SHEAR EDGE

Innovate with nature.

NOVEMBER 2026 |

New factory and material developments

Dear colleague,

A year on from meeting at K Messe in Düsseldorf, we would love to reconnect. We have settled into our new Auckland factory, launched our new website and made encouraging progress with our wool reinforced polymer compounds.



Our new home at 5 Mahunga Drive, Māngere Bridge, Auckland, New Zealand

More room to develop and collaborate

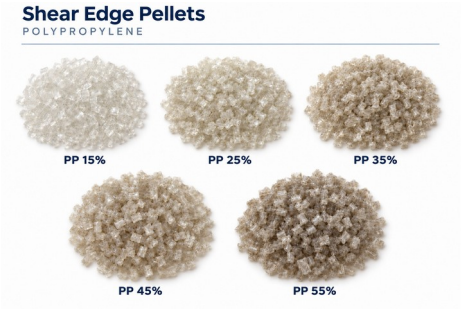
Our upgraded Auckland facility gives us more space for material development and compounding, and for working with customers and partners on practical applications.

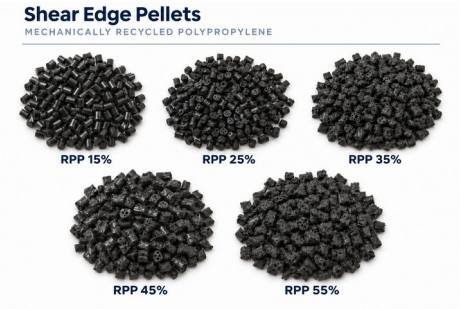
Explore our technology, materials and opportunities to collaborate on our new website: **www.shearedge.co.nz**.

Advancing materials with wool

Our development work combines natural strong wool fibre with thermoplastics, replacing a portion of conventional polymer with renewable fibre. The following pages introduce our compounds and latest results.

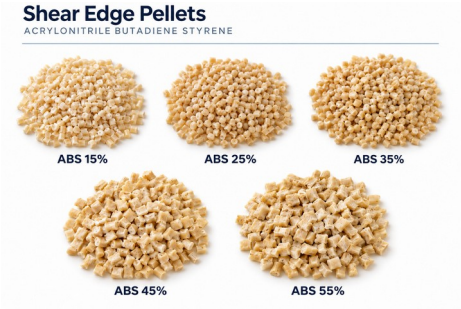
A closer look at our compounds





Virgin and recycled polypropylene

Virgin PP showed up to 56% greater stiffness and up to 25% higher tensile yield strength. Recycled PP showed up to 56% greater stiffness, highlighting the potential to enhance recycled polymer performance.





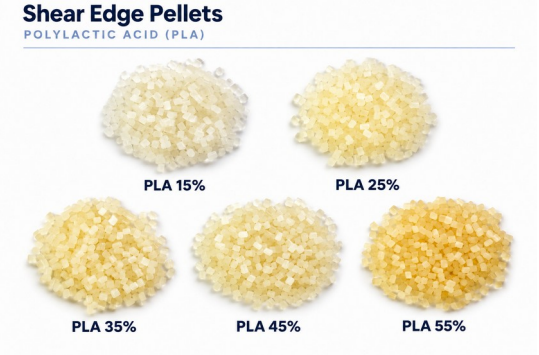
ABS and high density polyethylene

ABS showed up to 17% higher flexural strength and approximately 11% higher tensile yield strength. HDPE showed up to 42% greater stiffness, alongside an approximately 2% reduction in material density.

Promising findings with PLA

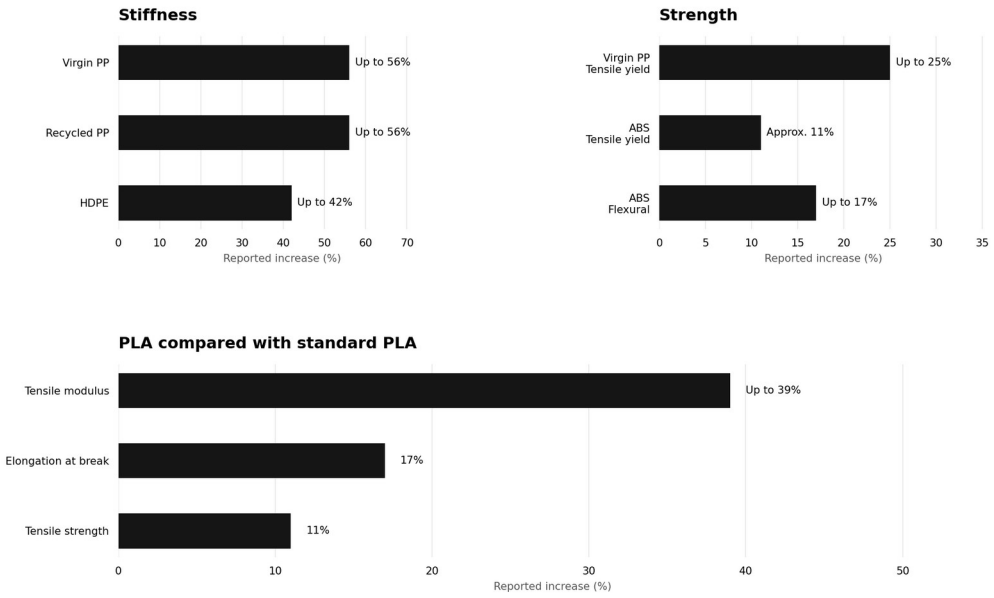
Compared with standard PLA, our latest results show up to 39% higher tensile modulus, delivering greater stiffness and rigidity; 17% higher elongation at break, improving the ability to deform before failure; and 11% higher tensile strength, providing improved resistance to tensile loading.

Hardness and tear strength ranges are identical, while impact ranges largely overlap, suggesting these properties remain broadly comparable to standard PLA.



Promising results and the road ahead

The graph brings together our mechanical testing highlights, including the latest PLA results compared with standard PLA.



Figures reflect tested formulations and conditions; performance varies by formulation and application.

PLA achieved 17% higher elongation at break. Reported hardness and tear strength ranges remain identical, while impact ranges largely overlap with standard PLA.

Fire retardancy testing. Testing of our wool reinforced compounds is ongoing, with promising early results. We look forward to sharing further findings.

What comes next

These encouraging results give us a strong foundation to refine our formulations and explore commercial applications. We look forward to working with manufacturers and development partners to turn this progress into product trials and further opportunities.

Let us explore your next project

Have a project in mind? Reply to this email to discuss material options, technical information or trials. We look forward to building on the connection we made at K Messe and exploring what we can create together.

Kind regards,

The Shear Edge Team