

# INTERLINK

## REPURPOSING RUSTIC TIMBERS

Interlink continually strive to deliver quality recycled timber products & services with the greatest degree of accuracy in description and suitability. Such is the nature of recycled, natural products there is generally variations in dimensions, interpretations, definitions, terms and general characteristics.

Interlink endeavours to communicate with clarity and certainty in all aspects, and have summarised the below to encompass a clear standard to which we operate to. With the best intentions in mind, Interlink asks that any communication and consideration in using such products are guided by the following terms to achieve the best results and experiences for everyone involved when re-purposing such materials.

In wholesale quantities there is often a portion of sleepers that are either above or below the average graded stated condition. All dimensions, weights, grades and characteristics are averaged approximates to our best knowledge. Tannin can be present in fresh, unused sleepers. Known treatments will always be declared. Interlink takes great pride in open dialogue and transparency, and encourage direct interaction to best assess suitability for all supply requirements.

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### **Railway sleepers are rated according to some of the following factors:**

**Used:** All used, recycled & reclaimed sleepers and hardwood products will always contain a minimum of splints, bows, cracks / splits, chips and general wear. Surface or minor rot is possible. Ex-rail steel or contaminants may be present and generally declared when noticeably observed. Bolt holes, recesses or notches can be present. General weathering is typical.

**New:** A completely unused sleeper, free from potential rail contaminants & typically clean. May contain moisture & sleeper characteristics such as knots, cracks, splits & (log) wane and bows. Variation in dimension is expected within reason and tannin or dry decay may be present.

**AAA Grade:** At least three flat faces and square sides. Typically a minimum of two straight edges. Minimal chips & dents. Clean bolt holes & notches may be present. Flat square ends. Generally consistent dimensions. Surface light weathering present.

**AA Grade:** At least two flat faces and square sides with minor weathering. Typically a minimum of one to two straight & clean edges. Notching & bolt holes could be present. Rustic weathering present. May have minor outer wane. May have minor cracking at ends.

**A Grade:** Top & sides are square with weathering, generally two to three good faces. Three sides are relatively defined. Minor to moderate wane & bow could be present. Crack at ends or dry decay may be present. Rail steel, rail tie notching and bolt holes could be present. Definite rustic weathering, split/worn ends possible.

**B Grade:** Top & side are generally square but worn and rustic weathering is probable. Splits and worn ends tend to be present. Wane & bow is likely and dry decay could be present. Chipping around bolt holes & notches could be substantial.

**C Grade:** Top mostly flat with two to three worn / well weathered sides present. End cracks will be evident. Wane & bows (possibly substantial) will be present. Rot may be evident. Substantial chips around bolt holes and notches likely.

**Landscape Grade:** Generally bundles of mixed graded sleepers that are typically B – D rated; or where a compelling grade cannot be applied. Ideally used in a variety of non-structural applications where visual or form continuity is less essential.

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### Terms & Characteristics:

Wane: Often refers to the bark or wood growth (against grain) that can be left on lumber after milling; this is due to the shape of the log and can leave curvature in edges where wood will not be present. Residual bark / timber remaining on sleeper may be liable to naturally fall off through drying & weathering.

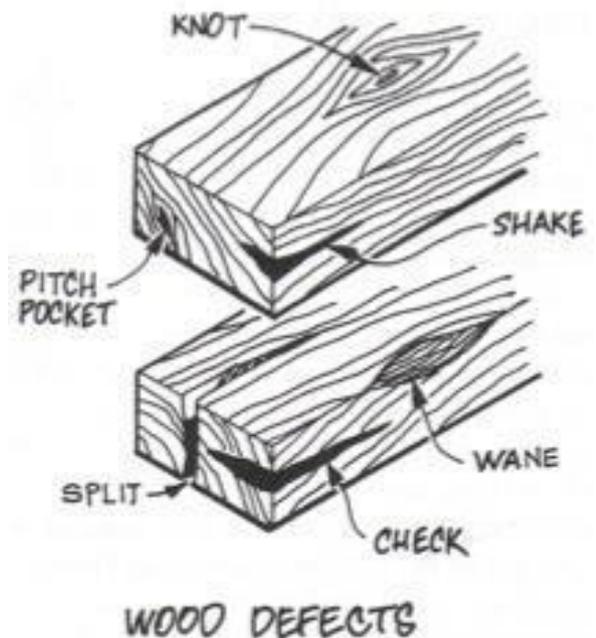
Check: A separation of the wood normally occurring through the rings of annual growth and usually as a result of the natural drying process occurring too quickly. Surface 'checks' are failures that usually occur in the wood on the flatsawn faces of boards. 'Checks' occur because drying stresses exceed the tensile strength of the wood against the grain, and they are caused by tension stresses that develop in the outer part, or shell, of boards as they dry around the still wet and swollen core. Surface checks usually develop early in drying because the lumber surfaces dry too quickly from low relative humidity.

End checks: Occur because moisture moves much faster to the end directions rather than in a transverse direction. Therefore, the ends of timbers dry faster than the middle and stresses develop at the ends, creating end 'checks' leading to cracks.

[Cross] Shake: Natural occurring defects in standing trees caused by lengthwise separation of the wood along the grain, usually occurring between or through the rings of annual growth. A surface 'shake' occurs on only one surface, while a through shake extends from one side to the opposite or adjoining side of the piece. This can be seen as growth holes or cracks.

Splits: Separation of the wood through the piece to the opposite surface or to an adjoining surface due to the tearing apart of the wood cells. Splits in wood are sometimes the result of the drying process or the dry kiln. Splits caused by drying extend across one or more growth rings (radial direction). Many splits extend parallel to the growth ring, as in the case of mechanical damage, while some splits run at various angles to the grain and growth rings.

Tannins: Tannins in hardwood timber are the natural properties of the timber itself and that stored within the internal grains of the timber. When moisture or water permeates through the timber it will bring these tannins to the surface, causing black or brownish stains. (Continued in handling guide below).



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### **Safety & Handling:**

Using, moving or modifying hardwoods & railway sleepers can be a highly rewarding activity. Creatively fitting a long lasting natural product should be done safely and carefully at all times throughout handling and installation. Occupational health & safety, good work practices and awareness on site for others and yourself contribute greatly to ensuring everyone finishes the day soundly.

Interlink Ltd recommends all safety, protection & work equipment carry a minimum of [AS/NZS safety standards](#). Please see the below as minimum suggested precautions:

### **Hints when handling sleepers:**

- Most sleepers are heavy, use correct form and two people to lift if alternatives are not available.
- Always wear gloves & steel toed footwear when handling sleepers.
- Sleepers will last longer if a barrier is placed between soil and sleeper (i.e. polythene) or free draining mediums.
- Thorough visual inspections prior to applying tools, fixtures & fittings or machinery should be applied.
- Use appropriate breathing masks, long sleeves eye & hearing protection when cutting, drilling & fixing sleepers.

### **Preservation treated sleepers:**

Sleepers that have been historically treated can be ecologically re-purposed in landscapes, where the carbon, and treatment is retained, and released over the course of their second life in NZ. This goes a huge way in minimising toxic volumes in to landfills, and minimises NZ's need for recently manufactured, treated timbers.

With some standard practices, any risk around historic treatments can be minimised or eliminated, please see the below for recommendations:

- Always wear gloves when handling sleepers.
- Avoid any skin contact, and wash any affected areas at the earliest convenience with cold water; clean and wash before rubbing eyes, eating, smoking or going to the toilet etc.
- Fine wood particles can be hazardous.
  - Use appropriate safety breathing masks + Eye & hearing protection when cutting sleepers.
  - Consider those around you and choose a suitable platform and space.
  - Contain/suppress dust. Collect timber residue after cutting thoroughly.
  - Wash clothes separately.
  - Dispose of waste responsibly (away from waterways).
- Preservation treated sleepers should not be used:
  - In or near internal areas.
  - External designs such as tables or barbeque areas, or where there may be frequent skin or food contact.
  - Do not use for cutting boards or counter tops.
- A suitable barrier (i.e polythene) is required when sleepers are in contact with soil for edible gardens or fruit trees.
- Avoid direct or indirect contact with drinking water and waterways.
- Do not use in the interiors or exteriors of agricultural buildings where the treated timber:
  - May be in direct contact with domestic animals & livestock which may lick or continuously rub against the wood.
  - Where food for onward consumption is stored.
- Avoid areas susceptible to prolonged heat as leeching can occur and staining is possible.
- Do not burn treated sleepers or wasteage.

**Tannin:** Tannins are water-soluble extractives, which are present in some species of timber, and moisture permeating through the timber will bring these to the surface, causing black or brownish stains and leaching. Applicable lock in or washout solutions are commonly available, however before installation, as recommended by (wash out) manufacturers, remove excess tannin. This is only necessary (a) if the timber is exposed to rain, and (b) if the tannin is likely to wash off onto a sensitive surface such as sandstone pavers or light-coloured render. Alternatively, allow nature to take its course and the tannin will eventually weather & wear out.

**If you have any questions, comments or suggestions please feel free to get in touch today!**

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