

Recycled Plastic Lumber

5 reasons why you should choose British Recycled Plastic

Extremely durable, strong and vandal proof, eliminating maintenance for lower whole life costs

Ultra low carbon footprint as made from recycled and recyclable waste

No need for paint or other harmful preservatives

Does not splinter, rot, crack or fade and is totally impervious to water, algae and insects

Can be worked just like wood

Whether you are installing a maintenance free fence for your garden, replacing the boards for the decking at your home, building some raised beds or building a boardwalk for the local park, we offer a wide range of recycled plastic lumber in many sizes, colours and designs suitable for all your landscaping needs.

The Lumber

Recycled Plastic Lumber (or **Plastic Wood Composite** as it also known) is the basic building block from which much of the **British Recycled Plastic** range of environmentally friendly maintenance free furniture and sustainable construction products are made.

The British Recycled Plastic range of recycled plastic lumber is rot proof, impact resistant, and algae and moss resistant. As the profiles have a skin that paint cannot penetrate, graffiti can simply be wiped clean.



www.britishrecycledplastic.co.uk

Registered office: Unit 8C, Topland Country Business Park, Cragg Road, Mytholmroyd, HX7 5RW

British Recycled Plastic is a trading name of Low Carbon Products Ltd
Company number 6903105 VAT 976 4519 73

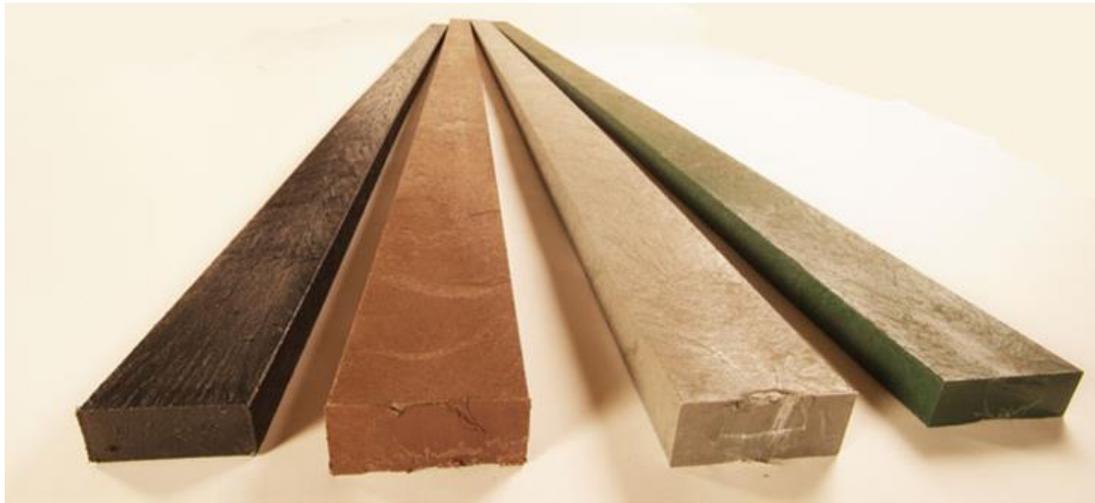


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Recycled Plastic Lumber

It is a **tough, durable, maintenance free alternative to timber**, offering a life span many times that of wood without the need for treatment. This means whole life costs are significantly reduced as maintenance and replacement costs are removed. Therefore as well as being environmentally friendly (made from 100% recycled post-industrial plastic, diverted from landfill) recycled plastic lumber offers significant commercial and technical benefits over traditional solutions.



Designed to replace traditional construction materials, recycled plastic profiles are impervious to water and allow for the easy and quick construction of fences, revetments, boardwalks, steps and pontoons, to name but a few applications, and is the ideal material for areas subject to flooding or standing water.

British Recycled Plastic offer an extensive range of recycled plastic lumber profiles, along with decking boards, tongue and groove and other profiles designed for civil engineering.

Coupled with the major positive environmental benefits, recycled plastic lumber can be used for any application traditionally solved using timber, concrete or metals, providing an economical and environmentally sustainable alternative to these materials, lowering the carbon footprint of construction projects compared to traditional solutions.



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Key points to note about recycled plastic lumber

- Reduction of energy consumption by 66%
- Production of only a third of the sulphur dioxide
- Production of only half of the nitrous oxide
- Reduction of water usage by nearly 90%
- Reduction of carbon dioxide generation by two-and-a-half times
- 1.8 tonnes of oil are saved for every tonne of recycled polythene produced
- Lasts 5 times longer than timber
- Rot and algae proof
- Crack, chip and splinter proof
- Insect and animal resistant
- Labour saving – minimal maintenance
- Non slip
- UV resistant
- Vandal Resistant
- Less Flammable than timber
- Easy to clean
- Can be worked like timber
- Holds screws and fittings well
- Reduced Whole Life Costs
- Diverting Material from Landfill
- Reduces the carbon footprint of any project



Features and Benefits

- **Non rotting** - Does not rot or degrade with age or require any painting or chemical treatment prior to use.
- **Tough, durable and strong** - Will not crack or dry out and is resistant to attack by insects.
- **Shaped** - Can be formed into many shapes and machined using standard tools.
- **Vandal-resistant** - Is more resistant to graffiti due to its surface.
- **Versatile** - Can easily be designed for use in conjunction with other materials.
- **Eco-friendly** - Is produced using 100% recycled polythene diverting valuable waste from landfill.
- **Good alternative** - Is as realistic alternative to hardwood.
- **Long lasting** - Has a life span at least four times timber alternatives.
- **Fully recyclable** - Can be fully recycled at the end of its use.
- **Completely Inert** - Will not leach any chemicals

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Test Data

The following information represents typical data for the material. The information provided is given in good faith and is accurate to the best of our knowledge. Users however must establish for themselves whether British Recycled Plastic Lumber is fit for their specific use as no liability will be accepted for any loss or injury resulting from its use.

Average Properties

	80mm x 80mm	100mm x 100mm
Density (kg/m ³)	0.86	0.86
Thermal Expansion (1×10 ⁻⁵ K ⁻¹)	133	155
Water Absorption (g/24hrs)	0.85	
Compression (MN/m ²)		
Longitudinal	21.6	17.3
Transverse	15.9	13.4
Cantilever Test at 1.8m long, breaking point (kgs)	205	340
Stiffness (GN/m ²)	0.52	0.60
Staple Pullout (kN)	1.032	1.13

Working with Recycled Plastic Lumber

Our recycled plastic profiles can, in principle, be worked in the same manner as wood with the same woodworking tools. For sawing and drilling we recommend working the recycled plastic steadily and slowly. The general rule is to choose a cutting speed which prevents the material melting on the surface of the tool. At low temperatures, the recycled plastic will be slightly stiffer. However, due to the combination of materials used in the construction, the recycled plastic exhibits good physical properties to at least 20 degrees below zero. In warm weather conditions the material tends to become slightly tougher and more flexible.

- **Drilling** Use metal or wood bits (HSS or HM type). Spiral or speed bits are both acceptable – do not use a high drilling speed. See table below.
- **Sawing** RPLs can be sawn with a handsaw, circular saw or a chop saw. See table below.
- **Rolling, Milling and Planing** All of these techniques can be used with our profiles. Care is required and experimentation on scrap material is advised.



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	Units	Drilling	Circular Saw	Band Saw	Milling
Clearance angle	degrees	10-12	10-15	30-40	5-15
Cutting edge side rake	degrees	3-5	0-15	0-5	0-15
Cutting speed	m/minute	50-100	<3000	500-1500	<1000
Tooth distance	mm	-	>10	>5	-
Nose angle	degrees	60-90	-	-	-
Feed	mm/rotation	0.2-0.5	-	-	0.1-0.5

Technique	Comment
Nails	Our profiles can be nailed but experience has shown that it is advisable to pre-drill.
Screws	It is preferable to pre-drill the holes for the screws and to deepen the holes when using screws with a countersink head. If this is not done, the material around the screw head has a tendency to bulge slightly. This bulge can be removed with a sharp knife.
Construction Staples	Stapling is possible but we recommend against using stapling as a constructive connection.
Bolts	Bolts must have a clearance hole drilled that can accommodate the size of the bolt being used.
Slits	Slits can be made by drilling a number of holes next to each other and by removing the walls between drilled walls either by moving the drill sideways or by using a mill drill bit.
Welding	Our profiles are manufactured using mixed plastics that improve the structural performance of the material however welding has not been shown to produce acceptable joint strength and therefore is not recommended.
Gluing	In general, gluing does not produce acceptable results therefore is not recommended.



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