

# Project Case Study: South Thoresby Quarry, Lincolnshire

Services: Minerals Planning; Restoration Landscape Design



Demolition | Enabling Earthworks | Remediation | Drilling | Civil Engineering | Plant & Technology | Geotechnical | Environmental | Planning | Renewable Energy

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Client: GBM

Project: South Thoresby Quarry – Face Stabilisation

Duration: Ongoing

Services: Minerals Planning and Restoration Landscape Design

Sector: Minerals



The current high risk chalk faces at South Thoresby Quarry

## Project Description

Preparation of a planning application to allow importation of inert material to stabilise historic quarry faces with a significant risk of collapse.

## Site Features

South Thoresby Quarry is an active chalk quarry which GBM took ownership in 2013. In 2016 permission was granted to allow a revised scheme of restoration to improve the site's ecological value.

The Quarries Regulations (QR99) require a full Geotechnical Assessment to be undertaken at least every two years.

The Geotechnical Assessment for the site identifies "significant hazards" on the historical faces of South Thoresby Quarry (see photo). Whilst regular face monitoring with edge protection and rock traps have been undertaken additional measures were required to address the face stability of these historical chalk faces in the long-term.

## Early Involvement

Working with Greenfield Environmental the following options were assessed to ensure long-term face stability could be achieved upon restoration and closure of the quarry.

- Backfilling against the face;
- Meshing and bolting; and
- Sprayed concrete.

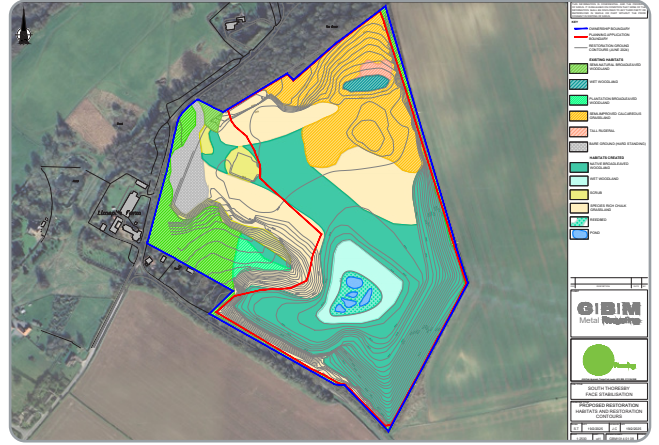
The project team considered that all the engineered solutions were feasible, however meshing, bolting and sprayed concrete were considered excessively costly for a quarry restoration scheme. The backfilling option was considered viable, cost effective and also achievable with the experience and knowledge of the quarry operators.

Historic faces of the South Thoresby Quarry

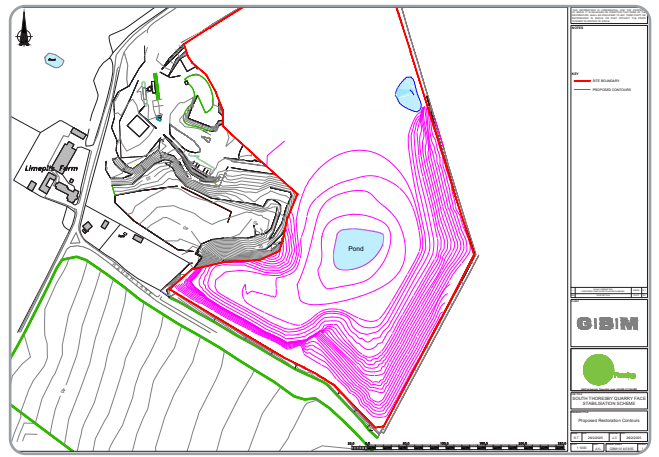




Localise face failure



Proposed Restoration Habitats



Proposed Restoration Contours

## Works outline

Sirius Planning prepared a planning application to vary the conditions of the existing consent to revise the approved restoration profile.

The revised restoration profile required an estimated 81,000m<sup>3</sup> of additional material to be imported to site to facilitate increased backfilling against the current high risk chalk faces.

As result of the changes to the restoration profile of the quarry, minor amendments are required to the approved scheme of landscaping.

The planning application was accompanied by a flood risk assessment and transport statement.

The application was approved at Lincolnshire County Council's Planning Committee.

Demolition, earthworks, remediation, drilling and civil engineering contractors.  
Geotechnical, environmental and planning consultants. Renewable Energy.

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