

Technology name: Post-consumer mechanical HDPE recycling  
Polymer type: HDPE  
Short description: Mechanical recycling:  
Specification of plastic input: Only HDPE PCW containing maximum 1 % of materials and articles that were used in contact with non-food materials or substances.

The process now owned by Veolia ES Plastics UK Limited for the Dagenham facility is based on a recycling system developed by WRAP (2005) ISBN: 1-84405-225-7.

This was followed by a large-scale trial by Wrap (2007) ISBN: 1-84405-308-3.

“The development of world leading UK recycling technology allows post-consumer milk bottles to be recycled back into food contact milk bottles. Milk bottles with 30% recycled content perform identically as virgin resin bottles, have been extensively tested and have passed all EU, UK and consumer tests and are currently in production within UK dairies. The novel technology represents the first time post-consumer HDPE Milk bottles have been recycled back into Milk Bottles with full food contact status.”

The process was submitted to the United States Food and Drug Administration for approval. Subsequently a No Objection Letter 108 was issued (2007).

Based on this the Dagenham facility was built (2009). The process contains the following key steps: Sorting of natural HDPE milk bottles, grinding and washing of the bottles then decontamination. Quality management of the feedstock, combined with improvements in pre-processing and decontamination reduce the risk of incidental contamination.

Since 2010 the Dagenham facility has supplied 10,000 tonnes / year to the UK dairy industry with no incidents and each batch of output material is tested for its suitability to come into contact with food.

The process was also submitted to EFSA (RECYC063) with a final safety assessment still pending on further additional data (2015).

There are no arrangements to adopt this Novel Technology at any other locations.

Location of reports: [Dagehamplastics.veolia.co.uk](http://Dagehamplastics.veolia.co.uk).