Case Study 17

Brown End Quarry

Quarry Type (ESCC)
ED - Disused quarries and pits.
Disused limestone quarry.

Resource Type
Quarry face exposures.
Interpretive trail.
Guided walk booklet.
Fossil collecting area.

Location Description
Waterhouses, Staffordshire.

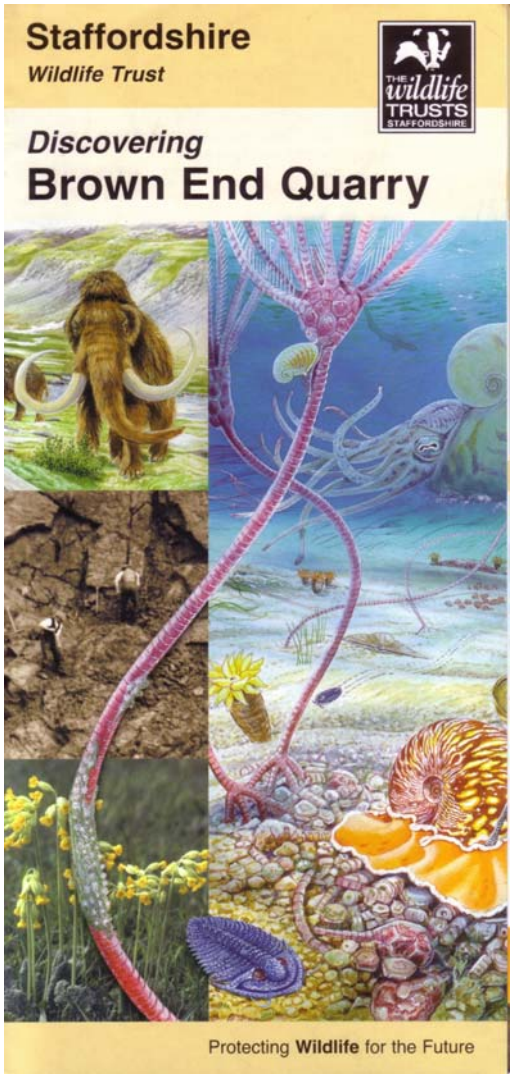
Location Grid Ref.
SK 090 502

Geological Setting
Milldale and Hopedale Formations of the Lower Carboniferous.

Designation
SSSI.
Geological Nature Reserve, (Staffordshire Wildlife Trust).

Lead Partner
Staffordshire Wildlife Trust.

Support Organisations
North Staffordshire Group of the Geologists Association, Natural England, Rural Regeneration NE Staffordshire.



Description of Resource

- Full colour interpretation panels on the reserve
- Fossil collecting areas
- An outdoor classroom seating area
- Easy access facilities
- Education pack and leaflet
- Web site

Development of Resource

Brown End was quarried for limestone from the mid 18th Century until the mid 1960s. The reserve was developed and is managed by the Staffordshire Wildlife Trust in partnership with the North Staffordshire Group of the Geologists' Association. The geological features are managed to maintain the bare exposures of rock. The site is generally in good condition with the process of natural weathering causing regular rock-falls and resulting in newly exposed surfaces. Some manual management work is required to prevent encroaching scrub from obscuring the rock face. The grassland areas are cut annually at the end of summer after the flowering plants have seeded.

This project is supported by the Aggregates Levy Sustainability Fund, Heritage Lottery Fund and North East Staffordshire Regeneration.

Brief Description of Geodiversity

Brown End Quarry is important for its exposed rocks and fossils of the Lower Carboniferous period. The exposed rocks belong to the Milldale and Hopedale Formations.

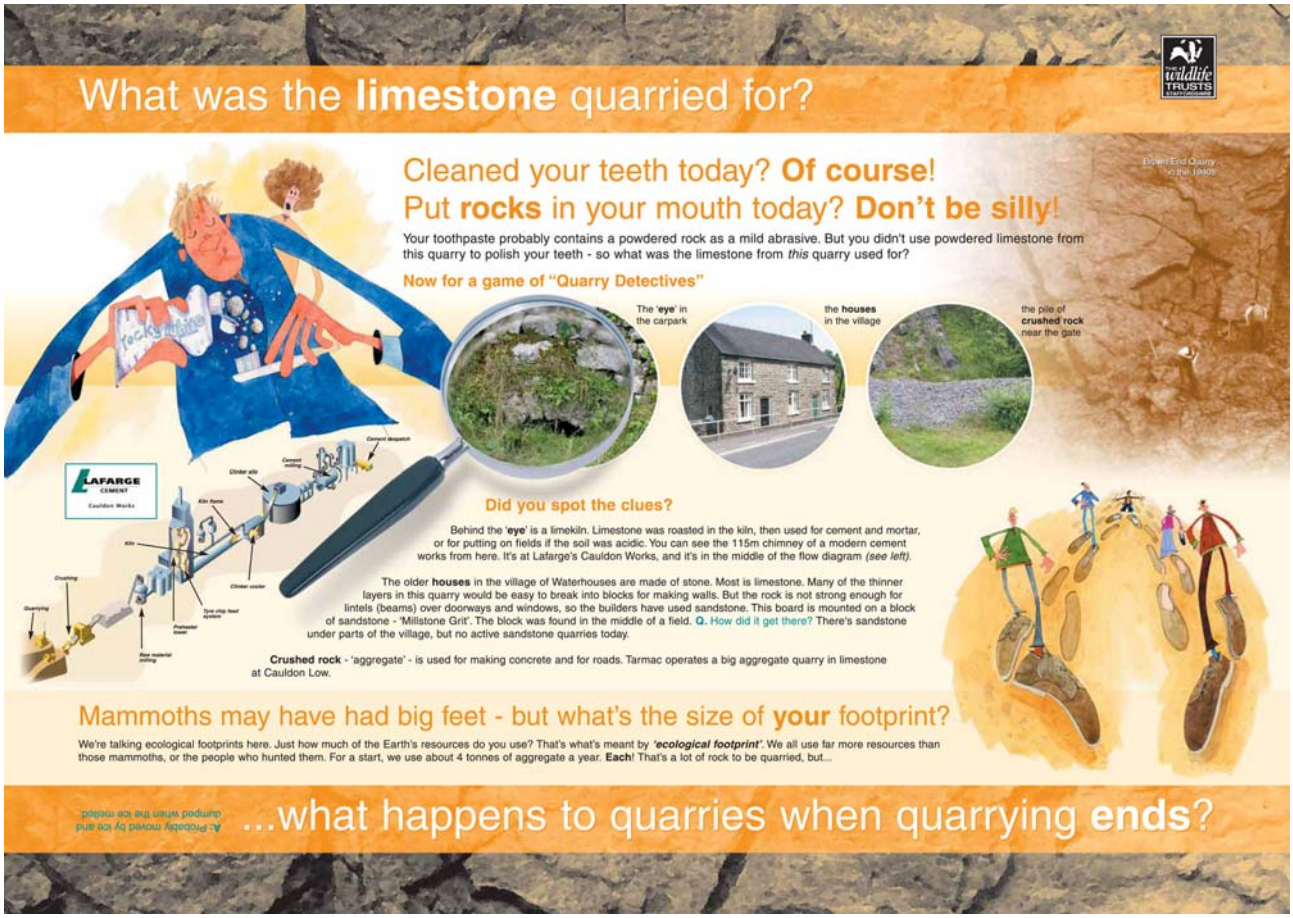
The older Milldale limestones are fine-grained with varying amounts of crinoid debris and numerous trace fossils. The younger Hopedale limestones show graded bedding (turbidites) with grain size decreasing in the upper layers.

The worked faces clearly show thin-bedded, steeply dipping strata which reflects the west side of the Peak District National Park.

Acknowledgements:

The Staffordshire Wildlife Trust

Further detailed information can be obtained from

www.staffordshirewildlife.org.uk/brownendquarry.asp?ses=&pl=false

A more detailed description of the development of the nature reserve is given by Eric Robinson (Briefing, Geology Today 20 (5), 162–169) which may be available online.