Introducing the UK's only dedicated beverage carton recycling facility
INTRODUCING THE UK’S ONLY DEDICATED BEVERAGE CARTON RECYCLING FACILITY

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FREQUENTLY ASKED QUESTIONS

The UK’s only dedicated beverage carton recycling facility, located at the Sonoco Alcore paper mill near Halifax, West Yorkshire.
Capable of recycling up to 40% of the cartons manufactured each year for the UK food and drink market – that’s 25,000 tonnes or 1.25 billion cartons which could be recycled – the new plant is expected to significantly boost recycling rates.

It is a joint initiative between the Alliance for Beverage Cartons & the Environment (ACE) UK – representing the leading beverage carton manufacturers Tetra Pak, Elopak and SIG Combibloc – and paper and packaging producer Sonoco Alcore.

Previously, the best available recycling solution for used cartons was to export them to Europe. Now, Sonoco Alcore will take advantage of the strength and quality of the virgin wood fibres found in cartons by turning them into industrial-strength coreboard at its paper mill located on the same site (in Stainland, near Halifax, West Yorkshire). The coreboard is then made into 100% recyclable tubes and cores, which are used to wrap paper, man-made fibre yarns, and metal and plastic film around for industrial applications.

Stimulating kerbside collection of beverage cartons and UK carton recycling rates

As the new facility offers numerous benefits to local authorities, kerbside collection of beverage cartons is expected to increase dramatically. This will make it much easier for consumers to recycle their cartons, having a positive impact on UK recycling rates and fulfilling the requirements of manufacturers and retailers for packaging that is easily recycled.

The four key benefits are:

- A clearly defined domestic end destination for used beverage cartons – local authorities and residents can be assured their waste is being recycled in the UK
- A stable price per tonne for cartons delivered – a better, more sustainable option compared to the price fluctuations on the global commodities market
- A reduction in road and rail miles travelled by used beverage cartons for them to be recycled. Previously cartons collected through ACE UK bring banks were recycled at mills in Sweden. Recycling cartons at the new UK facility instead will lead to an estimated annual reduction of 122 tonnes of transport-related CO₂
- An opportunity for local authorities with ‘no-export’ policies on waste to recycle cartons in the UK, rather than send them to landfill. When running at its full capacity of 25,000 tonnes per annum, the UK carton recycling facility has the potential to reduce landfill taxes and gate fees for local authorities by £3.6 million (based on 2013 levels) – offering better value for council tax payers.

The number of local authorities collecting cartons at kerbside has already increased more than ten-fold in the last six years. However, this development has the potential to truly transform the future of carton recycling in the UK.

On 3rd September 2013, the UK’s only dedicated beverage carton recycling facility opened for business.

INTRODUCING THE UK’S ONLY DEDICATED BEVERAGE CARTON RECYCLING FACILITY

Dealing with waste and recycling properly is not only good for the environment but can boost economic growth and create jobs. This new recycling plant is an exciting development and I’m delighted to see businesses working together to improve our ability to recycle more here in the UK. There is a huge global market for waste and recycling and I want to see UK businesses leading the way on this and helping us compete in the global race.

Lord de Mauley, Minister for Resource Management
THE CARTON RECYCLING PROCESS

Used beverage cartons are collected from homes, schools and businesses, before being sorted, baled and transported to the UK carton recycling facility for processing.

**HELDURUM PULPER:** The cartons are pulped with ambient temperature water in the Kadant Helisoft pulper using a large rotating screw, which separates out the fine polyethylene and aluminium layers from the paperboard layers and breaks the paperboard down into a fibre slurry. The process takes about 20 minutes.

**POIRE COARSE SCREEN:** This filters out the smaller pieces of polymer/aluminium (above 2mm) from the fibre mix which are conveyed to the dewatering screw compactor before being baled. The fibre mix is then sent to the final screening process.

**HD CLEANER:** The high density cleaner cleans the pulp (which still contains smaller pieces of polymer/aluminium) and separates out the ‘fines’ such as glass, grit and small stones.

**DEWATERING SCREW COMPACTOR:** This squeezes out the moisture from the recovered polymer/aluminium before baling.

**CONIC DRUM:** The polymer/aluminium recovered from the pulper is pumped into a large drum, similar to a washing machine, for cleaning. The water is reused in the pulper, so any remaining fibres are recaptured for processing.

**SCRENEONE:** The fibre slurry is pumped to the specially-designed Kadant ScreenOne which uses an energy-efficient three stage screening process to remove any glue or final tiny pieces of polymer and aluminium from the fibre.

**DRUM THICKENER:** The fibre slurry then passes through the drum thickener which reduces the water content to the optimum level for storage. Water content is reduced from 97.5% to 95%, doubling fibre content to 5%.

**CLEAN STOCK CHEST:** The reprocessed fibre is then stored in a large tank, ready to be blended with fibre from Sonoco Alcore’s other on-site pulping operation. Stock chest capacity is 300 cubic metres, containing water and 15 tonnes of carton fibre.

**BALER:** The polymer/aluminium is then baled for storage before reprocessing.

* Beverage cartons, on average, are made from 75% paperboard, a renewable material made from wood fibre sourced from responsibly managed forests. They also contain some fine layers of low density polyethylene to prevent leakage (21%) and, in aseptic cartons, a very fine layer of aluminium as a barrier to light and oxygen (4%).
Conwy County Borough Council’s kerbside collection service covers 51,000 households, and is set to rise to 56,000 in October 2013 with the inclusion of 5,000 rural properties. Until 2011, the council operated fortnightly collections of paper, cans, glass and garden waste, which was sorted at kerbside. Prompted by a need to meet recycling targets and calls from local residents who were keen to recycle more of their household waste, the council completely revamped its service in June 2011. It moved from fortnightly to weekly collections and added plastic, food waste, batteries, cardboard and beverage cartons to its collections for the first time.

When the weekly service was launched, beverage cartons were being recycled overseas but with a plant now open in the UK, Conwy County Borough Council’s collection service is more sustainable than ever.

CASE STUDY:
CONWY COUNCIL EMBRACES UK CARTON RECYCLING

In June 2011 Conwy County Borough Council transformed its kerbside recycling service, moving from fortnightly to weekly collections and adding a range of additional materials – including beverage cartons for the first time.

Why change and why include cartons?
Conwy County Borough Council’s kerbside collection service covers 51,000 households, and is set to rise to 56,000 in October 2013 with the inclusion of 5,000 rural properties. Until 2011, the council operated fortnightly collections of paper, cans, glass and garden waste, which was sorted at kerbside. Prompted by a need to meet recycling targets and calls from local residents who were keen to recycle more of their household waste, the council completely revamped its service in June 2011. It moved from fortnightly to weekly collections and added plastic, food waste, batteries, cardboard and beverage cartons to its collections for the first time.

Soaring recycling rates
The kerbside scheme has now been running for two years and has proved extremely successful. Recycling rates have soared from 42% in 2010/2011 to 58% in 2012/13. Conwy County Borough Council is now ranked as one of the top counties in Wales for recycling and continues to look for new and creative ways to recycle more. An important factor in this success has been communication with residents. Knowing that their waste is being recycled in the UK and not going to landfill or being shipped across the world has been a big incentive for local residents to recycle more.

Mark Cassidy,
Assistant Waste Manager,
Conwy County Borough Council

Years ago, people complained when recycling services were first introduced around the UK – now our residents are demanding to be able to recycle more. It’s fantastic. Recycling locally is also important to us as we are constantly working to reduce our carbon footprint and support jobs, both in North Wales and nationally, so it’s great that our beverage cartons can now be recycled here in the UK.

In June 2011 Conwy County Borough Council transformed its kerbside recycling service, moving from fortnightly to weekly collections and adding a range of additional materials – including beverage cartons for the first time.
Elopak continuously strives to reduce its impact on the environment. We are confident that our product – the paperboard carton – is the most sustainable form of beverage packaging. The package is made from renewable materials and is fully recyclable. At Elopak we take responsibility by working with our entire value chain to reduce energy and raw material consumption, and to use renewable energy. With the consumer in mind, we develop cartons that protect their products and are easy to use. Elopak is passionate about recycling and our cartons are easy to fold and dispose of to maximise recycling potential.

SIG Combibloc is taking action where it matters most for the environment. We are the first company in the food and beverage carton industry to achieve continuous Chain of Custody FSC certification at our production sites worldwide. This achievement allows us to globally offer carton packs that bear the FSC logo.

Another first is the launch of our innovative combibloc EcoPlus, which reduces CO₂ by 28 per cent, and we continue to ensure our carton packs offer the most environmentally responsible solutions for long-life packaged food and drink.

At Tetra Pak, the environmental profile of our cartons is of paramount importance. The recycling plant is a game-changing step in our on-going work to increase carton recycling in the UK, and it will contribute to our global ambition to double our recycling rates by 2020.

In addition to boosting our carton recycling we have a wider environmental strategy. Globally, our goal is to secure the supply of 100% Forest Stewardship Council (FSC) certified paperboard and to cap carbon emissions at 2010 levels across our entire value chain.

We are also committed to using renewable resources, and globally a huge amount of work has gone into developing renewable materials, including sugarcane based polymers, meaning we are now able to offer caps produced from renewable raw materials.

At ACE UK, we are constantly driving environmental performance. We focus on making it easier for consumers to recycle their carton packaging and increasing beverage carton recycling rates. This is why we invested in a UK-based recycling facility.

Steve Wyatt, Managing Director, Tetra Pak UK and Ireland

“Elopak continuously strives to reduce its impact on the environment. We are confident that our product – the paperboard carton – is the most sustainable form of beverage packaging. The package is made from renewable materials and is fully recyclable. At Elopak we take responsibility by working with our entire value chain to reduce energy and raw material consumption, and to use renewable energy. With the consumer in mind, we develop cartons that protect their products and are easy to use. Elopak is passionate about recycling and our cartons are easy to fold and dispose of to maximise recycling potential.”

Malcolm Allum, Managing Director, SIG Combibloc Ltd

“SIG Combibloc is taking action where it matters most for the environment and has a clear strategy to improve the ecological profile of its packaging solutions. SIG Combibloc is taking action where it matters most for the environment. We are the first company in the food and beverage carton industry to achieve continuous Chain of Custody FSC certification at our production sites worldwide. This achievement allows us to globally offer carton packs that bear the FSC logo.

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FREQUENTLY ASKED QUESTIONS

Why is a UK beverage carton recycling facility important?

Making it easier for consumers to recycle their carton packaging and increasing beverage carton recycling rates are ACE UK’s dual goals. We know from our discussions with local authorities that a UK-based recycling solution for cartons would increase the likelihood of their inclusion in kerbside collections. Such schemes can deliver up to six times the recycling rate of bring banks as they offer a more convenient recycling solution for consumers. Therefore, we expect kerbside collection of beverage cartons and UK carton recycling rates to increase dramatically as a result of the new facility.

Why did ACE UK choose to partner with Sonoco Alcore?

The Sonoco Alcore paper mill in Stainland (near Halifax, West Yorkshire) was selected because it will make best use of the strong, high-quality virgin wood fibres found in cartons by turning them into industrial-strength coreboard. It is also well placed to receive deliveries from all over the UK and is already licensed to do so; it currently manages 120,000 tonnes of recycled grade paper per annum.

Will the aluminium and plastic layers in cartons also be recycled?

The polymer and fine aluminium layers used in beverage cartons (the latter only for long-life products), to prevent leakage and provide a barrier to oxygen respectively, are also separated as part of the recycling process. Our long-term aim is to find a UK-based technology to recycle our polyeth and an approach is currently being trialled. Until a UK solution is in place, the polymer and aluminium content is being recycled at a high quality, fully audited plant overseas.
The Alliance for Beverage Cartons and the Environment (ACE) UK provides a platform for the industry to profile and benchmark cartons as a renewable, recyclable and low carbon packaging choice, and to drive its environmental initiatives. This includes managing the industry's carton recycling programme. ACE UK represents Tetra Pak, Elopak and SIG Combibloc, the leading manufacturers of beverage cartons for the UK market.

www.ace-uk.co.uk
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