



# Birch Plywood

PRODUCT GUIDE



# Birch Plywood – The Natural Choice



Orleans Infant School – project by DLA Architecture and Tandem (Photo by Leigh Simpson).

James Latham supplies a wide range of high quality Birch Plywood and to help you get the most from this versatile product – we have improved and updated our product guide to provide more technical information.

Birch trees are the ultimate renewable resource with virtually every part of the tree being utilised. The twigs are used for besoms and sauna whisks, timber for furniture and flooring; bark was used for roofing and canoes, and even the sap for wine! Waste timber and residue at plywood mills is used for other materials and boiler fuel for energy production.

Since the late 19th Century Birch has been used for high quality plywood that is widely used for furniture, construction, toys, vehicle building, packaging and today high-tech wind turbine blades and insulation boxes for LNG carriers (vessels).

From an environmental perspective, Birch is an abundant species found in the forests of the northern hemisphere being widespread across Canada, Russia and most of Northern Europe, in particular Finland and countries bordering the Baltic. Birch species are relatively fast growing and support a myriad of varied wildlife, and where managed as a sustainable forest resource, do not impinge on the natural biodiversity.

So for quality, sustainably sourced plywood, James Latham European Birch is definitely 'The Natural Choice'.

Birch Plywood is available with either FSC® or PEFC certification and James Latham has a comprehensive Chain of Custody system in place to ensure transparency in sourcing its timber products. Our Birch plywood is also purchased in line with the requirements of the European Union Timber Regulation (EUTR).





## Birch Plywood Grades - 'commercial availability'

### HIGHER GRADES

#### Grade B/BB

Generally, the best grade available for clear finishing. Good clean appearance, only minor, natural features, i.e. small pin knots permitted on the 'B' Face.

'B' grade is normally only available with 'BB' Grade reverse. (See grading information below for BB).

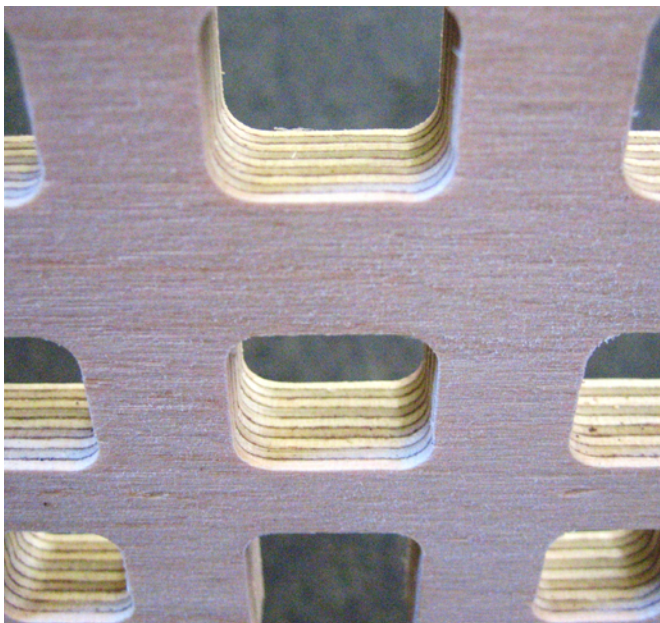
#### Grades S/BB & S+/BB

S Face is similar to Grade B, but allows more natural defects and the odd well-made patch – Generally good enough quality face for clear finishing or painting.

S+/BB has a better face with no plugs. The reverse is a standard BB Grade.

#### Grade BB

The main commercial or utility grade - both faces are Grade BB – which allows patches and other knots/imperfections. Suitable for all general work including CNC Machining or where face grade not overly important – However good quality BB grade boards may be acceptable for clear finishing and furniture! Available in Long or Cross grain construction.



*James Latham Birch Plywood is widely used for CNC Machining as the core is solid all the way through.*

### LOWER GRADES – (Cores are still solid)

#### Grade BB/CP and BB/WG

Grade BB face with WG or CP reverse. Standard commercial grades which are essentially only sound (Good) one side – Reverse side can have numerous large knots, open splits/defects and discolouration.

#### Grade CP

Russian Grade – In between BB and WG used where face appearance not important, i.e. packing crates, furniture carcasses.

#### Grade C

Similar appearance and use as Grade WG – may be un-sanded with open defects and discolouration.

#### Grade WG

Large knots / patches / open defects, staining and discolouration permitted - used for packing crates and carcass work or where unseen, such as upholstered furniture.



*A 'Batman' shaped plug or patch – often found on BB Grade Plywood and lower. These patches are generally well made and give a sound/solid face.*

# Birch Plywood

## How to specify Birch Plywood. Relevant Standards and Grades.

### BS EN 635-2: 1995 Plywood – Classification by Surface Appearance. Part 2. Hardwood

Note: - within BS EN 635-2: 1995 Plywood, five grades are classified, E, I, II, III and IV - for ALL hardwood species. However, European Birch plywood is generally graded according to a country's own National Grading Rules - so only approximate comparisons can be made with BS EN 635-2: 1995 Plywood, as the grades from the countries below tend to be more stringent.

Therefore, for practical purposes it is often easier to specify by Grade Letter, i.e. Grade B/BB or by the grade and country of origin, i.e. Finnish Birch Plywood, Grade S/BB or Latvian Birch Plywood, Grade BB - depending on end use requirement. The Grades refer to the faces, as the core of Latham Birch Plywood is always sound and solid (only very small minor core gaps may be present).

The bond type must also be specified, i.e. BS EN 314-2: 1993 Plywood. Bonding quality. Class 1, 2 or 3, depending on hazard class and applications.

BS EN 635-2: 1995 Plywood Grades for all hardwoods	Guide to end use for birch grades	Finnish birch	Latvian birch, Polish birch	Russian Birch-grading rules
Grade E	Clear-finishing, decorative uses, furniture, wall panels, toys, models, shopfitting, interior design	Approx Equivalents - But generally higher quality than BS EN 635-2: 1995 Plywood.		Not available as per BS EN 635-2: 1995 Plywood grading rules
Grade I		Grade A - This quality is near perfect ! But not commercially available any longer.	Grade B - Normally only available as B/BB	Grade B Available as B/BB
Grade II		Grade S – Normally available as S/BB	S/BB S+/BB – improved 'S' Grade	
Grade III	General use furniture, painting laminating and veneering	Grade BB – Main commercial grade with two sound faces. BB/WG - only has one sound face.  Good quality Utility Plywood, the all round workhorse for the trade.		BB or BB/CP (one sound side) are main commercial Russian Grades
Grade IV	Packing cases, pallet bases, carcassing	Grade WG		CP/CP or CP/C
			Grade C – Un-sanded	C/C

\*Please note - 'E' grade is not commercially available at present and B/B is very difficult to obtain.\*





*Birch plywood used to clad the walls of this contemporary garden room creates a clean, minimalist look that works well in both large and small buildings. (Photo courtesy of Eco-Space Ltd. Photographer: Andy Spain).*

## **Bond type and where to use birch plywood**

The majority of Birch plywood supplied by James Latham is bonded with thermosetting, exterior quality phenolic resin adhesives – formerly known as WBP (Weather and Boil Proof). Several standards now relate to the manufacture and specification of plywood, the main one being:- BS EN 314-2: 1993 Class 1, 2 or 3, with class 3 for exterior quality bonding. Most of the birch plywood supplied by James Latham meets this standard and is also rated as E1, (very low formaldehyde release) and some birch plywood also meets the new 'CARB' Regulations.

Exterior quality adhesives generally appear as dark, purplish-brown glue-lines on the plywood edges and are essential for applications that fall within Hazard Classes 2 and 3 of BS EN 335-3: 1996. The contrasting dark glue-lines against the lighter birch veneers is often incorporated into contemporary design, consequently Birch Plywood is widely used for furniture, shelving and interiors. The uniform construction of birch plywood means that the faces and edges can easily be machined, then simply lacquered or waxed as required (for interior purposes) as the photograph above demonstrates.



*The standard veneer thickness for most European Birch plywood is 1.4mm. Plywood normally has a balanced construction of alternating cross and long grain veneers, i.e. 9-ply for 12mm, 13-ply for 18mm, as can be seen above.*

# Birch Plywood

## Birch Plywood – Applications

Although Birch plywood is bonded with tough, durable exterior quality adhesives, standard uncoated birch plywood **must** always be protected with a suitable exterior paint or wood stain system if used in Service classes 2 or 3 of BS EN 636: 2012, i.e. in humid or exterior applications.

Pre-finished birch plywood such as WISA-®Mutiwall or Buffalo®Board can readily be used for exterior purposes, provided they are correctly detailed / installed, as the faces and edges are sealed against moisture absorption during the manufacturing process.

Birch Plywood can also be bonded with 'interior' quality adhesives and is generally used for LASER cutting of die forms, furniture, packaging and other non-structural end uses. Grades available include BB and C.

## Structural Use

When Birch Plywood is specified for use in structural 'load-bearing' applications such as flooring, roofing and wall sheathing it must have an exterior glue line to BS EN 314-2: 1993 Class 3, plus must also conform to the CE Structural quality as defined in EN 13986 with reference to the Construction Products Directive (CPD).

We can supply strength data (bending / compression) and other technical information for European birch plywood in an electronic format, and for the design of Timber Structures the following EN Standard now applies:- BS EN 1995-1-1: 2004 + A1: 2008 Eurocode 5. Design of timber structures. General. Common rules and rules for buildings. This standard supersedes the 'old' BS 5268 Part 2: 2002, which has now been withdrawn and designers and engineers should use Eurocode 5 instead when designing timber structures.

## Thin Birch Plywood

James Latham also supplies a wide range of 'thin' Finnish Birch Plywood which can be used for model making, toys, jigsaw puzzles, interior design fittings, boxes, saddles, cards, drums and string instruments and other applications that require a tough, flexible material. Available thicknesses include 0.4mm, 0.8mm, 1.5mm and up to 3mm.

## UPM GRADA®

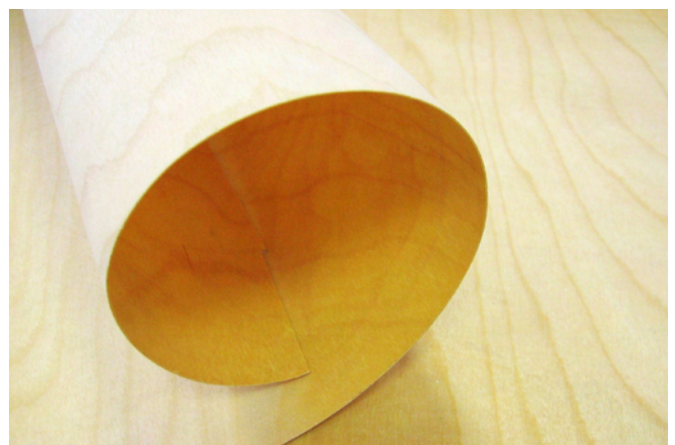
Grada® is an innovative concept which allows wood panels to be formed with heat and pressure. A special adhesive foil is used allowing the birch veneers to slide when heated, so curved components can be manufactured. There is minimal wastage, increased stability and greater productivity. Grada is available from James Latham branches in a range of thicknesses – from 4.5mm to 15mm. See separate brochure for more information.



*New – Grada® for curved and formed Birch Plywood components.*



*'Centenary Bar' at Sheffield University's School of Architecture, CNC machined Grade S/BB Birch Plywood with WISA-Hexagrip floor.*



*'Thin' Birch Plywood is available from stock.*



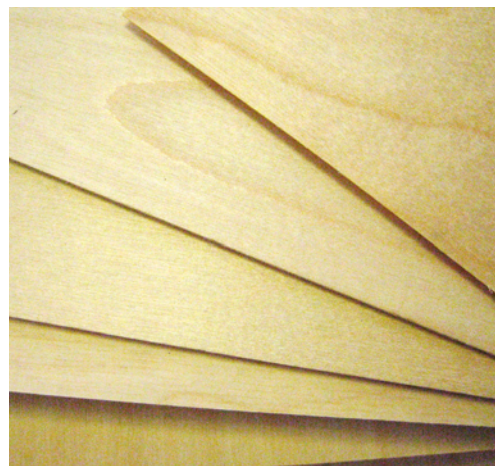
## James Latham. The Natural Choice for Quality Birch Plywood

James Latham stock a wide range of birch plywood - so we are able to offer you greater choice and value, plus our knowledgeable staff are always on hand to help with specifications or technical information.

Exterior Bonded BS EN 314-2: 1993 – Class 3		
Thicknesses	from 3mm to 30mm ( up to 50mm on request )	
Sizes	1220mm x 2440mm / 3050mm plus 1525 x 3050mm / 3660mm, cross grain 2440mm x 1220mm long grain panels always available and larger non-standard panels can be made to order up to 12500mm long.	
Grades	B/BB, S/BB and S+/BB	The highest grades generally stocked
	BB, BB/WG or BB/CP	The main commercial grades for general purpose applications
	WG, CP and C	The lower grades used for packing, crates and pallets where face quality is not important

Interior Bonded BS EN 314-2: 1993 – Class 1/2	
Thicknesses	from 3mm to 24mm
Sizes and falling sizes	1525 x 1525mm and falling sizes
Grades	BB, C and WG

Thin Finnish Birch Plywood	
Thicknesses	from 0.4mm up to 3mm in stock
Sizes	1220 x 1220, 1270 x 1270, 1525 x 1525mm, 1200 x 2400 mm
Grades	BR/BR or IV/IV, III/III, II/II or I/I



*Thin Birch Plywood.*

The above is to be used as a guide, please check availability with your local James Latham depot. Special sizes/thicknesses and specifications, plus CNC machined and cut to size panels are available to order, although minimum quantities may apply.

Details given represent a fair description of the products and are given without liability.

Most of our plywood is manufactured using Birch veneers throughout. All our plywood meets BS EN 314-2: 1993 Class 1, 2 or 3 and BS EN 13986: 2004.

More information relating to EN Standards, Plywood Specification and use can be found in the WPIF Panel Guide and from TRADA who have produced a range of Wood Information Sheets concerning Plywood and other wood-based panels. [www.wpif.co.uk](http://www.wpif.co.uk) [www.trada.co.uk](http://www.trada.co.uk)

# Importing & distribution companies



## Marketing

Tel: 0116 257 3415  
Email: marketing@lathams.co.uk

## Website

www.lathamtimber.co.uk

## Panel & Timber Products

### 1 Dudley

Unit 3, Yorks Park, Blowers Green Road  
Dudley, West Midlands DY2 8UL  
Tel 01384 234444  
Fax 01384 233121  
Email: panels.dudley@lathams.co.uk  
Email: timber.dudley@lathams.co.uk

### 2 Fareham

Unit 6, Matrix Park Talbot Road  
Fareham, Hants PO15 5AP  
Tel 01329 854800  
Fax 01329 849585  
Email: panels.fareham@lathams.co.uk  
Email: timber.fareham@lathams.co.uk

### 3 Gateshead

Nest Road, Felling Industrial Estate  
Gateshead Tyne & Wear NE10 OLU  
Tel 0191 469 4211  
Fax 0191 469 2615  
Email: panels.gateshead@lathams.co.uk

### 4 Leeds

Topcliffe Close, Off Topcliffe Lane  
Capitol Park East, Tingley, Leeds  
West Yorkshire WF3 1DR  
Tel 0113 387 0830  
Fax 0113 387 0855  
Email: panels.leeds@lathams.co.uk  
Email: timber.leeds@lathams.co.uk

### 5 James Latham Scotland

Pharos, Brittain Way, Eurocentral  
Lanarkshire ML1 4XJ  
Tel 01698 838777  
Fax 01698 831452  
Email: scotland@lathams.co.uk

### 6 Wigston

Chartwell Drive off West Avenue  
Wigston, Leicester LE18 2FN  
Tel 0116 288 9161  
Fax 0116 281 3806  
Email: panels.wigston@lathams.co.uk  
Email: timber.wigston@lathams.co.uk

### 7 Yate

Badminton Road Trading Estate  
Yate, Bristol BS37 5JX  
Tel 01454 315421  
Fax 01454 323488  
Email: panels.yate@lathams.co.uk  
Email: timber.yate@lathams.co.uk

## Panel Products

### 8 Hemel Hempstead

Unit 2 Swallow Park, Finway Road  
Hemel Hempstead, Herts HP2 7QU  
Tel 01442 849000  
Fax 01442 239287  
Email: panels.hemel@lathams.co.uk

### 9 Thurrock

Unit 4, Dolphin Way, Purfleet  
Essex RM19 1NZ  
Tel 01708 869800  
Fax 01708 860900  
Email: panels.thurrock@lathams.co.uk

## Timber Products

### 10 Purfleet\*

Units 22/24, Purfleet Industrial Park  
Juliette Way, Aveley, South Ockendon  
Essex RM15 4YD  
Tel 01708 864477  
Fax 01708 862727  
Email: timber.purfleet@lathams.co.uk

## Speciality Panels

### Advanced Technical Panels

**4 Northern Depot**  
Topcliffe Close, Off Topcliffe Lane  
Capitol Park East, Tingley, Leeds  
West Yorkshire WF3 1DR  
Tel 0113 387 0850  
Fax 0113 387 0855  
Email: atp@lathams.co.uk  
www.advancedtechnicalpanels.co.uk

### 8 Southern Depot – ATP

Unit 2 Swallow Park, Finway Road  
Hemel Hempstead, Herts HP2 7QU  
Tel 01442 849009  
Fax 01442 264203  
Email: atp@lathams.co.uk  
www.advancedtechnicalpanels.co.uk

## Flooring

### 9 Thurrock

Unit 4, Dolphin Way, Purfleet  
Essex RM19 1NZ  
Tel 01708 681700  
Fax 01708 252381  
Email: flooring@lathams.co.uk



## OTHER AVAILABLE BROCHURES:

- Door Blanks
- Cladding
- Product Guide
- Flexible Panels
- Cedar Cladding
- HI-MACS
- Environmental Certification Scheme & Timber Purchasing
- Moralt
- HIF
- Decorative Veneered Panels
- Melamine
- iDeck
- Machined Panels
- PAR-KY Flooring & Shinnoki
- ATP Plywood for Transport
- WoodEx
- Bausen Flooring
- ATP Plywood Guide
- North American & Canadian Softwood Clears
- Accoya
- Dendrolight
- Newsletter