



## OAK BEAMS GUIDELINES

This including oak beams used in the manufacturing of oak building, porches, trusses and fireplace beams

### Definition

Oak By Design only supplies seasoned, air-dried oak beams. We do not supply fresh, green oak.

An air-dried oak beam is one that has been felled more than 12 months. Typically, the stocks of beams are seasoned for a minimum of 3-5 years.

### Grading

Oak is visually graded and for structural purposes is classified as D30, D35 or D40. D30 is a common structural grade as is used as a minimum for all structural work.

The appearance, orientation and size of knots and cracks, will determine the grade of the oak and these characteristics are not necessarily detrimental to the beams suitability for structural work.

Non-structural work, for example fireplace beams, will still abide by this grading system.

### Colourisation

All oak beams will darken over time. If beams are left outside, the sunlight (UV rays) will react with a naturally present chemical in the oak called tannin acid. This reaction will result in the oak beam turning a silver or grey colour. See maintenance below.

Any oak beam used for internal purposes will not turn silver or grey but will mellow and slightly darken over time. This subtle change is sometimes noticeable after several years.

### Movement

All oak contains moisture. Where moisture levels are about 12%, oak will remain in a stable format as long as the temperature and humidity levels also remain within tolerances. Extreme variations in these additional criteria would increase or decrease the moisture level in oak causing movement in the beam.

Oak will naturally dry out over time and as a rule, will dry at 25mm per year. This means that seasoned oak, that contains less moisture than 'green' oak has less chance of movement. This is not to say no movement will take place, as the oak will have a settling down period where it acclimatizes to its surroundings.

All air-dried oak beams may 'move' resulting in slight bow or twist. Surface cracks may open and cracks may appear as the beam matures. This process is normal and accepted.

### Maintenance

Generally speaking, oak beams do not need maintaining. Any internal or external maintenance is purely for cosmetic reasons.

Externally, oak beams can be treated with UV oil. This is used to stop colourisation caused by the weather and sunlight. UV oil can also have a pigment to colour the oak to a natural, golden or dark oak appearance.

Internally, oak beams tend to be oiled, stained or waxed. With a plethora of products on the market, they will alter the oak beams' colour and sheen level that may result in the easier future maintenance of the beam.