



SMART-Plant

*Scale-up of low-carbon footprint
material recovery techniques in existing
wastewater treatment plants*



Bio-Composites

Composite Materials from Recovered Cellulose and PHA

Composite materials based on a combination of biological materials and polymers are widely used in outdoor applications such as benches, fences and decking, amongst others. These bio-composite materials have excellent properties for long-lasting outdoor use and provide good mechanical strength and stability. Usually, they are produced by extrusion of a mixture of wood flour and polymer granulates. Recovered products from municipal wastewater such as cellulose or bioplastic (PHA) can also be used in the production of bio-composites, but these new materials require an adaptation of the existing production process.

Within the SMART-Plant project, different combinations of materials, additives and production conditions have been investigated

at lab-scale by Brunel University London to generate high quality bio-composite products using recycled material from the wastewater sector. The bio-composite producer SBPL (Ecodek®) has optimised the production of bio-composites based on recovered cellulose at industrial scale.



