

1.12 Timbers

Natural Timbers:

Wood that has come from tree trunks, dried and cut into planks.

Manufactured Timbers:

Constructed by combining timbers together to make a board

Properties:



Hardness: The ability of a material to withstand cutting and scratching (timber is generally quite soft and can be cut and scratched with metal tools).



Toughness: The ability to withstand being hit (timber is quite a tough material, if you hit it with a hammer, it may dent but not break).



Durability: The ability of a material to last a long time (timber that has been dried out and kept dry is durable).

Hardwood:

- Broad leaf tree
- Seeds are in a fruit like an acorn
- Grow slowly taking more than 100 years.
- Deciduous

Soft Wood:

- Thin needle like leaf tree
- Seeds are in a cone
- Grow quickly used for timber after 30 years
- Evergreen so keeps leaves all year
- Coniferous

Manufactured:

- No grain
- Using off cuts or waste material

MDF:

Cheap, Smooth ungrained surface good for painting or staining, Easy to machine

Plywood:

Flat and structurally strong Surface looks like wood, Resistant to warping, cracking and twisting

Beech:

A tough wood, Does not crack or splinter easily, Hard

Oak:

Strong and durable, Has an attractive grain.

Mahogany:

An attractive finish, Quite easy to work with

Balsa:

Very lightweight, Easy to cut

Pine

Very durable, Easy to work Reasonably strong and lightweight, Quite cheap

Cedar

Natural oils make it resistant to water and fungal growth

Expensive, Not very resistant to moisture, Not suitable for exterior use

Expensive, Becoming rarer, Harder to work with than some woods, Corrodes iron and steel.

Expensive, Environmental problems with sourcing from tropical forests

Much too soft and weak for most products.

Can warp, crack and splinter more than other woods

More expensive than pine and not as strong.

Key Terms:

Grain: Fibres that run the length of a tree trunk, which give it its strength and make distinctive patterns.

Veneer: A thin slice of wood, about 1mm thick. Used as a decorative surface and to make plywood.

Evergreen: A tree that keeps its leaves all year round