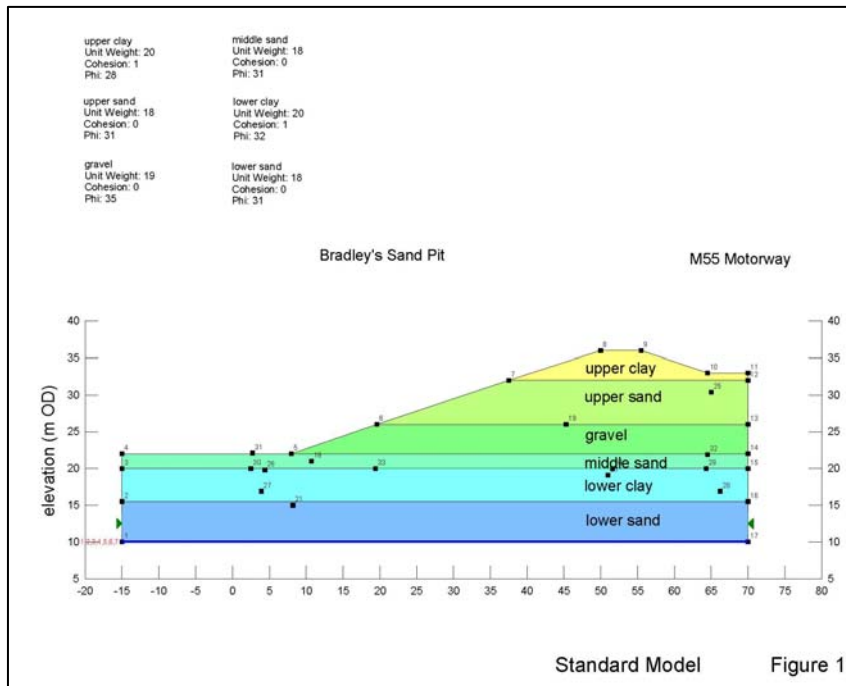


M55 Slope Stability Assessment

Project Description Sheet



Location

Broughton, Lancashire

Client

JA Jackson (Contractors)
Preston Ltd

Completed

March 2006

Key Project Elements

Slope Assessment
Ground Investigation
Slope Stability Design
Earthworks Modelling
Interpretative Report

PSA Design were commissioned by JA Jackson (Contractors) Preston Ltd to carry out a geotechnical assessment of the proposed mineral excavation of the 'three corner field' at Bradley's Sandpit Landfill Site, which is located adjacent to the M55 Motorway. A geotechnical report was required to be submitted as part of the planning application, with specific requirements related to the stability of the excavation and the site drainage.

The report demonstrated that the proposed development would not affect the stability or integrity of the motorway or motorway embankments. In addition, the report had to demonstrate the level of risk and how this was to be managed and meet the Highways Agency requirements set out in HD22. Details of the site drainage that demonstrates that no drainage shall run off into the motorway drainage system or adversely affect any motorway drainage was also submitted.

The excavation will be about 14 m deep, and the slope will be profiled to a gradient of 1 in 3. Planning constraints stipulate a lowest base level of 22 m OD. Ground levels at the site are approximately 36 m OD. The motorway passes alongside the southern boundary of the site in a cutting that varies in depth between 2 and 3 m.

Slope stability analysis was carried out using the the Geo-Slope SLOPE/W program modelling software.

The analysis demonstrated that the calculated factor of safety for the proposed cut slope is acceptable in regard to the Highways Agency requirements (HD22) and relates to a relatively low level of risk.

PSA Design provided design services for the site including geotechnical, drainage earthworks and environmental design.