8. COMMON DEFECTS AND RECTIFICATION

8.1 Pre-installation Rectification

Pre-installation inspection and rectification works for subfloor should be conducted before the installation process. Defects, e.g. hollowness, unevenness and cracks on the subfloor should be rectified before installation to achieve good performance of the engineered wood flooring.

8.2 Good Practices and Common Defects

To achieve high quality engineered wood flooring and workmanship standard, contractors should understand the common complaints and how to avoid them. It is important that quality control should be committed and driven by management. It is a good practice for contractors to prepare an Inspection and Test Plan (ITP, see Appendix) which summaries and keeps track of the project’s inspection, acceptance criteria and frequency of inspection. It should ensure that the finished work is inspected based on client’s requirements and standards.

Users should be mindful that the lamella on engineering wood floor is a natural product and is subject to the natural colour variations within the species. Although colour or tone variations are less apparent in some species, no two batches of flooring will be identical. This is the beauty and uniqueness in choosing a natural product. Users need to be fully aware and accept that colour variation may still occur although the manufacturer has adopted a very high standard when selecting the lamella during production.

The other aspect of this natural product is the presence of grains and knots on the lamella. These are part of the natural patterns of the wood from which the flooring is manufactured and are not considered as defects. However, the manufacturer needs to ensure that the plank surface with grains and knots is adequately treated and that the area with the grains and knots on the finished product should be smooth with all the coatings in place.

The contractor can make use of inspection checklist to set benchmark for the site team when conducting the inspection. The inspection criteria in the checklist can be in accordance with the CONQUAS® quality assessment standards. The following are some good practices and common defects.
Possible Causes
• Mixing of planks from different batches.
• Poor quality control from manufacturer.

Recommendations
• Ensure that the planks are from the same batch. It is recommended to open 2-3 bundles during installation so that it is possible to blend the planks more consistently.

Table 8.2a shows finishing check and defect in CONQUAS® Assessment

Consistent colour tone

Possible Causes
• Uneven sub floor.

Recommendations
• Ensure sub floor is even. Do necessary rectification if uneven.
• Apply self-levelling compound for direct installation or plywood in accordance to manufacturer’s recommendation or thicker for plywood base installation.
Possible Causes
• Poor human traffic control within the unit.
• Insufficient protection on the completed flooring.

Recommendations
• Control access to restrict workers entering unit.
• Plan sequence of work in order to minimise damage on flooring.
• Provide cardboard corrugated sheets or suitable protection to protect flooring after engineering wood flooring is installed.

Table 8.2d shows delamination check and defect in CONQUAS® Assessment
i) No squeaking sounds when walking on engineered wood flooring

Possible Causes
• Insufficient bonding for the planks with sub-floor / plywood.
• Floors bonded but dip in slab with thinner adhesive.
• Uneven sub-floor level and movement of boards.
• Types of sub-floor system installed, e.g. joists or battens system
**Recommendations**

- Apply sufficient adhesive for engineered wood planks.
- Ensure evenness of sub-floor.
- Ensure correct expansion allowance to prevent the floor from buckling and causing failure in adhesive bond.
- Hollowness check will not be performed on timber flooring and engineered wood flooring. Timber flooring and engineered wood flooring will have a ‘drummy’ sound based on the evenness of subfloor and depth of adhesive. This is not a concern unless there is squeaking sound and vertical movement of the planks (delamination) when walking over the flooring.

**Possible Causes**

- Water has penetrated the engineering timber flooring either through the flooring or through the windows.
- Loss of adhesion of engineered timber boards at the edges due to water seepage.
- Excessive exposure to sunlight may also cause slight cupping.

**Recommendations**

- Ensure that the flooring is protected from the weather and the flooring is not flooded after the timber planks are installed.
- Use proper waterproofing or stop the source of water seepage.
- Protect floor that is exposed to excessive sunlight.
Table 8.2e shows **jointing check and defect** in CONQUAS® Assessment

**i) No visible gaps between engineered wood strips**

<table>
<thead>
<tr>
<th>Good jointing</th>
<th>Obvious gaps between engineered wood strips</th>
</tr>
</thead>
</table>

**Possible Causes**
- Engineered wood planks moisture content higher than 14 %. Poor ventilation within the room resulting in excessive temperature difference causing movement of flooring.
- Poor workmanship.

**Recommendations**
- Ensure that the moisture content is within the manufacturer’s recommendation.
- After installing the engineered wood floor, ensure the room has air circulation.
- Ensure installer is trained adequately to meet the workmanship quality.

**ii) No visible gaps between engineered wood floor and skirting**

<table>
<thead>
<tr>
<th>No visible gap between skirting and engineered wood flooring</th>
<th>Uneven gap between skirting and engineered wood flooring</th>
</tr>
</thead>
</table>

**Possible Causes**
- The floor is uneven.
- The skirting is not properly installed.
- The glue or nail holding the skirting is not firm.
- Too many joints on the skirting.

**Recommendations**
- Ensure that the flooring is as flat and even as possible, e.g. using self-levelling compound.
- Make sure that the holding system adopted to fasten the skirting to the wall is effective.
- Reduce the number of joints by providing a full length or longer piece.

Over time, engineered wood flooring will respond to its environmental condition and usage. Thus, end users need to be aware that these conditions may cause tone variations across the flooring and appearance of gaps between some planks.
8.3 Rectification

8.3.1 Repair Kits for Minor Defects

For minor defects such as scratches and dents, users can use repair kits or paste to rectify and touch-up defects by themselves without replacing the engineered wood flooring. The ready-to-use material is easy to use and the flooring repaired by matching the tonality of the wood.

Recommended repair kits and paste by suppliers / vendors

8.3.2 Re-coating of Pre-finished Floors

Subject to the floor condition, it is recommended to re-coat existing flooring to extend the life span of engineered wood flooring. This process involves light buffing using correct buffing machine followed by an application of protective coating. It is recommended to test and check for compatibility of coating with the manufacturer or contractor.

8.3.3 Re-sanding and Re-application of Protective Coating

Depending on extent of wear and tear by human traffic and usage, users can consider carrying-out re-sanding and re-application of protective coating on existing flooring. This process involves sanding of existing floor surface to expose bare wood followed by buffing with fine screen to remove excess filler and preparing surface for coating.