have bark present.

Waney Edge Borer

(Ernobius mollis)

Timbers Attacked

Partly or fully seasoned softwoods with bark present.

Damage

Confined to the bark with very superficial tunnelling in the outer sapwood; emergence holes are rarely further than 15 mm from the barked area. Exit holes are round, about 2 mm in diameter. Bore dust feels 'gritty' and contains small, bun-shaped, light and dark coloured pellets.

Life Cycle (1 – 2 years)

- **Adult:** Emerge May – August and lay eggs.
- **Eggs:** Laid in bark; white, lemon-shaped.
- **Larva:** Bores and grows first in bark; may also superficially attack outer sapwood, which gives rise to the dark and light coloured pellets.
- **Pupa:** Develops in bark/sapwood interface 10 days before emergence.

Quick Identification

Bark present. Bun-shaped pellets in bore dust which are dark and light in colour. Holes in bark or close sapwood.

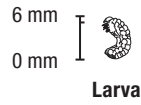
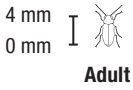
Treatment

No treatment required.

Part 2

Woodworm Identification

2 mm I ● Exit Hole Size



TIP

Damage caused by Wane Edge Borer is easily confused with that of Common Furniture Beetle. However, Wane Edge Borer damage can be easily distinguished as it only occurs along the barked edge.

Part 2

Woodworm Identification

ADULT SPECIMEN



NOTES

Damage is usually confused with Common Furniture Beetle damage, but any damage will have been caused in the forest – before the timber has been seasoned and cut. These insects cannot infest seasoned timber.

Ambrosia Beetles

(Pinhole Borer, *Platypodidae*, *Scolytidae*)

Timbers Attacked

Hardwoods and softwoods.

Damage

The damage occurs in the forest, the insects attack standing trees and freshly felled logs, tunnelling into the wood for long distances across the grain. No bore dust. Unlike most wood-borers, the adult does the tunnelling.

Surface of tunnels are coloured black/blue-black. Exit holes vary in size depending on which species of Ambrosia beetle caused the damage; many are about the same size as Common Furniture Beetle holes.

Life Cycle

Varies according to which species of Ambrosia beetle infested the timber.

Quick Identification

No bore dust. Exit holes run across the grain of the timber for long distances. The exit holes usually accommodate the entire length of a drawing pin. Surface of tunnels are coloured black/blue-black.

Since the damage occurred in the log converted wood often cuts holes at an angle which makes them look elongated.

Treatment

No treatment required.

Part 2

Woodworm Identification



TIP

Test the holes with a drawing pin; in the case of holes caused by Ambrosia beetles, the pin will often go in to its full length. In contrast, the pin will only normally penetrate 3 to 5 mm if the hole is caused by Common Furniture Beetle.

Part 2

Woodworm Identification

ADULT SPECIMEN



NOTES

Adult beetles can often be found on and beneath infested timbers during the emergence period. They will fly, but they require high temperatures.

Deathwatch Beetle is not usually found in Scotland or Northern Ireland.

Deathwatch Beetle

(Xestobium rufuvillosum)

Timbers Attacked

Sapwood and heartwood of hardwoods, usually oak, which have partly decayed. Softwoods are rarely attacked.

Damage

Extensive tunnelling, especially towards the centre of large dimensioned timber. Exit holes are round, 3 mm in diameter. Bore dust contains bun-shaped pellets visible to the naked eye. Damage is often more extensive than expected from external appearance.

Life Cycle (4+ years)

- **Adult:** Emerge March to June; eggs laid 10 – 20 days after mating.
- **Eggs:** Laid in cracks and crevices; white, lemon shaped.
- **Larva:** Crawl prior to boring into wood; feed and grow for up to 12 – 14 years.
- **Pupa:** Develop below surface of wood in July – August. Pre-emergent adults will wait in their pupa chambers until the following year.

Quick Identification

Attacks hardwoods. Large, bun-shaped pellets in bore dust.

Treatment

Due to their long life cycle and their ability to reproduce in voids in the timber (rather than needing to come to the surface), treatment can be complicated and a professional timber treatment contractor should be employed. Treatment is likely to involve a combination of:

1. Dealing with underlying damp issues – as these can allow the fungal decay that is necessary for Deathwatch attack to occur.
2. Surface spray of **SoluGuard® Woodworm Treatment**.
3. Injection of **ProBor 50.1 Wood Preservative Paste**.
4. Monitoring of the infestation.

Part 2

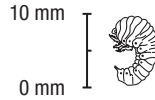
Woodworm Identification

Call 01403 210204 or email info@safeguardeurope.com for details of suitable specialist contractors in your area.

3 mm I ● Exit Hole Size
0 mm



Adult



Larva

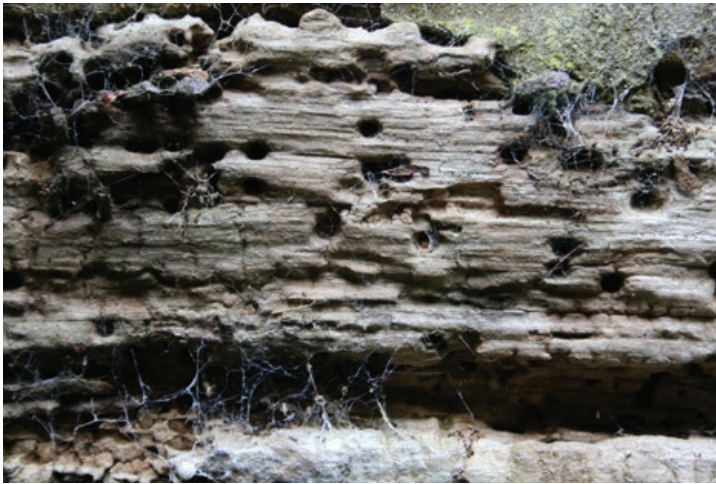


IMAGE OF BORE DUST



Microscope image of *Xestobium rufovillosum* bore dust. Lots of bore dust (frass) is usually present in timber affected by Deathwatch Beetle attack. Shake the timber to release the bore dust and examine it. Deathwatch bore dust is bun-shaped and clearly visible to the naked eye.

Part 2

Woodworm Identification

ADULT SPECIMEN



NOTES

Where Wood-Boring Weevil damage occurs, it is a secondary problem; fungal decay is the primary concern.

Wood-Boring Weevils

(Pentarthrum huttoni, Euophryum confine)

Timbers Attacked

Any wood that is decayed. Wood-Boring Weevil damage is very common in damp skirting boards and embedded joist ends.

Damage

Tunnels run along the grain just below surface, often exposed. Coarse bore dust feels 'gritty'. Emergence holes are round, 1 mm diameter but with ragged edges. Damage is caused by larvae and adults, both of which may be found in infested wood.

Life Cycle (7 – 9 months)

- **Adult:** Live up to 16 months and feed on wood with larvae.
- **Eggs:** Laid on or just below surface; white.
- **Larva:** Curved shape, white. Bore extensively along grain. Present for 8 – 9 months.
- **Pupa:** Develops just below surface.

Quick Identification

Ragged exit holes; coarse bore dust; tunnels run along the grain – often breaking the surface. Always in association with fungal decay.

Treatment


Dealing with the fungal decay that is allowing the Wood-Boring Weevils to attack the timber. This will usually involve the replacement of affected timbers combined with measures to deal with the underlying cause of dampness.

Call **01403 210204** or email **info@safeguardeurope.com** for details of suitable specialist contractors in your area.


Part 2

Woodworm Identification

1 mm ± • Exit Hole Size

3 mm
0 mm I 

Adult

4 mm
0 mm I 

Larva



TIP

You may find both adults and larvae in the wood – both burrow along the grain.



Part 2

Woodworm Identification

ADULT SPECIMEN



NOTES

Damage can be confused with Common Furniture Beetle damage.

Powder Post Beetles

(Lyctus brunneus, Lyctus linearis)

Timbers Attacked

Sapwood of seasoned, wide-pored hardwoods with a high starch content. Timbers over 15 years old are not attacked.

As Powder Post Beetles only attack the sapwood of wide-pored hardwoods (e.g. oak and obeche) which are less than approximately 15 years old, active infestations are only likely to be found in recently introduced hardwood items – e.g. oak flooring, new oak furniture or kitchen units.

Powder Post Beetles are unlikely to be found in the average domestic environment. They are usually a problem in timber yards or stores of hardwoods (e.g. furniture factories). When found in a building, the origin is usually from such storage areas.

Damage

Tunnels tend to run along grain; often causes surface tunnelling where timbers are stacked. Tunnels are filled with loose, flour-like dust. Round emergence holes 1 – 2 mm in diameter.

Life Cycle (1 – 2 years outdoors; 8 – 10 months indoors)

- **Adult:** Emerge outdoors July – August; anytime indoors.
- **Eggs:** Laid down open vessels; white, elongated with tail. Hatch in 2 – 3 weeks.
- **Larva:** Initially feed and bore along grain.
- **Pupa:** White; looks more like a beetle than a larva.

Quick Identification

Attacks hardwoods. Loose, flour-like bore dust.

Treatment

Where there is a desire to retain affected timber, it can be treated by surface application of **SoluGuard® Woodworm Treatment** by brush or spray. Other treatment options include removing the affective sapwood (e.g. by spoke shaving) or disposing of affected timber (e.g. furniture or oak floor sections) and replacing it.

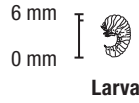
Part 2

Woodworm Identification

2 mm I ● Exit Hole Size



Adult



Larva



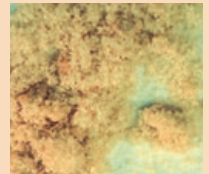
Note how the infestation is only affecting the sapwood of this oak section.



TIP:

As Powder Post Beetles only attack the sapwood of wide-pored hardwoods (e.g. oak and obeche) that are less than approximately 15 years old, active infestations are only likely to be found in recently introduced hardwood items – e.g. oak flooring, new oak furniture or kitchen units.

IMAGE OF BORE DUST



Microscope image of Powder Post Beetle bore dust. The bore dust (frass) is fine enough to appear as a powder even under magnification. It feels floury or 'talc-like' when rubbed between the fingers.

Part 2

Woodworm Identification

ADULT SPECIMEN



NOTES

Damage can be confused with Forest Longhorn damage. Localised distribution around South East England.

House Longhorn Beetle

(Hylotrupes bajulus)

Timbers Attacked

Sapwood of seasoned softwood.

Incidence of House Longhorn Beetle infestations are largely restricted to South-East England – particularly centred around Camberley, Surrey. Activity is rare in timbers over 10 years old.

Damage

Very severe tunnelling in sapwood which can lead to structural collapse. Frequently only a thin surface veneer of sound wood remains. Exit holes are oval (5 mm × 9 mm) and tunnels are somewhat flattened and full of sausage-shaped bore dust pellets.

Life Cycle (4+ Years)

- **Adult:** Emerge July – September.
- **Eggs:** Laid in a fan-shaped pattern in the cracks of wood; white spindle-shaped. Up to 200 laid.
- **Larva:** Feeds in sapwood for more than 4 years. Causes extensive damage; reaches up to 30 mm in length.
- **Pupa:** Takes place about 3 weeks prior to emergence.

Quick Identification

Large, oval exit holes; loose sausage-shaped bore dust pellets. Tunnels frequently coalesce and are not individually identifiable. Ridges on the surface of tunnels. Internal damage is worse than it appears externally.

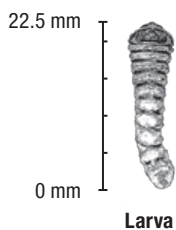
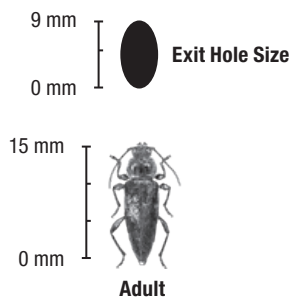
Treatment

House Longhorn Beetle can cause severe damage in a relatively short space of time. A specialist timber treatment company should always be employed.

Call **01403 210204** or email **info@safeguardeurope.com** for details of suitable specialist contractors in your area.

Part 2

Woodworm Identification



Part 2

Woodworm Identification

ADULT SPECIMEN



NOTES

These insects attack wood when it is in the forest; they do not attack seasoned wood. Holes that are seen when wood is sectioned are tunnels and not emergence holes. Damage often mistaken for House Longhorn damage.

Forest Longhorns

(Family: *Cerambycidae*)

Timbers Attacked

Softwoods and hardwoods; standing trees, freshly felled and partly dried barked timbers.

Damage

These form a large group of insects and so damage varies in extent and size. Oval exit holes up to 10 mm across. Tunnels very discrete, do not merge; tend to run across grain. No bore dust but tunnels may be plugged with a small amount of coarse fibres.

Life Cycle

There are many different types of Forest Longhorn Beetle. The life cycle will vary according to the particular Forest Longhorn attacking the wood.

Quick Identification

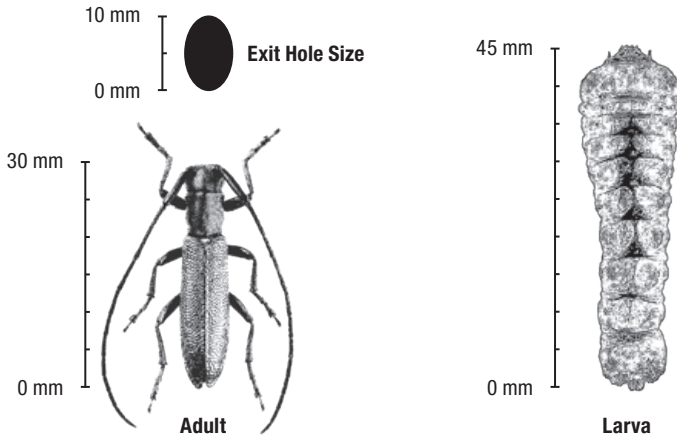
Discrete flat tunnels; sometimes plugged with a coarse fibre. If bark is present then surface of wood will be attacked and a lot of bore dust under bark only, not in tunnels.

Treatment

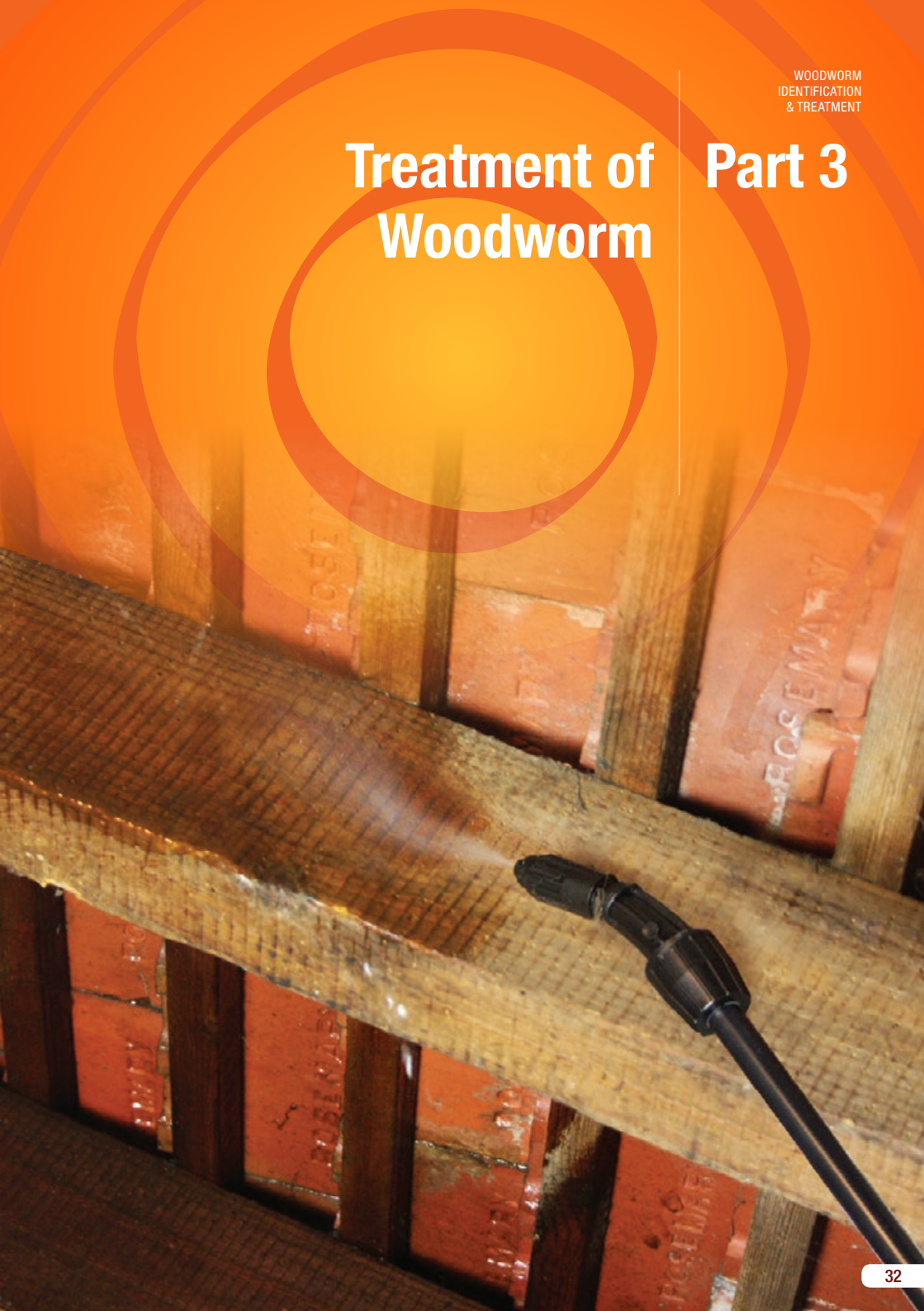
No treatment required.

Part 2

Woodworm Identification



Treatment of Woodworm Part 3



Part 3

Treatment of Woodworm

Treatment of Woodworm using SoluGuard® Woodworm Treatment

SoluGuard® Woodworm Treatment is a woodworm treatment formulated for application to timber surfaces by brush or spray. It is supplied ready-for-use in pack sizes of up to 5 litres.

Benefits:

- Full-strength formulation
- Solvent-free
- Targets all life cycle stages
- Tested to European Standards against Common Furniture Beetle (*Anobium punctatum*) and House Longhorn Beetle (*Hylotrupes bajulus*)



These guidelines cover the application of **SoluGuard® Woodworm Treatment** to timbers that are moderately affected by the most common woodworm species in the UK (Common Furniture Beetle, *Anobium punctatum*) and the precautionary treatment of unaffected timbers in the vicinity of a woodworm infestation.

Severe attacks of Common Furniture Beetle or infestations involving other species of woodworm (e.g. House Longhorn or Deathwatch) should be treated by a specialist timber treatment company – call **01403 210204** or email **info@safeguardeurope.com** for details of suitable specialist contractors in your area.

Part 3

Treatment of Woodworm

Preparation

Repairs

Carry out any necessary repairs before treatment. Any timbers at risk of becoming unsound should be replaced with pre-treated timber – if in any doubt, a structural engineer should be consulted.

Surface Preparation

Any paint, varnish, dirt or other surface coating should be removed before application. Clean by brush and/or vacuum all exposed structural timber surfaces that are to receive treatment so that they are as far as practically possible free of dust.

For best results, timber to be treated should be reasonably dry before treatment although the product will penetrate into damp timbers.

Health & Safety

Cover any exposed water tanks with plastic sheeting taped into position and then cover again with a dustsheet.

Turn off at the fuse board any electrical circuits in areas to be treated and neighbouring areas (e.g. the lighting circuit for rooms directly below the area to be treated). Wrap any electrical junction boxes and other vulnerable fittings in plastic and tape to prevent treatment fluid from entering them. Electricity for safety lighting and if being used an electric pump should be obtained from a different circuit. Do not turn on electrical circuits in treated areas until you are satisfied that the treatment fluid is dry.

Read the label and material safety data sheet of **SoluGuard® Woodworm Treatment** before use and take all precautions stipulated on the label including the wearing of personal protective equipment etc.

This product is approved under the Control of Pesticides Regulations (1986) for use as directed. HSE No.10137. Use pesticides safely. Always read the label.

Part 3

Treatment of Woodworm

Providing Access to All Timber Surfaces

The purpose of a spray treatment using **SoluGuard® Woodworm Treatment** is to provide a treated “*envelope*” to all surfaces of the affected timber. This ensures that the life cycle of the woodworm will be broken as they emerge from the timber to mate and reproduce.



In order for such a treatment strategy to be successful, it is necessary to provide access to all surfaces of the timber to be treated. Guidance follows as to how this can be achieved for timbers in different areas of a typical house construction:

Part 3

Treatment of Woodworm

Floor Areas

Unless safe access to the underside of the floor is possible from the sub-floor void or a cellar, gain access to the sub-floor timbers by raising sufficient floorboards across the entire width of a room. Single boards raised the full width of a room at approximately 1 metre intervals is usually sufficient.



At ground floor level, raise the floorboards as near to the wall plates as possible and adjacent to outside walls and solid floors. Remove dust from the top of exposed wall plates and carefully examine these more vulnerable sub-floor timbers in greater detail for the possible presence of fungal decay.

At first floor level, care should be taken to check that solid strutting or trimmers within the floor void do not obstruct access for the treatment.

Part 3

Treatment of Woodworm

Roof Voids

Remove all debris, insulation and stored items likely to obstruct access to any of the structural timber surfaces.



If present, raise adequate boarding and remove any other moveable obstructions to gain access to concealed structural timber surfaces.

Application

Apply **SoluGuard® Woodworm Treatment** by brush or coarse low pressure spray onto the timber at a rate of 3.3 m² per litre or to refusal. This will require 2 to 3 coats depending on the absorbency of the timber being treated.



After application tools should be cleaned immediately with warm, soapy water.

Part 3

Treatment of Woodworm

Floor Areas

Make ready application equipment and using a coarse low pressure spray apply the **SoluGuard® Woodworm Treatment** at 3.3 litres/m² follows:

Start at one end of the room and through the first raised floor board opening between two joists nearest to a wall introduce the spray lance at an angle with the spray nozzle pointing up towards the underside of the adjacent floor boards. Squeeze the trigger to release the woodworm treatment and manoeuvre the lance so that all accessible surfaces of the joists, wall plates and the underside of floorboards are coated.

Repeat this procedure between each of the joists in both directions for each floorboard raised ensuring that all sub-floor timber surfaces are coated at the designated application rate. Prior to relaying the raised boards, the underside of each should be coated then re-fixed into position.

Finally the top surface should be swept clean and coated with **SoluGuard® Woodworm Treatment** fluid at the prescribed application rate.

Roof Voids

Start at one end of the roof and work backwards, applying the **SoluGuard® Woodworm Treatment** using a coarse low-pressure spray at 2 – 3 litres per m² to the visible surfaces of rafters and ceiling joists. Upon reaching the other end of the roof turn around and repeat the process treating the other visible untreated surfaces of the rafters and ceiling joists. Treat all other structural timber surfaces – purlins, struts, collars etc. On vertical and the underside of timbers more than one application may be required to achieve the desired application rate.

Treat all surfaces of any boarding present and reinstate any disturbed sections.

Staircases

Where direct access to the underside of the staircase is not possible it will be necessary apply **SoluGuard® Woodworm Treatment** using a sprayer equipped with a “stair-back-nozzle”

Drill two 10 mm holes through each riser along a central horizontal line, equidistant from each string and each other. Introduce the full length of the stair back spray nozzle into each 10 mm hole and squeeze the spray lance trigger for approximately five seconds rotating from left to right at the same time to maximise coating potential of **SoluGuard® Woodworm Treatment** fluid.

Reconnect conventional spray lance to application equipment and using a coarse low-pressure spray, apply **SoluGuard® Woodworm Treatment** to any unpainted top surfaces of the staircase. This may be carried out by brush application if preferred.

Part 3

Treatment of Woodworm

After Treatment

SoluGuard® Woodworm Treatment is touch dry in 1 hour depending on wood and ambient conditions. Unprotected persons and animals should be kept away from treated surfaces until dry. Low temperatures, increased humidity and constituents of some wood types may increase drying time. Product should be suitable for over coating 24 hours after application depending on wood-type and ambient conditions.

SoluGuard® Woodworm Treatment and its container must be disposed of in a safe way (Hazard waste key: 020108). Do not empty into drains. Do not contaminate ground, waterbodies or watercourses with chemicals or used container.

Other Information

SoluGuard® Woodworm Treatment is authorised for use against attack by wood-boring insects and prevent re-infestation in use classes 1 and 2.

Use class 1: situation in which the wood or wood-based product is inside a construction, not exposed to the weather and wetting.

Use class 2: situation in which the wood or wood-based product is under cover and not exposed to the weather (particularly rain and driven rain) but where occasional, but not persistent, wetting can occur.

Certified	Organism	Use	Rate
BS EN 46	House Longhorn Beetle (<i>Hylotrupes bajulus</i>)	Preventative	200 ml/m ²
BS EN 118	Termites (<i>Reticulitermes flavipes</i>)	Preventative	200 ml/m ²
BS EN 1390	House Longhorn Beetle (<i>Hylotrupes bajulus</i>)	Curative	300 ml/m ²
BS EN 370	Common Furniture Beetle (<i>Anobium punctatum</i>)	Curative	300 ml/m ²

Table 1: Efficacy data for **SoluGuard® Woodworm Treatment**

For full health and safety information consult safety datasheet (SDS). This product is approved under the Control of Pesticides Regulations (1986) for use as directed. HSE No.10137. Use pesticides safely. Always read the label.

Part 3

Treatment of Woodworm

Timber Treatment Specialists

If you're unsure which woodworm species is affecting your timber or whether treatment is necessary, it is recommended to obtain a survey by an experienced timber treatment specialist.

Safeguard Europe can provide details of experienced timber treatment surveyors and contractors throughout the UK.

Simply call us on **01403 210204** or email **info@safeguardeurope.com** to obtain contact details of qualified timber surveyors who can inspect your property.

Ordering Treatment Materials

SoluGuard® Woodworm Treatment, other timber treatments and accessories can be obtained from local builder's merchants or ordered directly from Safeguard Europe. To find local stockists in your area or to place an order, call **01403 210204** or send us an email at **info@safeguardeurope.com**.

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