

Martin Leach
Edenbridge Town Council
72a High Street
Edenbridge

TN8 5AR

7th October 2022

Dear Mr Leach

Re: Wood Boring Insect Infestation

Further to our recent site inspection, please find confirmation of our findings and recommendations. If you should have any further questions please do not hesitate to call immediately.

Survey findings

The pest specie of boring insects identified is **Furniture Beetle (commonly referred to as Woodworm)** Additional information on the biology and behaviour of the species is attached to the rear of this report, Appendix 1.

During the survey of the premises the following locations were surveyed. **Main office/Reception all rooms, Hall and adjoining rooms, Museum and attic space.** Access to all parts of the infested locations was difficult to achieve in particular the attic space within the museum, this report focuses on the exposed wood available.

Main Office/Reception :- On the top floor of this building there are many wall and ceiling timbers, all displaying signs of previous and inactive areas. There is active woodworm on a couple of beams at the far end of the room as shown on the survey. The downstairs office area also has previous and inactive bore holes, however the ceiling timbers on several beams is displaying signs of active wood boring beetle, with dust deposits present.

Hall and adjoining rooms :- The timber beams within the hall are painted and all appear to be in good condition, there is however within the cupboards current active wood boring beetle in the panelling. This is mainly due to the damp conditions. Some timbers further through show signs of inactive holes.

Museum and attic space :- The internal of the museum is the same as other buildings, ceiling and wall timbers, timber doors etc. Most within here show signs of previous inactive wood boring beetle, a small spot on a door frame on the top floor being more recent than anything else. The attic space within this building has signs of current active beetle is different places through this space, access within here is difficult in a couple of areas.

Risks associated with wood boring insect activity

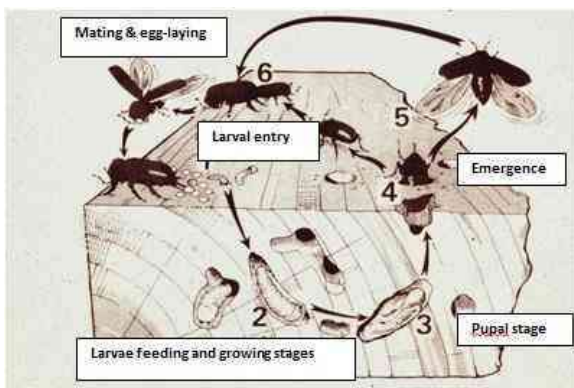
Wood boring insects, at the larval stage, tunnel their way through the wood as they grow and develop. The level of internal damage depends on the type of species present and the population numbers. Larger in size and number will obviously result in greater damage, all of which is often generally not visual from the surface.

Adult beetles lay their eggs on the surface or within cracks and gaps, allowing the larvae (also known as a grub or 'worm') to enter the internal structure of the timber. The development rate of these grubs will vary depending on the species (see appendix 1), but is usually no longer than 15 years; ambient temperature within the infested location; type of wood, dictating the level and quality of available foods and the moisture of the location.

Structural damage can occur to the infested items. The longer the infestation has not been treated or remained active, the greater the level of damage. This is particularly significant for structural supports such as roof and floor joists.

Floorboards and their supporting wooden joists are predominantly 'attached' from the underside where there may be higher levels of moisture and these locations are usually not inspected at all, let alone frequently. Infested boards and joists, where structural damage has occurred, may provide a slight bounce when walked upon or a slight dip / bowing on the floor. This bowing will also occur with roof joists.

Slender floorboards will also be most at risk as their thin cut will be weakened by long-term woodworm activity.



Complete metamorphosis

1. Eggs are laid by the adults – generally on cracks and gaps in the wood.
2. When the eggs develop into larvae (Grubs or 'Worms') they will burrow deeper into the wood and consume a mixture of foods as they develop through this stage of their lifecycle. This can take up to 15 years, depending on the species.
3. The transfer stage between the larvae eating through the wood and emergence as an adult is the Pupal phase. The insect does not eat or move during this period; temperature and moisture levels can affect the rate of development.
4. Adults emerge and start to look for a partner. Often flying to find a partner, they can also investigate other wooden surfaces in which to lay eggs and start the whole life-cycle process again.



Larvae development

During the period of development with this stage of the life cycle, the grub eats its way, al-be-it slowly, through the wooden structure.

This process can obviously weaken the structural integrity of the wood and if this should be floorboards or roof joists, this presents a significant risk.

Development rates will depend on many factors, but usually wood type / cut will affect the availability of 'food'; moisture content or ambient temperature will contribute to the length of time.

- Common Furniture Beetle: Larvae 3 – 5 years
- House Long-horn Beetle: Larvae up to 15 years
- Deathwatch Beetle: Larvae up to 10 years~
- Powder Post Beetle: Larvae up to 5 years



Areas of recommended work

Due to active beetle being present, it is recommended that all exposed and accessible timbers are treated within all buildings on the site that we were shown.

During the process we are naturally as careful and diligent as possible, covers will be laid however we ask that, all rooms to be clutter free for the process, any items left within rooms will be at customer risk, we will not be responsible for any of these items. We appreciate that some items cannot be removed for differing reasons, should any need to remain that is of significant value, please make us aware before the process and we will discuss this with you and how we can work round this. The museum is the area that comes to mind that could possibly cause some logistic issues for all.

In terms of time scale on treating, we will always advise to have any infestation treated as soon as possible as it runs the high risk of increasing and spreading to unaffected areas on the site. We understand the process of having to go through the approval process first and this quote will remain valid for 90 days for you.

Treatment actions:

Following our survey and reviewing the evidence within the property our service solution would consist of the following control options.

Prior to the application of any chemical control, we will complete a Control of Substances Hazardous to Health (CoSHH) Assessment and you will be issued with a Customer Treatment Instruction (CTI) which will provide all the necessary information relating to the treatment, our requirements in order to complete the treatment and what you will need to action in order for the treatment to be completed.

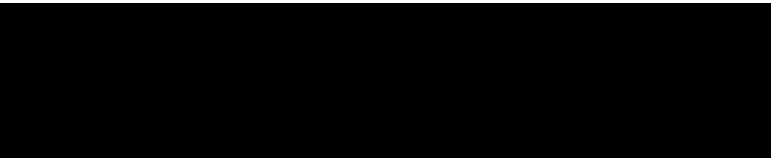
Wood boring insects all have a particular liking for damp / moist wood and as such one of the key long-term control and prevention recommendations is to reduce this capability. Repair locations where water can penetrate the building; increase ventilation in areas where moisture can accumulate, especially within bathrooms and rooms if tumble driers are operating and if the ground floor is of wooden construction if possible ensure that rafters are mounted on water-proof materials and increase the frequency of inspection within these areas.

Compression Application:

Residual insecticide will be applied under pressure, to exposed wooden locations as identified in section 1. This process applied long-lasting insecticide, which the wood will absorb past the exposed layer and act as a barrier for any potential emerging adults.

Used on larger scale treatment processes or areas where the infestation is widespread, with higher possibilities of subsequent infestations.

Brushing Application:



In areas where the woodworm activity is heavy, a gel type formulation will be applied in a heavier concentration and quantity. This bespoke approach allows a focused application in the areas that requires the most product, without applying significant quantities throughout the entire local environment.

Further, this process adds additional protection where any timber has become slightly damp and is more vulnerable to attack by insects, or for new timbers being installed in a damp area.

Injection Application:

This specialist treatment process overall applies smaller quantities of insecticides, as it concentrates on areas of activity, but does apply greater individual volumes – where it is needed.

This process allows smaller items of furniture to be chemically treated, while at the same time reducing the risk of staining or overuse of insecticides within the property.

Pastes and creams will be directly absorbed by the wooden structure, rather than general application to the surface.

Integrated Woodworm Control:

To simply use one method of control may be ineffective to provide an effective initial control treatment and combine this will longer-term protection.

A balanced combination of the beneficial control options will provide the longest and most effective control of the active woodworm activity.

Specific information will be provided within the treatment instructions at the start of the control process.

Fogging:

We do not recommend fogging against woodworm.

This application process will usually only fill the open space with an insecticide and rarely, if at all, actually penetrate the locations where these insects may be active. While the chemicals used are constantly being enhanced, fogging usually it has a residual value of a few days; but it is quick and cheap to apply.

Fumigation:

True fumigation for woodworm rarely exists in today's market, but it continues to sound impressive.

The primary fumigant product was removed from the market some five years ago and there is very little that has been created to replace this process.

We always recommend caution or deeper investigation of the actual process and products to be used, if anyone recommends fumigation.



Quotation

Our cost to carry out the above works will be as follows:

Item:	Description:	Cost:
Main office/reception	To treat all exposed timbers and small attic space	£1750.00
Hall and adjoining rooms	To treat all exposed timbers	£750.00
Museum and attic space	To treat all exposed timbers and attic space	£1750.00

Guarantee **10 Year Guarantee for Museum attic space only. 5 years for office/reception. 1 year for all other areas due to timbers being heavily painted/varnished**

Total (Excluding VAT) £4,250.00

This quotation excludes VAT which will be charged at the rate prevailing at the time of invoice.

This quotation is valid for 90 days (E&OE)

Payment Terms: balance on completion.

Payment by BACS:



Payment by Cheque

Please make cheques payable to  Limited and post to 

Health & Safety

On acceptance of this quotation, a method statement and risk assessment will be available to you, prior to commencement of work. Site health and safety specification, site inductions, method statement and risk assessments are general until work commences, at which time, site specific risk assessments are carried out.

Looking After You

We work closely with you to understand your requirements, installing systems which are proactive in predicting where, and when, pests may compromise your home or business. We work hard to protect your home and business and strive to prevent problems re-occurring.

Appendix 1

Wood boring insect diagnosis

There are four primary types of wood boring / damaging insects in the UK:

1. The Common Furniture Beetle (*Anobium punctatum*); which is the most common of the boring insects.



Their life cycle is usually completed between three to five years, depending on environmental and wood conditions, generally preferring damp, rather than dry wood. The larval stage of this beetle looks like a small grub, is around 4-5 mm in length when fully developed and is a dirty white colour. The larval stage does the

damage inside the wood structure.

Adult beetles are about 4-5mm in length, oval in shape and reddish-brown or darker in colour. The furniture beetle's head is not visible when viewed from above, and adults do not consume wood. Flight-holes are approximately 2mm in diameter.

2. The House Longhorn Beetle; is rarer but much more destructive, mainly due to their size.



Initially confined to the South-East of the UK, with increasing imports of wood, infestations are starting to spread around the country. Lifecycle can be up to 10 years. Flight-holes are approximately 6-10 mm in diameter and mainly found in roof timbers, especially softwood, where it feeds on the sapwood.

3. Death-Watch Beetle; which is the one that sounds the worst!



Adult beetles are between 7 – 10 mm in length and the larvae up to 13 mm; taking up to 10 years to reach adult maturity. The beetles much prefer very damp conditions, on hardwoods such as oak, ash or sweet chestnut, especially if a fungal decay such as wet-rot is also present.

To attract a mate, they 'tap' to make a ticking sound that be heard in old buildings, especially during summer months. Perfect conditions existed within medieval 'hospitals' where superstitious occupants, who heard this tapping during the quiet of the night, associated the sound with an omen of impending death.

4. Powder post beetle; which is typically only found in wood containing sufficient levels of starch.



The smallest of the borers, the adult is around the size of a match head and dark / reddish in colour. Preferring materials such as ash, elm, sycamore and oak, where the larva will mature anywhere up to around 5 years.

Adults prefer 'splits' in the wood to lay eggs and allow easier access into the structure and they generally do not create significant flight-holes, but with enough time reduce the structures to a fine powder.

How to detect active wood boring insects.

Generally, all wood boring insects are referred to as 'Woodworm' – this is the common name applied to the larvae or grub that develops within the wooden structure.

Flight-holes:

It is extremely rare to see the developing grubs, often it is the evidence left by the adult that raises awareness to an active infestation. Once the larvae have reached maturity inside the wood, they tunnel to the surface and emerge looking for a partner; the resultant hole created is known as a 'flight-hole'.

NOTE: These holes do not mean that the insect activity has now become inactive, if anything discovery of new flight holes is the time to act, as the adult may return to lay eggs and start the whole life-cycle again. Fresh flight holes will have a golden appearance within the wood tunnel, whereas older flight will be darker in colour.

Fresh flight-holes will also show signs of 'frass', which looks like fine sawdust around / directly below the affected areas.

Structure damage:

As woodworms develop, they damage the internal structure of the wood; this can result in weak and damaged flooring timber, which will give the wooden floor a slight 'bouncy' feel. Within attic timbers, where woodworm has been active for a number of years, the joists can start to bow with the weight of the roof / flooring.

Sightings:

Adult beetles, when they emerge are predominately looking for a partner to reproduce with. However, they are also attracted to the light and as such can be found on internal window-sills. Often their dead bodies are found on the floor – however they also have a very similar appearance to a different insect known as 'Biscuit Beetle' – which do not infest wooden structures and are treated in a completely different way.

Furniture:

Woodworm prefer environments that are tucked out of the way, to allow them to complete their life-cycle. However, they will of course also infest furniture, which is often the usual time that woodworm flight holes are noticed.

If you have woodworm in your property or furniture and you have other timber in the house, which may offer a better environment for the adults to lay their eggs, they will find it! So, it is much better to treat when you see evidence of woodworm.

Woodworm and Damp conditions:

Conditions do not need to be 'damp' for woodworm to survive, but they do prefer environments where the wood is moist. Therefore, floorboards or loft timbers that are higher in moisture content, either through leaking gutters or areas of high-water condensation are principal location for woodworm