



Case

STUDY

STRATAWEB

Holly Lane, Erdington
Former Brownfield Site
Development



MARKET SECTOR:

Residential Housing



LOCATION:

Holly Lane, Erdington
B24 9LU



CONTRACTOR:

Dunton Environmental



CONSULTANT:

Campbell Reith



MERCHANT:

Wolseley

The BACKGROUND

Dunton Environmental contacted Geosynthetics Limited to evaluate options for a 150m length of stream at their Holly Lane, Erdington site.

Part of the stream was in a culvert with the remainder being an open watercourse, albeit incredibly overgrown.

As part of the development, the 150m long stream had to be de-culverted to form a 2-2.5m deep channel with 45 degree side slopes.

This would form an aesthetically pleasing 'green' feature for the new housing development that would also provide an environment for flora and fauna to flourish.

Our Client's REQUIREMENTS

A unique and bespoke solution for the development of a former Brownfield site for client Persimmon Homes.

Prior to our involvement the proposal was to form the channel sides using geogrid reinforced soil.

However, on closer inspection this was found not to work due to the proximity of existing properties and lack of access on the southern bank.

On the northern bank, whilst there was space for the geogrid tails, the solution would have meant double handling the backfill in the 'reinforced soil block'.

This solution was therefore discounted.

150M

**WATERCOURSE IN A
ENVIRONMENTALLY
SYMPATHETIC MANNER**

2,100M³

**FILL SAVED EXCAVATING
THEN RECOMPACTING**

13

ACRE SITE

Our Value Engineered SOLUTION

We were required to develop a solution that was viable and buildable within the available space. Additionally, given the 13 acre sites former uses as brickwork, landfill, and quarry our solution had to prevent possible contaminants entering the watercourse.

Once we had fully understood the clients brief and constraints, we designed a site specific/bespoke solution.

The channel side slopes were stabilised by a combination of Platipus 'Percussion Driven Earth Anchors' and Tenax High Modulus geogrid. This stabilised the slopes within the space constraints on the southern slope and without unnecessary double handling of material on the northern slope.

Over this, a Powerscrim membrane, protected above and beneath by an Ekotex geotextile, was installed to prevent ingress of contaminants from the main site.

To hold topsoil and facilitate vegetation on the 45° channel sides, Strataweb threaded with reinforcing tendons was used. The topsoil filled Strataweb was then covered with a layer of Landlok 450 Erosion control matting, pinned down with 'Bio' pins.

Our solution was a unique and bespoke solution which achieved the brief. It was made possible by carefully selecting and expertly using a wide selection of products from Geosynthetics Ltd. portfolio. It created a pleasing 'green' space / environment for flora and fauna to flourish. Importantly, the Value Engineered solution fitted into the available space and did away with the unnecessary earthworks of the original proposal.

Our solution was delivered in collaboration with Platipus Anchors. It was simply installed by Dunton Environmental after site tuition from our Technical Manager and Platipus Anchors.

