

**WASTE RECYCLING PLANT, KENT
FILON PRODUCTS LIMITED**



Pepperhill Household Waste Recycling Centre (Pepperhill HWRC) is a large waste recycling plant in Gravesend, Kent, designed to recycle more than 70% of the waste brought in by residents served by Gravesham and Dartford Borough Councils.

Following a major fire at the facility in 2018, the waste transfer station on the site required a complete rebuild of the concrete walls and aluminium standing seam roof, including almost 1,000 linear metres of rooflights. Industrial Construction (Sussex) Ltd of Rodmell, East Sussex, were contracted to carry out the roof replacement.

The customer required that the roof should be rebuilt to the original specification using the Ziplok 400 standing seam roof from Omnis by System. Having previously worked with Filon Products on a number of projects, the team at ICS looked to Filon to provide rooflights to meet the required light levels and Class B non-fragility certification (*in accordance with ACR[M]001:2014*) required by the client.

Bespoke rooflights for a challenging project

Steve Mercer, Filon's Technical Manager, takes up the story: "This was a particularly interesting project for us, as it required a rooflight to be developed specifically for it."

He continued: "Ziplok roofing is usually installed as a twin skin, insulated roof system, so the rooflights for the standing seam element can be very lightweight – typically CE18E which is nominally 1.8 kg/m². This is because the required non-fragility is provided by a combination of the weather sheet and the liner sheet. However, the roof for the Pepperhill project was a single skin roof, yet required the same Class B non-fragility rating. This meant that the rooflights needed to be much stronger, as no liners would be used."



Steve and the R&D team at Filon Products undertook the development of a rooflight to meet the project requirements. It was thought that producing the required profile in CE30E (3.0 kg/m²) would be suitable.

However, the 1.6mm thick laminate could not be manipulated into the very tight profile of the standing seam 'lollypop' side detail. Filon's innovative R&D team rose to the challenge. Their solution was simple, but effective: using Filon's 1.3mm thick CEDR24E double reinforced laminate for the rooflights. This 2.4 kg/m² sheet, is produced with a special combination of glass mats that ensure a strength equivalent to a 3.0 kg/m² sheet.

Developed, tested, delivered and installed – within a short lead time

Following a successful production trial, the next stage was the all-important non-fragility test to ensure suitability for the project. A test programme in conjunction with ICS Ltd and roof system manufacturer Omnis was scheduled. Filon then carried out the required ACR[M]001 drop test procedure at its Staffordshire factory, with representatives of ICS and Omnis present. The test proved extremely successful, with the new rooflight achieving a 'very good' Class B certification, leading the way to a successful project.

Steven Johnson, Contracts Manager at ICS Ltd, said: "I've worked with Filon on many previous projects and I've always been extremely satisfied with their very pro-active technical support and general 'can do' attitude. So, it was an easy choice to involve them on this important and technically challenging project".

A nine-week shutdown was required at the waste transfer station to allow the work to be completed. The new roof, complete with rooflights, was completed on-time, with the development work on the new rooflights completed within just two weeks, with a further two weeks for production at Filon's plant.

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