

CASE HISTORY

Construction of overflow car-park at Gatwick Airport using TENAX bi-axial geogrids

PRODUCT	TENAX LBO 220 SAMP
LOCATION	Gatwick, August 1997
OWNER	BAA
CONTRACTOR	John Laing Construction

Geogrids are used increasingly to reinforce unpaved roads and trafficked areas. As in the case of a temporary overflow car park, when the protection of the grassed area is required, then TENAX LBO geogrids reinforcement are well suited for this application. Geogrids help to prevent shear failure in the sub-grade and reduce rutting to a minimum. The design consists of placing the geogrids over the grassed or trafficked areas and fixing with 'U' shaped pins, an overlap of 300 mm usually is required. Grass will then grow through the apertures of the TENAX LBO geogrid, thus forming a stable reinforced ground crust. If however the requirement is temporary then the TENAX LBO geogrid can be easily rolled back and re-used in other applications.

PROBLEM

During the peak summer holiday season, traffic becomes much busier at Gatwick Airport, bringing with it a requirement for extra car parking space. The airport operator approached the contractor John Laing Construction for a solution which was both economical and fast in order to provide temporary parking space for the general public using the airport.

SOLUTION

There was plenty of open space and grassy areas in the Airport site and the proposed solution was to place bi-axial geogrids of the type TENAX LBO 220 SAMP directly on the ground, and fix it with 'U' shaped pins at 2,0 m intervals along the roll edges and the centreline. The client accepted this proposal and scheme was successfully completed.

CONCLUSIONS

The use of TENAX bi-axial geogrids has resulted in a successful solution to the car parking problem at Gatwick Airport thanks to its integral structure, flexural rigidity and tensile strength. Geogrids helped to prevent shear failure and deformations in the ground, and the scheme was completed quickly and economically.

