Project Profile:

Ground Investigation, Earthworks Design & Management, Soil Stabilisation, Foundation Design

Remada

Former Site Use: Quarry, partly filled with waste soils

Value: £90,000

Client: JPE Holdings

Location: West Midlands

Remada was appointed by JPE Holdings to investigate a partially in-filled quarry and to provide a platform for the re-location of quarry washing plant.

The depth and nature of existing quarry in-fill material was not known, and required investigation in order to determine its profile, condition, bearing capacity and settlement characteristics. Geotechnical analysis confirmed visual observation that due to high moisture content, and compressibility, the existing and generally cohesive fill would settle beyond limits that would be acceptable for the proposed quarry plant. A range of foundation design options were considered that eliminated deep foundations provided that the infill material could be suitably stiffened and raised in level to the required platform elevation.

The requirement to raise and improve the fill also presented the opportunity to replace imported capping and sub-base with site won and improved material.

A supply of predominately drier sandy fill was available elsewhere within the quarry, and the upper layers of cohesive fill were removed and replaced with the sandy material. This fill was modified with cement to improve its bulk fill properties and stiffness and provide a 2m thickness of subgrade improvement.

The further 1m of fill was then stabilised with cement to provide both a capping a sub-base replacement and provide a formation suitable for the construction of concrete hard-standing and as foundation platform for the quarry plant.All layers of fill were tested for strength and stiffness using in-situ plate bearing tests.

Due Diligence

Desk Study

Intrusive Ground Investigation

Human Health Risk Assessment

Water Resource Risk Assessment

Mining Risk Assessment

Preliminary Foundation Design Recommendations

Remediation Strategies & Method Statements

Pre-acquisition Advice

Abnormal Cost Assessment

Materials Management Plans & Declarations

UST Decommissioning

Soil Bio-remediation

Soil Stabilisation

In-situ Groundwater Remediation

EA Remediation Permit

Verification & Completion Reports

Soil Treatment Facility

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