Understanding a garden building, Sellers 'claims' and Useful advice.

One of the biggest issues we face when talking to customers is that they are presented with all sorts of 'facts and figures' regarding garden buildings. So which are true and which are false.

The most important fact regarding the purchase of a garden building is that here construction and manufacture is NOT regulated. The only regulation they have to meet is the 'Sales of goods act.'
The reality of sales law in the UK is that all purchases are made 'Caveat Emptor' which means it is the buyer who is responsible for what they buy or in broader terms 'buyer beware.' It is true that a seller cannot out rightly lie without leaving themselves open to prosecution. They can however go a long way in disguising the truth. This document is an attempt to try and explain some of the terms that they use and hide behind.

What is WET ROT ?

I started with this because it is the single most important factor regarding a garden building. As soon as a tree is cut down and converted to lumber it is susceptible to decay. 'Wet Rot' is the fungi that in nature deals with fallen trees and dead growth. It dissolves the material and then sends it back into the eco-system for other plants to absorb as nutrients.
The fungi is quite literally everywhere. It is in the ground as a living body and it is in the air as spores looking for a host. It can remain dormant for years waiting for the right conditions to start to develop.
It works by growing very thin tendrils called 'Hypha' into the host and then using moisture it secretes chemicals that dissolve the material. This weakens the timber and as it develops the 'Hypha' spread through the wood until eventually it has gained enough energy to 'fruit.' this is often seen as mushrooms that when ripe will release spores and the whole process starts again.

Wet rot can destroy timber in a few years, Spruce used in garden buildings if not pressure treated and protected will last less than 5 years.

The biggest issue with WET ROT is that the only real warning that you have an issue is often TOO LATE. The fungi needs only a few things to develop

- A host
- Absence of sun light
- moisture

The first warning signs are often a fading of the timber, it starts to look bleached. This is often followed internally with black mildew developing. Eventually as the hypha develops the whole inner core of the timber will be dissolved and the weak outer edge starts to break away.

Once WET ROT starts there is very little that you can do. Some timbers will accept a treatment that can kill the fungi but normally by this stage it is too late and the wood has failed. Also not all woods will absorb the treatment. Spruce a very common timber in garden buildings for example is very poor at absorbing treatments. There are chemicals such as 'WOOD HARDENERS' for small areas, that if the worst of the damage is removed can be applied to help stabilise the wood and then the damage may be filled. This however is only a temporary fix unless the infected wood is removed it will simply start up again around the treated area.

The only real defence against this fungi is choosing the right material, good design and workmanship. otherwise your building is going to fail.
Sadly the garden building sector is filled with suppliers and manufacturers who fail to make clients aware of the issue. We get hundreds of calls from people who have purchased a building in good faith only to see it rot away in 5 – 6 years .

Here is a casing point

This log cabin is 6 years old and was installed 'professionally' for a GP. His wife painted it every year with a timber preserver. It is built on a concrete foundation and fitted out with lighting, heating a gym and seating. It has 44mm thick boards which the manufacturer described as 'Slow grown Spruce from northern climates'
in total he had spent £11000 on the building the installation and the internal fitting.

The client was horrified to find that all around the log cabin, section of the wood was falling off. When he investigated further he could push his finger into the planks up to a height of 2ft.
He had paid to have it installed correctly and treated it every year so how could it fail…….
Worst of all the only repair was to take it all back down take out the rotting wood and then rebuild it which was going to cost thousands of pounds.

About the timber SPRUCE.
A term you read over and over again in garden buildings is 'SLOW GROWN SPRUCE WOOD FROM NORTHEN CLIMATES' another term seen is 'First class spruce from Northern countries' or versions of it. The only key word is **SPRUCE.** It is often written as though this is a good thing, a sign of some quality. Most log cabins are made from it as are a lot of other buildings, however beware this is extracts from the data sheet readily available for this timber.

Common Name(s): Norway Spruce, European Spruce, German Spruce
Scientific Name: Picea abies
Distribution: Northern and central Europe
Rot Resistance: Heartwood is rated as being slightly resistant to non-resistant to decay.
Treatability 3-4 poorly or not permeable

Spruce is actually the cheapest timber commercially grown in Europe. It is only intended for use internally unless it is PRESSURE TREATED.' Used outside it will last about 4-5 years even if you paint it in common timber preservers regularly and if it comes into contact with the ground much less. Untreated spruce wood is extremely resinous and does not take up water based timber preservers. Even spirit based timber treatments need to be applied every year and most need three coats each time. Be warned also of terms like 'TANALISED' if they are using this term then it is more likely dipped and not PRESSURE TREATED which is a process where the treatment is forced in under extreme pressure. Dipped spruce is almost a waste of time and effort as the treatment will degrade in UV light and rain.
A KEY POINT IS THAT the building regulations forbid the use of untreated spruce externally but sadly garden buildings are not covered by the buildings regulations and even though it is not suitable for purpose they will use it.

Some suppliers refer to the fact that in some countries they build genuine full size 'log cabins' from spruce wood. This is true but there is a very good reason why.
Our climate has a high moisture content. The gulf stream coming in over the sea means our air is always high in moisture – to the point that it rains regularly. WET ROT uses this moisture to develop and secrete its chemicals. If you buy a building where the moisture content has been reduced to 15 – 20% as soon as you put it outside it will shoot back up to 40% in days and that is all it needs. Countries like Canada and Norway have extremely cold climates the moisture is often locked up in ICE and this prevents the fungi developing. Equally the builders of these structures apply treatment to EACH AND EVERY log to act as a barrier. Your humble shed or garden log cabin gets nothings like this.
Other sources of moisture are…

- The concrete foundation.
  A misconception is that concrete is waterproof, this is totally wrong. Concrete is hydroscopic which means that it absorbs moisture, This is why when they build houses they add DAMP PROOF MEMBRANES to concrete floors and DAMP PROOF COURSES to walls. Any building on a concrete foundation should be proud of ground level and a DPC should be installed between the timber and the concrete.
- The roof is another very good source of moisture. Faulty or cheap roof coverings abound in garden buildings often the covering is too short or cheap grade and fails in a few years. Also unless guttering is fitted the water drips off the roof onto the ground and splashed back up. On the building above the covering was not lapped over the roof edge behind the fascia's and so water passed into the top of the logs.
- Soil too close to the building. So many times we see a concrete foundation finished at ground level and the building placed upon it. The supplier assures you that the ground bearers are pressure treated so what is the issue ?

The foundation acts like a sponge but also the solid and surface water can wash over the concrete and contact the bearers. Now it is true the bearers if pressure treated will not rot BUT pressure treated wood IS NOT WATERPROOF. The water will be absorbed by the bearers and passed up into the floor. If this is untreated and virtually all are then it will now start to rot. The fungi then can spread and infect the walls, doors and windows. This is exactly what happened here.

Logic said that the extra wide canopy should protect the door frame but the WET ROT fungi wasn't getting its moisture from above it was being fed from below

Never Allow soil to collect against a building. Soil not only acts as a path for moisture but also as a path for the WET ROT fungi and the most virulent strains of this are actually in the ground.

Now it would seem that we are against log cabins but this is not the case. There are many very good builders who make fantastic buildings. Some of the best use other timbers such as Larch or Douglas Fir. Some who make buildings from SPRUCE supply it pressure treated and all if installed properly are perfectly sound choices.
Our best advice would always be.

Finally IF SPRUCE IS NOT IDEAL FOR GARDEN BUILDINGS, WHY IS IT SO COMMONLY USED ?
Garden buildings up to 30 years ago would be made from Redwood or Douglas Fir which is far better externally.
The answer is all about supply and demand. Spruce was traditionally grown for the paper industry. It is quick growing and ideal to produce 'pulp' the raw material for paper. Vast tracts of land were planted and it was a very valuable resource.
With the rise of computers, mobile phones, emailing and texting we use far less paper these days. Suddenly the value of Spruce woodland collapsed and alternate uses were sort. The construction industry tested the material and found that if pressure treated it was a good alternative to existing timber. The garden building sector who isn't regulated in any way also started using it because it is cheap but for the most part UNTREATED and there is nothing to stop them. Nowadays people seem accepting of the fact that their building will need replacing every few years, or perhaps are misled into believing that their new building will last. Our advice is….

DO NOT BUY A BUILDING MADE FROM UNTREATED SPRUCE.

'Cedar doesn't Rot'

Another term we here is 'CEDAR DOESN'T ROT.'
First wood of any kind will rot, it is not rot resistant. Like all wood it starts to decay from the moment it is cut down. Some woods decay slower than others but also how quickly this happens depend on what part of the tree the wood came from.
All Cedar is graded from grade 1 (the best - heartwood) to grade 4. (there are other grades but these do not relate to construction lumber) This is particularly relevant to cedar greenhouses. If the builder is making a **quality building** then they will be using what is referred to as 'Grade 2 clear or better' **and they will say so.** it is a real plus point. Grade 1 is rarely used as because of cost and any other grade is not suitable for external joinery. A cheap building will be grade 4.
There is a cedar supplier that is making a new greenhouse at the moment where they claim to use western red cedar but omit to mention the grade. They do state that it has occasional knots so that straight away suggests it is an inferior grade. Why is this important…. well Cedar though good outside is actually very brittle and imperfections such as knots encourages wet rot to start. It will also break and split very easily if cross grain is used. '**Grade 2 Clear or better**' is straight grained and **free from knots** and so is the only real choice for a cedar greenhouse where the amount of wood is quite limited. To make matter worse, the supplier states that they treat their greenhouses. This can only be a spray on product and further reinforces the fact that they are using a very cheap grade of cedar wood that needs additional protection.

Hardwoods are better than softwoods. There are suppliers that make this claim although why is beyond me. The term hardwood and softwood has nothing what so ever to do with the quality of the wood. Hardwoods are trees that normally lose their leaves in winter (deciduous) and have hard shell coatings on their seeds, hence HARDWOOD. Softwoods are generally coniferous and retain their leave all year round. They produce seeds that are often in fruiting bodies or have soft shells and so SOFTWOOD.
A good example is REDWOOD which is a very hard timber that machines well and has moderate durability common in construction and can be used outside but it is a SOFTWOOD. POPLAR which is another common timber is moderately durable and has about the same strength characteristic and looks almost identical is a HARDWOOD. The key is that this term means nothing, good woods are measured in

- Strength
- Durability
- availability
- workability

Not in whether they are a hardwood or softwood.

'Pressure treating doesn't make wood waterproof' This is a statement on a log cabin suppliers site who is trying to explain away why he is selling untreated wooden log cabins knowing that they will rot very quickly.
The statement is in fact true but you don't pressure treat wood to make it waterproof…. you pressure treat it to make it ROT RESISTANT.
The number one enemy of wood is WET ROT….it is a naturally occurring fungus that is quite literally everywhere. It function in nature is to consume dead material and return it back to the eco system. As far as it is concerned your shed or summerhouse is just a dead tree.
If you use untreated spruce outside then it will last about 5 years, if you use pressure treated spruce it will last about 25 years. It does however cost much more. Another point is that even if they say they use pressure treated bearers on a floor, you still need a damp proof coarse. Otherwise the water will pass through the pressure treated wood into the untreated wood.

Other terms to look for are.

'Good quality shed felt'
this is often a term on cheap garden buildings and generally means that they are using a standard CHEAP grade shed felt that lasts 5 years. There are far better felts that can last up to 15 years and if they are used then you will see the term **'POLYESTER WOVEN REINFORCED FELT.'**

'3mm Toughened glass'
This is the realm of the supplier looking to cut costs. Most people define toughened glass as a strong strengthened product far stronger than standard glass. The correct term is actually annealed glass and the annealing process only works on glass above and including 4mm thick. It generally produces a glass pane that is 5 times stronger than the equivalent thickness of glass.
3mm Glass can be strengthened but only to a limited degree. In fact it is only twice the strength of ordinary 3mm glass and very easy to break but still just as expensive.
Again a major Cedar greenhouse supplier is selling their greenhouse with 3mm toughened glass which they claim is 5 to 7 times stronger…..Ask any glazing supplier and he will tell you that is not possible.

Water based preservers are timber treatments.
The definition of preserver and treatment is sketchy but in the building industry a preserver is simply a product that is applied to help waterproof wood. Normally water based they are generally a mix of a soluble wax and water with a colour.
Timber Treatments are generally spirit based, that is you cannot wash them off in water. They generally contain BIOCIDES and INSECTICIDES and are designed to either treat infected timber or be absorbed and protect new wood. Most require three coats over a couple of days to work and they are either transparent or have a hint of a colour added.
There use is strictly difference. You treat wood maybe every 7-10 years and preserve it every 3-4 years depending on the supplier's recommendation.
IF YOU HAVE AN UNTREATED LOG CABIN THEN YOU NEED TO TREAT IT WITH A SPIRIT BASED PRESERVER EVERY YEAR.

TIMBER SIZES

Another note of caution is that some suppliers quote timber sizes as COMMERCIAL GRADE sizes and not ACTUAL SIZE. An example is timber sold as 2" x 1" which in metric should be 51 x 25mm **BUT ACTUALLY** is 45mm x 19mm
The difference is that **commercial grade sizes** are CUT sizes as they are cut from the tree. Whereas **actual size** is the size after it is machined and dried.
So a less than scrupulous supplier may imply that they are selling a much stronger and better product than a rival who chooses to tell the truth.

Guarantees….

Most suppliers offer some sort of guarantee but when you look into it, sometimes it isn't worth the paper it is written on. Most are hidden deep inside pages of legal talk and are almost impossible to decipher. A good example is a greenhouse supplier who proudly states his cedar greenhouse has a 10 year guarantee. When you look into the small print the guarantee doesn't cover 'WIND AND WEATHER. 'So we have an expensive timber greenhouse that isn't covered if there is a storm !!!!
Another popular one is selling a building with a water based preserver and a 10 year anti rot guarantee. When you look into the small print it states that you must TREAT IT EVERY YEAR WITH A SPIRIT BASED TIMBER TREATMENT.'
Too late you find that the water based preserver doesn't let the spirit based treatment through to the wood.

A real concern is the lengths of some of these guarantees. WHY? if the buildings has as the supplier suggests got the best quality material does it only have a 'ONE YEAR GUARANTEE .' In truth the guarantee is usually a good indicator as to quality and life expectancy, So if it is only guaranteed for a year it will probably not last much longer.

WHY? is the guarantee void if you aren't the original purchaser i.e. if you buy a house with a one year old greenhouse that has a 10 year guarantee then surely it must still be under guarantee, after all it is the building that has the guarantee on it when it was purchased. Sadly however most are 'NON TRANSFERRABLE.'

We regularly look at buildings for people and the guarantee is the first thing we go for. They can often tell you more about the quality than the sales description.
A reputable supplier 'WILL SUPPORT' there building against defect and 'reasonable' time should not be a limiting factor. We for example have returned to buildings years after they were built where an issue has occurred such as sticking doors and windows. In truth faults are rare because we aim to design potential issues out. Obviously if the owner isn't maintaining the building then it will fail. We recently attended a greenhouse that a client had built by another supplier, it was supposed to be painted every 6 years but the owner had not bothered as a consequence rot set in and the supplier would not take responsibility which is not unreasonable. Age is always a factor but a reasonable request about an issue or problem in a reasonable time frame is surely not beyond the bounds of the supplier to address.

Always read the guarantee, if you can't see it in full ask for it and ideally a printed copy.
Don't just accept because it says it has a '10 YEAR ANTI ROT GUARANTEE' that you will be immediately covered.
Almost certainly you will not……there will be conditions and many of them.
Sadly our restoration and repair work means that we often see the aftermath of where people are misled
We have seen log cabins rot out in 5-6 years, very expensive £10000+ Summer houses that rot in 5 years.
Sheds that leak after just 3 years . In cases even when legal advice is sought the supplier takes no responsibility.

On this point I would also add
BEWARE of review sites. Most people we are contacted by made their purchase based on positive reviews on sites.
The issue here is that even if the review is genuine, they are reviewing the building just after it was delivered. Of course for most reviews the product is perfect and looks good but very few review sites allow you to go back and amend your statement when it fails in a few years and the supplier ignores you.
Review sites are good for talking about delivery time and point of sale comments but only time will as to how good the building is and they do not give that feedback, which is surely as much a relevant piece of information.
Worst still there are plenty of 'businesses' that will give fake reviews, we run a website and get regular emails from people and companies that will for a small fee happily provide fake reviews.
Another trick is for companies to get their staff to write reviews to build up their profile. I actually witnessed this with a company that launched a new product and website and before the first product had left the company they already had 7 reviews !!!!

Reading the small print is crucial of course but don't be misled by what you read. Most companies will give all sorts of advice to get THEM out of trouble will faults and complaints. Some is simply worthless but some will actually create more harm than good.

We recently were contacted by a customer who had damp coming through the timber floor of his log cabin. He had followed the supplier's directions and laid a concrete base, the supplier had installed the building for him at a cost of some additional £1400, two years later his floor was showing signs of black mould and when touched was damp.

He contacted the company (based in Surrey near Woking) who advised him that the building was probably sitting in water which was being drawn up by capillary action through the concrete. A little surprised as he had paid for the building to be erected by the company he assumed that this would not happen. On asking for advice they provided the following

"If you have this problem the answer is to apply some 'Thompson Water Seal' liberally over all the areas in question once the building is dry. Do not be afraid of using too much as this water seal is colourless."

When he visited his hardware store and explained what he wanted and why they told him CORRECTLY that **Thompson water seal doesn't work on wood**, it is for concrete, brick and plaster. At this point a friend suggested he contact us.

On visiting, the wooden base was laid straight onto the concrete. There was no 'Damp proof course' between wood and concrete because the supplier's claim it isn't needed as the wooden floor has pressure treated wood framework.

REMEMBER Pressure treated wood isn't a process to make wood waterproof, it is to make it rot and insect resistant.

Remarkably they even said so on their own website

"*Building supplied pressure treated will need to be painted with a suitable wood preserver to make them waterproof."*

Mind you that is nothing compared to the company on the South Coast, that make sheds etc. Whose statement about the waterproofing ability of their buildings and they do the installation….

"*We do not supply waterproofed buildings. It is the customer's responsibility to ensure the building is water tight."*

Surely you buy a shed or summerhouse to protect you or your items from the rain, and so surely it must be waterproof. Mind you the company do only offer a one year guarantee on their buildings and just 3 months on their roofing felt (provided they have installed the building) So perhaps it is no surprise that they aren't waterproof……

Their advice which is essentially sound is that even on their pressure treated buildings, the outside be coated with 'Protek Royal Exterior' treatment, 3 – 4 coats when first installed and then one coat every year. If you don't do this the guarantee is void.

Now let us cost that. A tin of Protek Royal Exterior 2.5L costs currently £34.99 It will cover about 15 sq.M a tin and an average 10ft by 8ft building is 24 Sq. M So to meet there requirements on installation of say 3 coats we would need 5 2.5L tins or 3 of the 5L tins. Then a further 5L tin every year , let us say for 10 Years.

That means a total of 12 of the 5L tins of paint at a total cost of £720.00 assuming you do it yourself.

This on a site that suggest that you can have a 10ft by 8 ft pressure treated shed on a concrete base for just £1599 complete with one year guarantee on the shed and 3 months on the roof felt. There is no guttering the lock is a cheap hasp and staple and a basic diagonally braced door.
To keep the costings going the felt they use last 3-5 years and so will need replacing at least twice to last 10 years. This will cost an additional £100 if you do it yourself. Which brings the total cost to nearly £2500.00

So the real cost of the buildings that was originally advertised as just £949.00 is actually nearly £2500 to last 10 years and you have a lot of maintenance work in the 10 year period.
(They do offer an EPDM roof which the claim will last 20 years but it will cost an additional £320.00 so nearly £3000 for a 10ft x 8ft shed)

Most bespoke and quality builders would supply this with guttering a fully Framed ledge and braced door, A vapour barrier and a proper lock, installed including base for this and you would only have to paint it twice in 10 years, and that is only for appearance the building will be fully waterproof (most quality preservers need painting once every 5 years)

It gets even worse with log cabins as they need painting inside and out on installation plus repeated coats every year externally, so the same size building 10ft x 8ft will require 10 2.5L tins or 5 of the 5L tins at a cost of £300.00 The building would cost £2280, the concrete base an additional £600.00 if you want it erected £600 (with this company) and retreatment would be over a 10 year period £600 assuming you do the work. Again no guttering and it is made from cheap grade UNTREATED Spruce.
(For the roof as a summerhouse we have assumed an asphalt shingle roof as this is standard)

So our tiny little 10ft by 8ft Summerhouse that started, listed as just £1890.00 delivered now actually costs £4380.00

Compared again with a bespoke builder, they could provide a vastly superior specification than that above. That would require one coat every 5 years for appearance only and include gutter and pressure treated wood.

The reality is that a building that looks too good to be true is exactly that. The prices shown are for a bare basic shell and to get any sort of life, meet the requirements of their guarantees and have a useable building it will cost much more and involve a lot more work. So why not simply buying a properly made one in the first place.

All the prices and information are based on three of the largest main suppliers based in the South of England advertising in April 2019