Factsheet: Wood Species, Use and Origin

Choosing the right wood

When public purchasers procure for instance wooden window frames they need to consider several aspects ranging from price, timber availability to the use of the product. How weather-resistant (cold, heat, rain) must the wood be? Is tropical wood an option? How will the window-frame look in 5 or 10 years? Will the colour peel off quickly? What is the most suitable wood species available locally? etc.. These are just a few of very practical questions impacting on the final product purchased.

This factsheets provides an overview of some of the types of wood typically available, its origin and usage according to the product procured, together with some useful links on where to find additional information.

Table 1: Products and type of wood

The table below lists, in a non-comprehensive way, some of the wood species and the typical type of product use.

More detailed information can be found in the following websites:

- www.hoovedesigns.com/woods.html
- www.wood-database.com/about/
- www.ehow.com/ehow-home/
- www.azwood.com/index.html
- www.musterkiste.com/en/holz/index.html
- www.nzwood.co.nz/about-nz-wood/
- www.eastteak.com/aboutus/history.html
- www.essortment.com/different-types-wood-54080.html

	CONSTRUCTION	FURNITURE	PANNELLING	FLOOR	JOINERY	SPECIFIC USE
ASH		X	X			Wardrobe doors, tool handles
BALAU / SELANGAN BATU/BANGIRAKI	X					
BALSA		X			X	Model making, insulation
BAMBOO	X	X		X		Scaffolding
BEECH		X		X		Marine construction
BRAZILIAN MAHOGANY		X			X	Plywood
CEDAR	X	X	X			
DOUGLAS-FIR (softwood)	X	X	X			Plywood, sea defences
LARCH	X	X	X			Fencing
LOURO VERMELHO	X	X	X		X	Veneer, boxes and crates, ship building, bridges

MAHOGANY		X			X	Boatbuilding
OAK		X		X	X	
PINE		X			X	
SAPELE		X			X	
SYCAMORE			X			Veneer
TEAK		X			X	Garden furniture
UTILE / SIPO	X	X			X	
WALNUT		X	X			
Note: When purchasing tropical timber it is important to ensure that it is certified as originating from sustainably managed forestry.						

Table 2: Origin and characteristics of the most common types of wood

The table below lists origin and properties of the most common wood species.

	ORIGIN	PROPERTIES
ASH	UK, Europe and North America	Ash is a hard, heavy, ring porous hardwood. It has a prominent grain that resembles oak, and a white to light brown colour. Ash can be differentiated from hickory (pecan) which it also resembles, by white dots in the darker summerwood which can be seen with the naked eye. Ash burls have a twisted, interwoven figure.
BALAU / SELANGAN BATU/BANGIRAKI	South-east Asia	Typically hard to work, due to its high density. Some species may have a slight blunting effect on tools due to small levels of silica present in the wood. Glues, stains, and finishes well.
BALSA	Ecuador	Soft, lightweight and flexible, balsa wood is easy to work and inexpensive to use for hobbies and home construction.
BAMBOO	Found in all climates across Asia, sub-Saharan Africa, northern Australia and the Americas	Bamboo plants are harvested and then the narrow strips (or slats as they are sometimes referred to as). Because it is such a dense product, bamboo does not respond to staining.
BEECH	UK, Europe and North America	Beech is a hard, strong, heavy wood with tiny pores and large conspicuous medullary rays, similar in appearance to maple. This relatively inexpensive wood has reddish brown heartwood and light sapwood.
BRAZILIAN MAHOGANY	Central and South America	
CEDAR	Brazil and North America	Cedar is knotty softwood which has a red-brown colour with light streaks.
DOUGLAS-FIR (softwood)	Europe and North America	The wood of the Douglas fir is medium-weight and, in comparison to other coniferous woods, fairly hard. It is subject to low shrinkage and has good stability. It is strong and elastic. It is also resistant against fungal and insect infestation and exhibits good natural durability when exposed to the elements.
LARCH	Europe and North America	Larch is a medium density softwood, with shrinkage. Due to a small juvenile core, the timber is fairly dimensionally stable, but can sometimes be prone to twist, particularly where larger sizes are used.
MAHOGANY	West Africa	Mahogany is strong, with a uniform pore structure and poorly defined annual rings. It has a reddish - brown colour and may display stripe,

		ribbon, broken stripe, rope, ripple, mottle, fiddle back or blister figures.
OAK	UK, Europe, US and Australia	Oak is a heavy, strong, light coloured hardwood. It is ring porous, due to the fact that more and larger conductive vessels are laid down early in the summer, rather than later. Prominent rings and large pores give oak a course texture and prominent grain.
PINE	UK, Europe and North America	Pine is a soft, white or pale yellow wood which is light weight, straight grained and lacks figure. It resists shrinking and swelling.
SAPELE	West Africa	Sapele ranges from medium to fairly dark reddish-brown to purplish-brown, while sapwood is whitish or pale yellow. This wood is moderately durable, and its resistance to termite attack varies. While sapele is similar in colour to African mahogany, it is more durable than true mahoganies. Its strength is similar to oak.
SPRUCE (softwood), also known as WHITEWOOD	UK, Europe, North America	Strong and hard. Finishes well and has low resistance to decay. Has moderate shrinkage and light in weight.
SYCAMORE	Europe	The sapwood of sycamore ranges from white to light yellow to reddish-brown or flesh-coloured, while the heartwood ranges more towards light to dark brown in colour. The species has an interlocked and irregular grain, and is fine and even in texture.
TEAK	Burma and Africa	Teak is a yellow to dark brown hardwood which is extremely heavy, strong and durable. Often strongly figured, teak may show straight grain, mottled or fiddle back figures.
UTILE / SIPO	West Africa (Ghana, Cote d'Ivoire)	
WALNUT	Africa	Walnut is strong, hard and durable, without being excessively heavy. It has excellent woodworking qualities, and takes finishes well. The wood is light to dark chocolate brown in colour with a straight grain in the trunk. Wavy grain is present toward the roots, and walnut stumps are often dug out and used as a source of highly figured veneer.
Note: When purchasing tropical timber it is important to ensure that it is certified as originating from sustainably managed forestry.		

Useful links on further information on type of wood and use

In the following links public purchasers can find further information on use, origin and properties of various wood species that would help them choosing the most suitable material.

- ✓ Australian Timber database with a list of several wood species and details about the use of each one.
  http://www.timber.net.au/index.php/species.html
- ✓ Friends of the Earth's "Good Wood Guide" that provides a table with detailed information about countries of origin, common uses and additional information such as threat of extinction, possibility of reclaim and the diffusion in the UK of several wood species.
  http://www.foe.co.uk/campaigns/biodiversity/resource/good_wood_guide/wood_timber_types_a_to_g.html
- ✓ In this webpage the International Wood Products Association (IWPA) provides a list of the lesser known wood species.
  http://www.iwpawood.org/displaycommon.cfm?an=1&subarticlenbr=81

- ✓ This website is an introduction to lesser known species from the tropical regions of the world. It includes a selection of species, which have been chosen because of their commercial possibilities and potential.
  http://pre.fsc.dk/index.php?id=262
- ✓ Spanish guide sustainable timber procurement, written by the City of Madrid:
  http://www.madrid.es/UnidadesDescentralizadas/Sostenibilidad/AYRE/Gu%C3%ADa%20productos%20forestales%20AYTO_10_2012.pdf
- ✓ Italian website in which it's possible to find many useful information and suggestions on the recognition of different types of wood:
  http://culturalegno.weebly.com/

For more information on the Sustainable Timber Action (STA) project please visit
www.sustainable-timber-action.org

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