

Ecoblocks

– strength and safety

When Waipa Networks had a line mechanic off work for a year with back injuries from handling a heavy concrete breast block, network asset manager Lee Goddard was asked to look for a safer way to stabilise power poles.

A chance discussion with Spencer Winn of TransNet sparked the inventor of the Ecopillar and TUDS pits to find a solution. Winn had worked with robust, long lasting plastics in developing these power reticulation products and was determined to prove plastic alternatives to back-breaking concrete pole support blocks would not only be easier to handle but also perform better in the ground.

Now a new and safer range of breast blocks, heel blocks, anchor blocks and donuts from TransNet are available for line crews throughout the country. The uptake on this product is very encouraging, says Winn.

“It shows network companies are interested in improving health and safety in the work environment.”

After helping test the prototypes on site, Waipa Networks put in some of the first orders for the patent-pending Ecoblock range.

Lee Goddard says the new Ecoblocks gained immediate acceptance from their 33 line mechanics who cover an area from Kawhia to Cambridge from their base in Te Awamutu.

“We’ve now moved entirely to Ecoblocks,” he says.

Waipa Networks reticulation is predominantly overhead lines, mainly using concrete poles. He says most poles should have breast blocks and heel blocks in place to correctly anchor the poles and prevent them nodding.

“Thanks to Ecoblocks there is a new enthusiasm from our line mechanics for breast and heel blocks which sees them more consistently used than the old concrete types.

“They are safer, easier and more convenient to handle because they are a lot lighter, and they don’t have the sharp edges like the



Waipa Networks’ asset manager Lee Goddard holds a 11 kg TransNet breast block while live line mechanic Paul Murray has to use the hands-free option and have the hiab lift the old 75kg concrete version

old concrete blocks.”

Goddard says their motivation for change was driven by the need to take all practicable steps to improve safety.

He says if you can remove hazards from the workplace, the improved health and safety is worth the investment.

Winn, who spent time on the lines at Wairarapa Electric Power Board in the 1980s, says the the heel block Waipa Networks were using weighed 38kg and the breast block 75kg, weights that come with the risk of lifting and handling injuries.

“The equivalent size Ecoblock heel block weighs only 5kgs – even our 1200mm breast block weighs only 14kgs.

“At the same time the lighter weight will save freight costs and means more convenient handling and storage in the yard. A full pallet of Ecoblocks can be shifted with a

general purpose forklift where concrete is too heavy,” he says.

“Easy handling and reduced weight is especially important in difficult terrain or where helicopters are used.”

While health and safety issues sparked the development, Winn says Ecoblocks overcome other performance shortcomings in concrete blocks to the point where concrete pole manufacturers themselves are showing a lot of interest in the product.

Concrete blocks are prone to breakage during handling and installation. Winn says while the reinforcing mesh holds cracked concrete blocks together, its effectiveness is compromised – unlike the Ecoblock which will not break or deform.

“Ecoblocks use the same tried and tested Cotene 9050 Ultra UV heavy duty plastic material used in our TransNet TUDS and Ecopillars,” says Winn. “It’s the same plastic used in high pressure water pipes.

“This means the Ecoblocks are lighter but also stronger than their concrete counterparts.”

To independently verify this Winn took Ecoblocks and a comparison concrete block to the government testing agency Industrial Research Ltd for testing and certification.

He says the concrete block broke as soon as it was placed under load, while the Ecoblocks withstood loads and stresses greater than any pole could apply without deformation.

“Ecoblocks have now set a new performance benchmark for heel blocks, breast blocks and donuts and a new benchmark for safety.” ■

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