LIME MODIFICATION
AT MINWORTH WASTE WATER TREATMENT WORKS

Client:
Buckingham Group
Contracting

Project:
Minworth Waste Water
Treatment Works

PROJECT DETAILS

The site at Minworth was the old sludge lagoons for the adjacent Minworth WwTW. The sludge cake was between 20 and 40 years old and could not be removed from the site. It was to be utilised as treated fill beneath areas of lightly loaded external pavings and had to have a bearing capacity of CBR3%.
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PROJECT DETAILS (cont.)

How Combined Soil Stabilisation Helped

The Main Contractor asked CSSL to suggest ways in which this could be done using modification or stabilisation techniques.

CSSL proposed that a two-powder binder be used, lime and PFA to give the strength with the sludge acting as a bulking material. UKQAA (The ash people) were consulted which resulted in a conditioned PFA being used.

Site trials were undertaken and a method of working devised. The moisture content of the sludge, variable across the site, dictated the amount of lime to be used. A ratio of 1 lime : 5 PFA was used thus the mass of PFA per unit area could be calculated. A mass of PFA was tipped from lorries and spread at an appropriate depth across a defined area, this was the rotivated into the sludge. The lime was then added either by spreader-cart of integrated mixer and the sludge/pfa/lime re-mixed.