



## Lancashire Waste PFI Project, Thornton

**Type of System:** Waterproof and Gas Proof

**Date of Installation:** January 2008

**Size:** 51,000m<sup>2</sup> Tuflex Barrier System

### Site Problem:

This was a former landfill site with an adjacent chemical, which was to be the location for an innovative waste recycling plant. The site was extensively piled – almost 9,000 piles in total – with perimeter beams. There was also a vast pit (approx. 30m x 28m x 3m deep). A robust and durable gas protection system was essential.

### Solution:

Working closely with the engineers DGP International, a design using a combination of gas barrier materials was developed to provide a fully integrated solution. Tuflex membrane was used around the perimeter beams and beneath the main floor slab. All laps were heat-bonded by using the twin-wedge technique, to enable testing of the laps as part of a rigorous QA procedure. The large pit area had Alderprufe MR50 and Backerboard beneath the slab and on the walls. All laps were heat-bonded for total lap security. Each of the piles interfaced with the membrane, so at each one a bespoke pre-formed pile collar was heat-bonded to the pile, and then on to the main, or 'parent', gas barrier membrane.



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