

# RECOVINYL

Case  
Study:

PVC  
Recycling  
Limited

## BEYOND WINDOWS - RECYCLED PLASTIC IS FANTASTIC FOR FENCING - A 'GREEN' SOLUTION FOR GREEN FIELDS

PVC-U's environmental credentials are impressive with research suggesting that it can actually be recycled up to 7 times without losing performance<sup>1</sup>. Given the average 40-year lifespan of plastic windows and doors, this means at the end of their useful lives they can potentially be turned into many new and diverse products over several centuries.

Whether it's windows, roofline products or even garden furniture, giving this fully recyclable material a new lease of life offers many environmentally-friendly, economic and low-maintenance benefits for consumers.

These were among the reasons why Recovynyl recycler PVC Recycling Ltd and PAL Group, a Midlands-based manufacturer of construction and glazing products teamed up to produce an innovative equestrian fencing product, Fensys – made entirely from old plastic windows.

End-of-life frames diverted from landfill are processed at PVC Recycling's Stalybridge site into chip or melt-filtrated pellets to a quality that can be used to make new products. Run by Ian Murray and his wife Joanne, the company's state-of-the-art processing plant can recover up to 400 tonnes of even the most contaminated post-use PVC-U window and door frames per month.

PAL Group extrudes the 100% recycled material to make a white fencing product for paddocks and equestrian centres, complementing its existing Fensys range of decking and fencing systems. PVC-U is ideal for this application as the maintenance-free, 1.2 metre high fencing will not rot or splinter, offering a cost-effective, long-life and environmentally-friendly alternative to wood. Plus, there's no costly and time-consuming maintenance to worry about, such as painting and repairs.

An extra advantage of using recycled window grade rigid PVC-U is the higher impact resistance it gives to the fencing. Special additives used to strengthen PVC for window use are retained in the recycled product, which meets all current equestrian regulations.

Peter Lowe, PAL Group Chairman, says: "Every 160 metres of recycled plastic three-rail fencing saves one tonne of waste PVC from landfill. It makes sound environmental and economic sense to re-use such a versatile material in new concepts from fencing to furniture. Being maintenance-free, PVC is perfect for leisure industry applications. It's a green solution for green fields!"

Ian Murray, MD PVC Recycling Ltd, adds: "One tonne of waste PVC equates to around 140 old plastic windows, so recycling them makes a significant contribution to reducing environmental impact and conserving precious resources. Consumers are far more willing to buy recycled products where possible. Paddock fencing is one example of where recycled plastic offers a genuinely practical, sustainable and time-saving solution."

Roger Morton, Director of Axion Consulting, Recovynyl's UK agent comments: "This is an imaginative and novel use for recycled PVC-U that is also makes for a great sales platform for new markets."

<sup>1</sup> The BRE (British Research Establishment) estimates that PVC-U can be recycled up to 7 times over a 200-year lifespan. In its 2008 Green Guide to Specification, the BRE has awarded PVC-u windows and cladding systems an A rating for domestic and an A+ rating for commercial properties.

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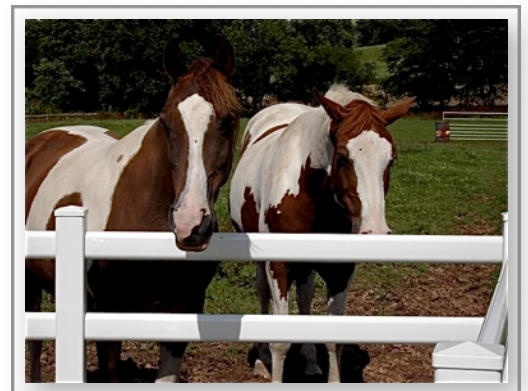
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Axion - Innovation in recycling



PAL Group's white fencing product made from 100% recycled material.

## PVC-U RECYCLING FACTS:

- Figures for the first nine months of 2009 show that recycling of post-consumer window frames is up 20% on the same period in 2008.
- Established in the UK in 2005, Recovinyl now has 29 accredited PVC recyclers across the country.
- As well as windows, recycled PVC-U can be used in other new construction products, such as fenestration reinforcement bars, fascias, soffits and cladding.



PVC-U frames and reinforcements are 100% recyclable.

## REASONS TO RECYCLE

Collecting and mechanically recycling one tonne of recovered PVC will generate about 120 kg CO<sub>2</sub> per tonne of PVC recycled. Latest eco-profile data for virgin PVC from Plastics Europe, shows producing one tonne of virgin PVC from its primary raw materials (salt and oil) will generate about 1,900 kg of CO<sub>2</sub> emissions. Using recycled PVC chip saves 94% in CO<sub>2</sub> emissions compared to production of virgin PVC polymer. Most recycled PVC can be re-used as a clean chip to substitute virgin polymer so there are fewer melting costs. This helps to reduce the carbon impact of the recycled material compared to virgin.

- Reduced environmental impact; diverts waste from landfill.
- Preserves natural resources for re-use in the UK; reduced use of virgin material.
- New products contain up to 100% recycled content.
- Cuts disposal costs for installers.
- New revenue stream for installers and an incentive to recycle.
- Traceability - almost 34,000 tonnes of waste PVC-U were recycled through the Recovinyl scheme in 2009.



Old PVC frames for recycling