

Case Study

Client	Redrow Homes (Midlands) Limited Tamworth, UK		
Project date	2006 – 2009	Case Study date	Sept 2009
Area	16 hectares	Budget	£5m

Project: Midland Quarry, Nuneaton - Overview

The project involved the construction of a Reinforced Earth Slope embankment (RES) between two former quarry extraction voids which had remained from historic quarrying at the site. The RES was constructed between a larger Main Void and a smaller Shallow Void to allow filling of the Shallow Void in order to provide a plateau for future housing development by the Client.

The former hard rock quarry occupies an area of some 16 hectares and is located approximately 1 km to the northwest of Nuneaton town centre, which is situated approximately midway between Birmingham and Leicester.

Quarrying commenced at the site in about 1885 and ceased during the late 1990's, when the quarry had developed as two distinct voids – the larger deep Main Void which had partly flooded and the smaller parabolic shaped Shallow Void – both were surrounded by stockpiles of surplus quarried rock and spoil heaps.

Services Provided

Project Management

Employer's Representative

Contract Administration

Site Supervision

Description of the Project

Merebrook has been involved in an ambitious scheme for filling part of the redundant quarry with imported cohesive fill materials and for the filled area to be retained behind an extensive reinforced earth wall – the RES. At 38 metres in height, the RES is the highest in Britain. The RES is constructed from surplus materials from another site in nearby Rugby owned by the same Client, which surplus materials had represented a disposal problem. However, since construction of the RES was undertaken using site derived crushed rock, quarry spoil and some imported surplus foundry sand from the site in Rugby, the project afforded maximum re-use of materials from both the Nuneaton and Rugby sites, thereby representing an 'environmentally friendly' solution.

The RES comprises 500 mm thick layers of engineered granular fill reinforced with composite high strength synthetic polymer geogrids, which have a wrap-around face with coarse stone infill for the lower section to be submerged below the Main Void lake, with the upper section faced with topsoil which has been grass seeded.

