

20 Common Post Installation Problems - Hardwood Flooring

Why do gaps between planks appear post installation?

Gaps between planks can appear due to improper installation or acclimation of hardwood flooring for a few reasons. The main reasons are:

1. **Moisture Content:** Hardwood flooring is a natural product that expands and contracts with changes in temperature and humidity. If the wood is not properly acclimated to the environment where it will be installed, it may expand or contract excessively after installation, causing gaps to appear.
2. **Improper Installation:** Gaps between planks can also occur if the planks are not properly installed. For example, if the installer does not fix the flooring down to the subfloor correctly (with the correct or not enough nails or adhesive) then the floor may move whilst naturally expanding and contracting and break up/gaps appear.
3. **Low Humidity:** If the humidity in the installation area is too low, the wood can shrink and gaps can appear between the planks. This can be particularly common in the winter when indoor heating can reduce the humidity levels inside rooms.
4. **Inconsistent Subfloor:** If the subfloor is not level, the hardwood flooring may not lay flat, leading to gaps between the planks and especially in herringbone parquet or chevron. Uneven subfloors can also cause gaps to appear if they are not sound, flat, level, dry and free from dirt and debris

Proper acclimatisation and installation techniques are critical to preventing gaps from appearing in your hardwood flooring. Always make sure to follow the manufacturer's guidelines for acclimating and installing your hardwood flooring, and consider consulting with a professional if you are unsure about any aspect of the installation process.

Why do hardwood floors cup or warp post installation?

Hardwood floors can cup or warp post-installation for a variety of reasons, but the most common cause is excessive moisture. Here are some of the main reasons why this can happen:

1. **Moisture Content:** Hardwood flooring is a natural product that expands and contracts with changes in temperature and humidity. If the moisture content in the hardwood flooring changes and becomes too high due to high humidity, it can cause the boards to swell and cup. Conversely, if the moisture content is too low, the boards can shrink and warp.
2. **Moisture from Subfloor:** If the subfloor underneath the hardwood flooring is not properly prepared, moisture can transfer from the subfloor to the hardwood floor and cause the hardwood to cup or warp. Also, if the subfloor is not level/or pooling and there are low spots where water can collect, this can cause problems with the hardwood flooring.
3. **Inadequate Acclimation:** If the hardwood flooring is not properly acclimated to the environment where it will be installed, it can lead to problems with cupping or warping. This is because the moisture content in the hardwood may not be in balance with the humidity levels in the installation area.
4. **Improper Installation:** If the hardwood flooring is not properly installed, it can also lead to problems with cupping or warping. For example, if the installer does not leave enough space for expansion and contraction, the boards may push against each other, causing cupping or warping.
5. **Environmental Factors:** Finally, environmental factors such as excessive humidity or water damage can also cause hardwood floors to cup or warp.

To prevent cupping or warping, it is important to follow the manufacturer's guidelines for acclimating and installing your hardwood flooring. Additionally, checking moisture of the product prior to installation, the moisture levels on site and maintaining a fairly consistent indoor temperature and humidity level can help prevent problems from occurring. If you notice any signs of cupping or warping in your hardwood floors, it is important to address the issue promptly to prevent further damage.

Why do hardwood floors buckle or lift post installation?

Hardwood floors can buckle or lift post-installation due to a few different reasons, but the most common cause is excessive moisture or lack of expansion gaps. Here are some of the main reasons why this can happen:

1. **Moisture from Subfloor:** If the subfloor underneath the hardwood flooring is not properly prepared/dried, moisture can seep through and cause the hardwood to expand, buckle and/or lift. Excessive moisture causes the boards to become larger so they fill the expansion gap, move tight to a vertical surface and lift as they have pressure around the perimeter.
2. **Inadequate Expansion Gap:** If the installer does not leave enough space around 100% of the perimeter of the room for the hardwood flooring to naturally expand and contract, it can lead to problems with buckling or lifting. This is because the hardwood may push against the walls or other obstacles, causing it to lift off the subfloor.
3. **Improper Installation:** If the hardwood flooring is not properly installed, it can also lead to problems with buckling or lifting. For example, if the boards are not properly fastened to the subfloor or if the subfloor is not level, it can cause problems with buckling or lifting.
4. **Environmental Factors:** Finally, environmental factors such as excessive humidity or temperature changes can also cause hardwood floors to buckle or lift.

To prevent buckling or lifting, it is important to follow the manufacturer's guidelines for installation, take moisture readings before installing, test and make sure subfloor is dry and leave adequate space for expansion and contraction around the perimeter of the room. Additionally, maintaining a consistent indoor temperature and humidity level can help prevent problems from occurring. If you notice any signs of buckling or lifting in your hardwood floors, it is important to address the issue promptly to prevent further damage.

What type of problems will an uneven or bumpy subfloor/surface or subfloor issues create post installation?

Uneven or bumpy surfaces or subfloors can cause a number of issues when hardwood flooring is laid. Here are some of the main problems that can occur:

1. **Uneven Floor:** If the subfloor is uneven, it can cause the hardwood flooring to be installed unevenly as well. This can lead to problems with gaps between the planks, or the flooring may feel bumpy or wavy underfoot.
2. **Hollow or Loose Spots:** If the subfloor is not properly secured to the joists, it can cause the hardwood flooring to become loose or hollow in certain spots. This can lead to a squeaky or creaky floor and can also cause the hardwood to wear unevenly over time.
3. **Nail Pops:** Uneven subfloors can cause nail pops to occur as the flooring is installed. When the subfloor is not level, the nails or staples used to secure the flooring may not be driven in evenly, causing them to pop up over time.
4. **Reduced Lifespan:** When hardwood flooring is installed over an uneven subfloor, it can cause the boards to wear unevenly and may also lead to premature wear and tear. This can reduce the lifespan of the hardwood flooring, resulting in the need for replacement or repair much sooner than anticipated.

To avoid these issues, it is important to properly prepare the subfloor before installing hardwood flooring. The subfloor should be sound, flat, level, dry and free from dirt and debris. Subfloors can be screeded with a self-levelling screed to take out any unevenness. Subfloor preparation is key to avoiding issues post install. In the United Kingdom, the British Standard for subfloor evenness is BS 8203:2017. This standard provides guidance on the tolerances for the levelness and flatness of subfloors in preparation for the installation of resilient floor coverings such as hardwood flooring.

British Standard

According to BS 8203:2017, the allowable tolerances for subfloor evenness for hardwood flooring installation are:

Levelness: The maximum deviation from a straight edge placed in any direction across a 2-meter span should not exceed 3mm.

It is important to note that these tolerances apply to the subfloor surface only and do not take into account any deviations in the hardwood flooring itself. The standard also recommends that any deviations in the subfloor should be corrected prior to the installation of hardwood flooring, either by levelling the subfloor or by using a suitable underlayment.

Why do hardwood floors crack or split due inadequate subfloor or improper installation?

Hardwood floors can crack or split due to inadequate subfloor or improper installation for a few reasons. Here are some of the most common causes:

1. **Uneven Subfloor:** If the subfloor is uneven or has high spots, it can create stress points in the hardwood flooring. As a result, the wood can crack or split under weight or pressure.
2. **Inadequate Subfloor Support:** If the subfloor does not provide enough support for the hardwood flooring, it can cause the boards to flex and bend. Over time, this can lead to cracks or splits in the wood.
3. **Improper Installation:** If the hardwood flooring is not installed properly, it can lead to cracks or splits. For example, if the boards are not properly spaced or if they are not properly secured to the subfloor, they can move or shift, causing stress points in the wood.
4. **Moisture:** Moisture can also cause hardwood floors to crack or split. If the wood is exposed to excessive moisture, it can swell and then contract, leading to stress points in the wood. Over time, this can cause the wood to crack or split.
5. **Seasonal Changes:** Seasonal changes in temperature and humidity can cause the wood to expand and contract, which can create stress points and lead to cracks or splits.

To prevent cracks or splits in your hardwood flooring, it is important to properly prepare the subfloor before installation and follow the manufacturer's installation guidelines. This may involve ensuring adequate subfloor support, addressing any moisture issues, and allowing the wood to acclimate to the environment before installation. Additionally, it is important to maintain proper humidity levels in your home to minimize seasonal changes in the wood. If you notice any cracks or splits in your hardwood floors, it is important to address the issue promptly to prevent further damage.

Why do hardwood floors crack or split when used in conjunction with underfloor heating?

Hardwood floors can crack or split when used in conjunction with underfloor heating due to the following reasons:

1. **Rapid Temperature Changes:** Rapid changes in temperature can cause hardwood flooring to expand and contract quickly, which can create stress points and lead to cracking or splitting. This is particularly common with underfloor heating, where the temperature can change rapidly.
2. **Type of Wood:** Some types of wood are more prone to cracking or splitting when used with underfloor heating. For example, engineered oak is generally considered to be a good choice for underfloor heating as it is less likely to crack or split than other hardwoods. While hardwood floors can be used with underfloor heating, some types of hardwood flooring are not recommended due to their susceptibility to cracking, splitting, or warping. These mentioned earlier and below are Canadian Hard Maple, Beech, Jatoba, Hickory, Pine, Bamboo.

3. **Rugs:** Rugs or Carpets may cause hotspots when used on top of underfloor heating, this can cause the hardwood floor to dry out and crack or split

Hardwood floors not to use with underfloor heating

4. **Solid Hardwood:** Solid hardwood flooring is not recommended for use with underfloor heating due to its high susceptibility to warping and cupping. Solid hardwood is more prone to these issues because it is a single solid piece of wood that can expand and contract with changes in temperature and humidity.
5. **Bamboo:** Bamboo flooring can be prone to cracking when exposed to extreme temperature changes, and is not recommended for use with underfloor heating.
6. **Hickory:** Hickory flooring is prone to splitting and cracking when exposed to extreme temperature changes, and is not recommended for use with underfloor heating.
7. **Softwoods:** Softwoods such as pine, spruce, and fir are not recommended for use with underfloor heating as they are more susceptible to warping and splitting.
8. **Exotic Woods:** Exotic hardwoods such as Brazilian cherry and teak are not recommended for use with underfloor heating due to their high density and potential for warping.
9. **Reclaimed Hardwood:** Reclaimed hardwood flooring is made from salvaged wood, which can be more prone to warping and cupping due to its age and prior exposure to moisture. It is not recommended for use with underfloor heating.
10. **Highly Reactive Woods:** Certain wood species, such as maple and beech, are highly reactive to moisture and temperature changes, and may not be stable enough to use with underfloor heating.

When selecting hardwood flooring for use with underfloor heating, it is important to choose a wood species that is stable and can handle the temperature and humidity changes associated with underfloor heating. It is also important to follow the manufacturer's guidelines for installation and maintenance to prevent issues with your hardwood flooring.

It is important to consult with a flooring specialist or the manufacturer of your chosen hardwood flooring to determine whether it is suitable for use with underfloor heating. Proper installation, acclimation, and maintenance are also essential to minimize the risk of issues with your hardwood flooring.

Why do hardwood floors squeak or creak post installation?

Hardwood floors can develop squeaks or creaks post-installation due to movement in a variety of scenarios:

1. **Movement:** As hardwood flooring expands and contracts with changes in temperature and humidity, it can shift slightly and create movement between the floorboards. This movement can cause the boards to rub against each other and create a squeaking or creaking sound.
2. **Lack of expansion gaps:** If expansion gaps are inadequate this can create tension within the flooring. If under tension the floor may flex/move and therefore may creak when walked upon.
3. **Subfloor Issues:** If the subfloor is uneven or the wrong type/density of underlay is used it can cause the hardwood flooring to flex, become uneven which may create gaps between

the boards. This movement can create squeaking or creaking sounds when weight is applied to the floor.

4. **Moisture:** Excess moisture can cause hardwood flooring to expand and warp, which can lead to gaps between the boards and create movement that causes squeaking or creaking.
5. **Insufficient Fastening:** If the hardwood flooring was not properly fastened to the subfloor during installation, it can lead to movement between the boards and cause squeaking or creaking sounds.
6. **Age:** Over time, hardwood flooring can develop wear and tear that can cause the boards to shift and create movement that leads to squeaking or creaking.

To address squeaking or creaking hardwood floors, it is important to identify the source of the problem. If the issue is due to movement, addressing the root cause of the movement can help reduce or eliminate the noise. This may involve addressing subfloor issues, reducing moisture levels, or ensuring proper fastening of the flooring.

What problems can heavy items such as furniture and heavy kitchen islands cause and why do they prevent a hardwood floor from expanding and contracting?

Hardwood floors naturally expand and contract in response to changes in temperature and humidity. Heavy items such as furniture can cause problems if they are not properly placed or maintained in relation to the floor's natural expansion and contraction. In effect then can pin a floating floor down. Here are some examples:

1. **Buckling:** If a hardwood floor is unable to expand and contract freely, it may start to buckle or warp. This can cause the floorboards to lift or separate, creating an uneven surface and other issues with the floor.
2. **Cracking:** Heavy furniture can also cause hardwood floors to crack if the furniture is not placed correctly. For example, if a large piece of furniture is placed directly over a floorboard joint, it can put excessive pressure on that joint and cause it to crack or it can cause tension in the floor as previously mentioned in "7".

To prevent these problems, it's important to properly maintain your hardwood floors and take care when placing heavy furniture. The best solution is to install the floor using the "stick down" method which is when the hardwood floor is fully bonded to the subfloor. Also try to use felt pads on the bottom of furniture to reduce friction which gives the floor a higher chance of expanding and contracting. Another solution if it's a large kitchen island for example is to fit the floor around the object as opposed to underneath it.

Are scratches and dents acceptable on hardwood flooring post installation?

Scratches and dents will happen on the surface of hardwood flooring post-installation, it's important to recognize that hardwood flooring is a natural product and will develop wear and tear over time, especially in high-traffic areas. Some minor scratches and dents may be inevitable, even with proper maintenance and care.

While it's true that scratches and dents can occur over time as a result of normal wear and tear, it's important to take steps to prevent them from happening in the first place. For example, using

protective pads or coasters under furniture legs can help prevent scratches, having a mat at entrance doors to knock moisture and grit off footwear, while regular cleaning and maintenance can help keep the floor free of debris and other abrasive materials.

The severity of scratches and dents can vary widely, and some may be more noticeable or problematic than others. Small, shallow scratches and dents may be less noticeable and may not significantly impact the overall appearance or function of the floor. Deeper scratches or dents, on the other hand, can be more noticeable. If scratches or dents do occur on your hardwood floors, it's important to address them promptly. Depending on the severity of the damage, it may be possible to repair the affected area using wood filler or sanding and refinishing techniques. However, it's generally best to consult with a professional hardwood flooring contractor to ensure that the repair work is done correctly and that the floor remains structurally sound.

It's also worth noting that the type of hardwood flooring and its finish can affect how resistant it is to scratches and dents. Harder woods, such as oak or maple, may be more resistant to scratches and dents than softer woods, such as Walnut and Cherry. Similarly, finishes that are harder or more durable may be more resistant to scratches and dents than other finishes.

Overall, while some minor scratches and dents may be acceptable on hardwood flooring post-installation, it's important to properly maintain and care for the floor to minimize the risk of damage and preserve its appearance and longevity.

Why does hardwood flooring fade or discolour from exposure to sunlight?

Hardwood flooring can fade or discolour from exposure to sunlight due to the ultraviolet (UV) rays present in natural sunlight. UV rays can cause a natural chemical reaction in the wood's pigments, which can lead to a loss of colour or a change in hue. This process is often referred to as "photo-oxidation" or "photo-degradation."

There are a few factors that can impact the degree to which hardwood flooring fades or discolours from sunlight exposure. These include:

1. **Wood species:** Different wood species have different levels of resistance to sunlight and UV rays. For example, Oak is generally more resistant to fading than Cherry.
2. **Stain or finish:** The type of stain or finish used on hardwood flooring can also impact its resistance to sunlight. Some finishes, such as oil-based finishes, may offer better protection against UV rays than others.
3. **Sunlight exposure:** The amount of sunlight that hardwood flooring is exposed to can also impact its resistance to fading and discolouration. Areas that receive more direct sunlight, such as near windows or doors, may be more prone to fading.

To prevent hardwood flooring from fading or discolouring from sunlight exposure, there are a few steps you can take. These include:

1. **Use window coverings:** Window coverings, such as curtains or blinds, can help block UV rays from entering your home and reaching your hardwood flooring.
2. **Move furniture:** If possible, try to rearrange your furniture periodically to ensure that all areas of your hardwood flooring receive equal amounts of sunlight exposure. This can help prevent uneven fading or discolouration. If a covered area is next an exposed area it will if the covering object is removed blend in after 5-6 weeks as the photo-oxidation occurs.

In summary, hardwood flooring can fade or discolour from exposure to sunlight due to the chemical reaction caused by UV rays. By taking steps to limit sunlight exposure and using UV-resistant finishes, you can help protect your hardwood flooring and keep it looking beautiful for years to come.

How can spills or improper cleaning products change the appearance of a hardwood floor post install?

Spills or improper cleaning products can change the appearance of a hardwood floor post-installation in several ways, including:

1. **Stains:** Spills can cause stains on the hardwood floor if not cleaned up promptly. The wood can absorb the liquid, which can cause discoloration or leave a visible mark.
2. **Warping:** Excessive moisture from spills or using improper cleaning products can cause hardwood floors to warp or cup. This can result in a number of problems as previously mentioned
3. **Discoloration:** Using harsh or abrasive cleaning products can cause discoloration of the hardwood floor. The chemicals in these products can strip away the natural finish or sealant, leading to a dull or faded appearance.
4. **Scratches or scuffs:** Using improper cleaning tools or equipment, such as a hard-bristled brush or rough sponge, can leave scratches or scuffs on the hardwood floor. These can be unsightly and can compromise the structural integrity of the floor over time.

To prevent these issues, it's important to take proper care of your hardwood floor. This includes cleaning up spills immediately with a dry or damp cloth, using only products specifically designed for hardwood floors, and avoiding excessive moisture or harsh chemicals. In addition, it's important to use soft-bristled brushes or cloths when cleaning the floor and to avoid dragging furniture or other heavy objects across the surface.

If you do notice any stains, warping, discoloration, or scratches on your hardwood floor, it's important to address the issue promptly to prevent further damage. Depending on the severity of the issue, this may involve sanding and refinishing the affected area or replacing damaged floorboards altogether.

In short, spills or improper cleaning products can significantly impact the appearance of a hardwood floor post-installation. By taking proper care of your hardwood floor and addressing any issues promptly, you can help keep your floor looking beautiful and functioning properly.

How can using adhesive tapes or other adhesives damage a hardwood floor post install?

Using adhesive tapes or other adhesives can damage a hardwood floor post-installation in several ways, including:

1. **Removing finish:** Adhesive tapes, such as duct tape or masking tape, can leave a residue on the hardwood floor when removed. This residue can be difficult to clean and can cause damage to the finish or sealant on the hardwood floor.

2. **Scratches:** The adhesive on tapes and other adhesives can also scratch or scuff the hardwood floor if not removed carefully. This can leave unsightly marks.
3. **Discoloration:** Certain adhesives, such as rubber-based adhesives, can cause discoloration of the hardwood floor over time. This can be difficult to remove and can impact the overall appearance of the floor.
4. **Difficulty in refinishing:** If adhesives are used on the hardwood floor, it can make refinishing or sanding the floor difficult or impossible. The adhesive can gum up the sandpaper, making it difficult to achieve a smooth and even finish.

To prevent these issues, it's important to avoid using adhesive tapes or other adhesives on hardwood floors whenever possible. If it is necessary to use an adhesive, use a product that is specifically designed for hardwood floors and follow the manufacturer's instructions carefully. Additionally, it's important to remove any adhesive residue immediately after use using a gentle cleaning solution and a soft cloth or sponge.

How can a hardwood floor be damaged from high humidity, moisture or water and why?

A hardwood floor can be damaged from high humidity, moisture, or water in several ways, including:

1. **Swelling:** Wood is a porous material that absorbs moisture from the surrounding environment. When hardwood flooring is exposed to high levels of humidity, moisture, or water, the wood fibres can swell and expand. This can cause the floorboards to buckle, warp, or cup, resulting in an uneven or damaged surface.
2. **Discoloration:** Moisture and water can cause the hardwood floor to become discoloured or stained. This is especially true if the water is left on the surface of the floor for an extended period of time. The wood can absorb the water, causing it to darken or become discoloured.
3. **Mould and mildew:** Moisture and water can create the ideal conditions for mould and mildew to grow on the hardwood floor. This can be difficult to remove and can compromise the structural integrity of the floor over time.
4. **Structural damage:** If moisture or water is left on the hardwood floor for an extended period of time, it can seep into the subfloor and cause structural damage. This can lead to a weakened or unstable floor that may need to be replaced altogether.

To prevent these issues, it's important to take proper care of your hardwood floor and address any issues with humidity, moisture, or water promptly. This includes using a dehumidifier to maintain optimal humidity levels in the home, cleaning up spills and leaks immediately, and using a moisture barrier under the hardwood floor when installing over a concrete subfloor. Additionally, it's important to avoid using excessive amounts of water or harsh chemicals when cleaning the floor, as this can lead to damage and discoloration.

How can a hardwood floor be damaged from improper maintenance or general neglect?

Improper maintenance or neglect can cause significant damage to a hardwood floor over time. Some of the ways that a hardwood floor can be damaged due to improper maintenance or neglect include:

1. **Scratches and scuffs:** If the hardwood floor is not properly maintained, dirt, sand, and other debris can accumulate on the surface, causing scratches and scuffs. This can make the floor appear dull and unsightly.
2. **Staining and discoloration:** Spills and leaks that are not cleaned up promptly can cause staining and discoloration on the hardwood floor. This can be difficult to remove and can compromise the overall appearance of the floor.
3. **Dulling of the finish:** Over time, the finish on a hardwood floor can become dull or worn down due to improper maintenance. This can make the floor more susceptible to damage from scratches and scuffs.

To prevent these issues, it's important to take proper care of your hardwood floor by sweeping and vacuuming regularly, cleaning up spills and leaks immediately, using a pH-neutral cleaner for hardwood floors, and avoiding the use of harsh chemicals or excessive amounts of water when cleaning the floor. Additionally, it's important to maintain optimal humidity levels in the home and to address any issues with the floor promptly to prevent further damage.

How can a hardwood floor become discoloured or damaged from chemical exposure?

A hardwood floor can become discoloured or damaged from chemical exposure in several ways:

1. **Discoloration:** Chemical exposure can cause the hardwood floor to become discoloured or stained. For example, if acidic or alkaline cleaning agents are used on the floor, it can cause the wood to darken or become discoloured. This can be especially true if the cleaning agent is left on the surface of the floor for an extended period of time.
2. **Dulling of the finish:** Chemical exposure can cause the finish on a hardwood floor to become dull or hazy. This can make the floor appear unsightly and can compromise the overall appearance of the floor.
3. **Damage to the finish:** Certain chemicals can damage the finish on a hardwood floor, causing it to peel, flake, or crack. This can expose the wood underneath to further damage from scratches and scuffs.

To prevent these issues, it's important to avoid using harsh chemicals on a hardwood floor and to use only products that are specifically designed for use on hardwood floors. Additionally, it's important to avoid leaving cleaning agents or other chemicals on the surface of the floor for an extended period of time and to rinse the floor thoroughly after cleaning.

What happens to a hardwood floor if insufficient expansion gaps are not provided for?

If insufficient expansion gaps are not provided for in a hardwood floor installation, the floor can experience a range of problems.

Hardwood flooring is a natural product that expands and contracts in response to changes in temperature and humidity. If the flooring is installed without adequate space for this expansion and contraction, it can cause the floorboards to buckle, warp, or split.

Here are some of the specific issues that can arise from insufficient expansion gaps:

1. **Buckling:** If the hardwood floor is installed too tightly, the boards can push against each other and buckle upwards when they expand with changes in temperature and humidity. If the hardwood flooring had an expansion gap provided for but the boards take in excessive moisture they will expand excessively fill the expansion gap and buckle upwards
2. **Cupping:** Insufficient expansion gaps can also cause the boards to cup, which means the edges of the boards curl up. This can occur when the boards absorb more moisture on the back of the boards than the top. The back then expands more than the top and board cups.
3. **Warping:** Similarly, the hardwood floor can warp if it doesn't have enough room to expand and contract. This can cause the boards to crack, squeak, twist, bow, or become uneven.
4. **Gaps:** Ironically, a lack of expansion gaps can also cause gaps to form between the boards. This happens when the boards are forced together too tightly and then expand beyond their capacity, causing them to split apart at the seams.

To avoid these issues, it's important to follow the manufacturer's guidelines for expansion gaps and to leave enough space around the perimeter of the floor for expansion. Check expansion is left at risers, newel posts, doorways, radiator pipes and all vertical surfaces. This typically means leaving a gap as per the installation instructions around 100% of the perimeter of the room. By providing adequate expansion gaps, you can help ensure that your hardwood floor remains stable, level, and free from warping, buckling, and other issues.

What happens if you fail to acclimatize hardwood flooring prior to installation?

If hardwood flooring is not properly acclimatized prior to installation, it can lead to a number of problems:

1. **Warping:** Hardwood flooring that has not been acclimatized may warp when installed. This is because the flooring is not used to the temperature and humidity of the installation location, and it may try to adjust after installation by expanding or contracting unevenly.
2. **Buckling:** Similar to warping, hardwood flooring that has not been acclimatized may buckle after installation. This happens when the floorboards expand too much, and there isn't enough room for them to move freely. The result is a raised floor that can be uneven and even dangerous to walk on.
3. **Gapping:** If the hardwood flooring is not acclimatized, it may expand or contract too much after installation, leading to gaps between the floorboards. This can be unsightly and can also create gaps that allow dirt and debris to accumulate.
4. **Shrinking:** Hardwood flooring that is not acclimatized may shrink after installation if the installation location is drier than the place where the flooring was stored. This can result in gaps between the boards and can also cause the boards to become loose.

5. **Cupping:** Finally, hardwood flooring that is not acclimatized may cup after installation. This happens when the moisture content of the boards is uneven, causing the boards to curl up at the edges.

To avoid these problems, it's important to take moisture readings to measure site humidity, site temperature, subfloor moisture and hardwood flooring moisture content. It's also important to properly acclimatize hardwood flooring prior to installation. This typically involves storing the flooring in the installation location for a period of time, so that it can adjust to the temperature and humidity of the space. The manufacturer's guidelines should be followed for acclimatization, as different types of hardwood flooring may have different requirements. By properly acclimatizing the flooring, you can help ensure that it remains stable, level, and free from warping, buckling, and other issues

What subfloor issues lead to hardwood flooring installations being problematic?

Subfloor issues can cause a range of problems with hardwood flooring installations. Subfloors as a rule should be even, dry, sound, level and free from dirt and debris. Here are some of the most common subfloor issues that can lead to problems with a hardwood flooring installation:

1. **Uneven subfloor:** If the subfloor is not level, it can cause the hardwood flooring to be uneven as well. This can lead to gaps between the floorboards, and even cause the boards to warp or buckle over time.
2. **Moisture in subfloor:** If the subfloor is not dry, it can cause the hardwood flooring to expand and contract unevenly, leading to warping, cupping, or even buckling of the boards. Moisture can come from a variety of sources, including a high water table, leaky pipes, poor drainage or simply that the subfloor was not dry enough in the first instance and should have been checked by the installer.
3. **Subfloor movement:** If the subfloor is not stable, it can cause the hardwood flooring to move around as well. This can lead to gaps between the floorboards, and even cause the boards to loosen or become uneven.
4. **Inadequate subfloor preparation:** If the subfloor is not properly prepared, it can lead to problems with the hardwood flooring installation. For example, if the subfloor is not clean and free of debris, it can cause the adhesive to fail, leading to loose or uneven flooring.

To avoid these problems, it's important to ensure that the subfloor is properly prepared before installing hardwood flooring. This may include levelling the subfloor, ensuring that it is dry and stable, and using the correct type of adhesive and installation method for the subfloor type. By addressing any subfloor issues prior to installation, you can help ensure that your hardwood flooring is installed correctly and will remain stable, level, and free from problems.

What are the different types of subfloors you can install hardwood flooring on and what should you bear in mind before installation?

There are several types of subfloors that you can install hardwood flooring on. Here are the most common types and some things to consider before installation:

1. **Plywood subfloors:** Plywood is a popular choice for subfloors because it provides a stable and level surface for hardwood flooring. Before installation of the plywood, it's important to ensure that the plywood subfloor is clean, dry, and free of debris. Plywood subfloors should also be secured firmly to the floor joists or subfloor using plugs and screws, and have no loose or squeaky areas.
2. **Concrete subfloors:** Concrete is another common subfloor material. Before installation, it's important to check the moisture levels in the concrete. If the moisture levels are too high, you may need to install a moisture barrier before installing the hardwood flooring or wait until they become dry enough. Concrete subfloors should also be level, with no bumps or uneven areas.
3. **OSB subfloors:** OSB (oriented strand board) is a type of engineered wood product that is commonly used as a subfloor. Before installation, it's important to ensure that the OSB subfloor is properly secured to the floor joists or subfloor and is free of any damage or defects. OSB subfloors should also be level, with no bumps or uneven areas.
4. **Chipboard/Particle board subfloors:** Particle board is a low-cost subfloor material that is typically used in new build homes. Particle board subfloors should also be securely fastened to the floor joists or subfloors, with no loose or squeaky areas.

Before installing hardwood flooring on any type of subfloor, it's important to ensure that the subfloor is clean, dry, and level. You should also check for any damage or defects, and make any necessary repairs before installation. Additionally, you should choose the appropriate type of adhesive and installation method for the subfloor material, and follow the manufacturer's installation instructions carefully.

British Standard BS 8201:2011 which provides guidance on the selection and installation of hard floorcoverings, including hardwood flooring. This standard covers various types of subfloors and provides recommendations for moisture testing, surface preparation, adhesive selection, and installation methods.

Some of the key points covered by BS 8201 include:

Moisture testing: Prior to installation, it is important to conduct a moisture test of the subfloor and the hardwood flooring to ensure that the moisture content is within acceptable limits. The standard recommends using a moisture meter and following the manufacturer's guidelines for acceptable moisture levels.

Surface preparation: The subfloor should be clean, level, and free from dust, debris, and any protruding objects. The standard recommends using suitable preparation methods such as sanding or grinding, and filling any gaps or cracks with an appropriate material.

Adhesive selection: The adhesive used to install the hardwood flooring should be suitable for the subfloor and the hardwood species, and should comply with relevant standards such as BS EN 14293:2003.

Installation methods: The standard recommends using an appropriate installation method based on the subfloor type and the hardwood flooring species. This may include methods such as floating, glue-down, or nail-down installation.

It is important to note that compliance with BS 8201 is not mandatory, but following its guidelines can help ensure a successful hardwood flooring installation.