



Tensar case study Ref 091

Stream bank stabilisation using Tensar Wall – West Lake Peterborough UK July 2002



Bryant Homes' West Lake Development, Peterborough

BENEFITS TO CLIENT

Due to tight planning approval deadlines, Tensar delivered a professionally indemnified design and supply service in just 1 week. The on-site advice service, ensured the successful completion of the retaining walls in just 6 weeks.

THE PROBLEM

The luxury housing development is either side of a slow flowing stream, which connects two local lakes 400 metres apart. The banks of the stream were originally rough and unstabilised and thus unsuitable for Bryant Homes' plans which included bankside paths, trees, block seating and the close proximity of access roads.

THE SOLUTION

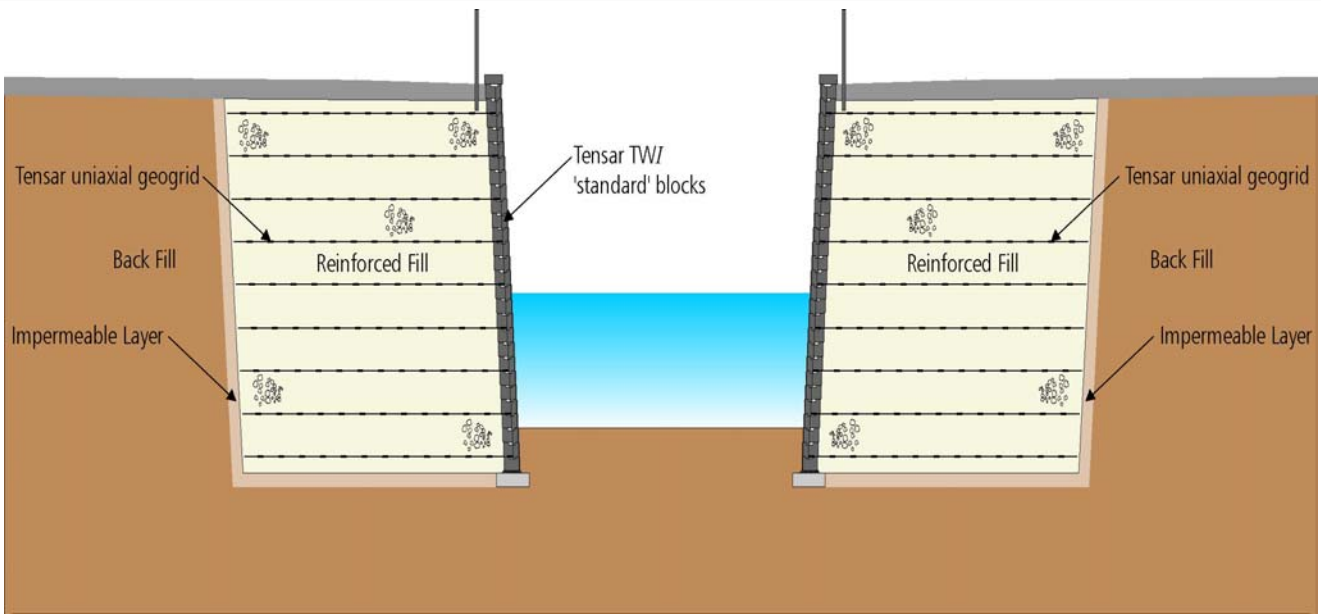
The Tensar Wall System was used to stabilise and build up the banks of the watercourse. This allowed the luxury development by Bryant Homes to be greatly enhanced and has enabled the watercourse to become a major selling feature of the site.

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PROJECT DESCRIPTION

The watercourse was sealed at both ends and large diameter bypass pipes laid between the lakes as flood relief measures. Then the existing banks were cut back 3.75 metres, lined with an impermeable membrane and a concrete levelling strip for the wall facing was laid along the original bank lines 0.45 metres below the original stream bed.

Following this, graded granular fill (to DoT Class 6I/6J) was placed and compacted with layers of Tensar uniaxial geogrid 55RE at 0.45 metres vertical spacing. The geogrid layers were connected by a unique high-strength polymer key to the Tensar pre-cast modular facing blocks (TW1), which were dry laid as the facing wall. The wall is between 3.1 and 3.6 metres above the stream bed, with a water height of 1.5 metres, at a nominal angle of 86°. The construction was completed by a coping unit before landscaping with waterside paths, verges and roads.



Typical Section

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CONTRACT DETAILS

Project Engineer
Taylor Woodrow

Housebuilder
Bryant Homes

Contractor
Kane Construction



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