MARKET SECTOR:
Highways

LOCATION:
Stanford-le-Hope, Essex

CONTRACTOR:
Kier

CONSULTANT:
Atkins

Project

OVERVIEW

GEOSYNTHETIC CLAY LINER &
FLOWTEX PROTECTION GEOTEXTILE
A13 Widening Project
Pond Lining

The

BACKGROUND

The existing A13 Stanford-le-Hope bypass was originally constructed as a dual carriageway, the proposal was to increase the dual carriage way by 1 lane in each direction to help ease congestion and support local growth and investment in the area.

The additional road surface posed an issue as the increased impermeability of the area would significantly add to the surface water run-off. To solve the problem a large pond was therefore required to help store and slow the rate of discharge into the local water body.

Our Client's

REQUIREMENTS

A suitable pond liner with a supply and installation package. The consulting engineers were already aware the area had a high water table. Although originally specified as a pre-hydrated bentonite liner, this was changed to a Geosynthetic Clay Liner. This product is often preferred due to the flexibility posed when increasing the cover material to prevent hydrostatic lift. In this case a cover depth of 1450mm was required. The pond was also on three different levels.

Our Value Engineered

SOLUTION

For the shallow sections Bentotex 50 Geosynthetic Clay Liner was used, the mid to deeper sections of the pond required a more specialised product, Bentotex 30SL Clay Liner was chosen, this material has a thin polymeric membrane laminated to it, this provides additional impermeability at greater depths. To protect the laminate a Flowtex Protection Geotextile was placed above prior to the cover material being laid and compacted.

Our team, both office and site based, co-ordinated the supply & delivery of the lining materials through the Client's preferred builders merchant and was in regular contact with the Client's site team to facilitate a well organised installation.