Minimum cost, maximum durability with BarChip reinforced Ultra Thin Whitetopping road rehabilitation

Whitetopping is a method of concrete paving used mainly in the rehabilitation of deteriorated asphalt pavements. There are three common forms of whitetopping:

- Conventional (greater than 8in thick)
- Thin (thickness between 4in and 8in)
- Ultra Thin (2in to 4in)

Ultra Thin Whitetopping is a bonded, fibre reinforced concrete overlay with closely spaced joints. Introduced in the United States in the early 1990’s, UTW has become an accepted and highly used method of road construction and rehabilitation.

Two critical factors to the success of UTW are bonding and joint spacing. Bob Packard, American Concrete Pavement Association’s director of engineering explains;

“The bond or high friction at the concrete asphalt interface creates section lowering the neutral axis so that load stresses in the concrete are substantially reduced. Short joint spacings, much shorter than normal, also reduce stresses because the slabs are not long enough to develop as much bending movement.”

Extensive deterioration from high heavy truck traffic forced the rehabilitation of State Route 24 and Section 2 Route 20 in Uruguay. Using Ultra Thin Whitetopping (UTW) technology reinforced with BarChip synthetic fibre, the rehabilitation is a prime example of how UTW can provide an efficient and cost effective solution to infrastructure needs.

Synthetic fibre reinforcement is a key factor to the long term success of UTW. BarChip fibres increase residual strength and wear resistance, minimise crack widths and permeability and reduce surface spalling. Most importantly, BarChip fibres never rust, ensuring long term durability.