



# British Recycled Plastic

## Embodied Carbon Statement - Updated February 2026

### 1. Executive Summary

British Recycled Plastic has conducted an aggregated cradle-to-gate (A1–A3) embodied carbon assessment across its primary UK manufacturing partners.

The weighted average embodied carbon intensity of our recycled polymer sections is:

**0.38 kg CO<sub>2</sub>e per kg of polymer**

This represents approximately **80–85% lower embodied carbon than virgin polymer production.**

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### 2. Product-Level Application Example

#### Denholme Picnic Table

- Product mass: **106 kg**
- Cradle-to-gate embodied carbon:  
**~40 kg CO<sub>2</sub>e per table**

Based on a **25-year guarantee**, this equates to:

**~1.6 kg CO<sub>2</sub>e per year of guaranteed service**

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### 3. Comparative Lifetime Assessment – Softwood Timber

Typical softwood outdoor picnic table:

- Approximate mass: 50–60 kg
- Typical service life: 5–7 years
- Multiple replacements required over 25 years

Using conservative cradle-to-gate softwood carbon intensity values and a 6-year service life:

Metric	Softwood (25 years)	Recycled Plastic (25 years)
Tables required	~4	1
Total embodied carbon	~115 kg CO <sub>2</sub> e	~40 kg CO <sub>2</sub> e
Carbon per year	~4.6 kg CO <sub>2</sub> e	~1.6 kg CO <sub>2</sub> e

Result:

Over 25 years, the recycled plastic solution produces approximately **one third of the embodied carbon** of a typical softwood alternative due to extended service life.

This assessment excludes maintenance treatments, repainting cycles and additional transport impacts, which would further increase the timber carbon profile.

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## 4. Methodology

### System Boundary

Included:

- A1 – Raw material supply
- A2 – Transport to manufacturing facility
- A3 – Manufacturing and extrusion

Excluded:

- A4 – Transport to customer
- Installation

- Use phase
- End-of-life
- Benefits beyond system boundary

## **Data Harmonisation**

Data has been aggregated across UK manufacturing partners operating under EN15804-aligned methodology. Results are weighted according to annual material throughput.

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## **5. Energy Source**

All primary extrusion facilities operate using renewable electricity.

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## **6. Limitations**

This assessment is cradle-to-gate only.  
Transport to customers is excluded due to variability in project location and logistics.

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## **7. Review Cycle**

This document will be reviewed annually as updated verified data becomes available.

Authorised by:  
Jason Elliott  
Managing Director  
Low Carbon Products Ltd  
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British Recycled Plastic is a trading name of Low Carbon Products Ltd, a company registered in England and Wales with the Registered Office of Unit 8F, Topland Country Business Park, Cragg Road, Mytholmroyd, West Yorkshire, HX7 5RW - Company No: 06903105 - VAT Number: 976451973