

# Retail

## Stonelake Park

A former filled site crossed by one of the first large precast piled concrete storm water sewers and a high pressure 600mm diameter gas main, presented an interesting engineering challenge. This was compounded by the underlying buried marshland generating soil gases. No surface water discharge was permitted to adjacent sewers, which had prevented others from developing this site.

The surface water solution was to create a flow balancing storage ditch that discharged into the tidal part of the Thames via a 500m long culvert.

Maximisation of development space was achieved using innovative engineering techniques to overcome severe site constraints. These included lightweight polystyrene embankments for HGV access across the old piled sewer and a 5m high reinforced earth embankment to create a maximum development footprint. Avoidance of active soil gas amelioration measures was achieved by careful geotechnical appraisals. Utilisation of a special piling system to avoid creating contamination paths into the underlying aquifers satisfied the environmental constraints.

