

## Knottingley Canal Sides



STATUS: Local Geological Site

OTHER DESIGNATIONS:

COUNTY: West Yorkshire

DISTRICT: Wakefield

OS GRID REF. 5 localities listed separately

OS 1:50,000 Landranger 105 York and Selby

OS 1:25,000 Explorer 290 York and Selby

BGS 1:50,000 Sheet 78 Wakefield

FIRST DESIGNATED by West Yorkshire RIGS Group in 1996

DATE OF MOST RECENT SURVEY October 2007 by West Yorkshire Geology Trust

DESIGNATION SHEET UPDATED August 2009

### SITE DESCRIPTION

Limestones, mudstones and sands of the Permian Brotherton Formation (Upper Magnesian Limestone) are seen in a series of exposures adjacent to the Aire and Calder Navigation Canal.

Locality 1: Knottingley Old Hall, SE 499 241

A 5m high exposure of limestone is revealed in the grounds of Knottingley Old Hall. The limestone is finely bedded and gently undulating with vertical joints. The notice in the park comments on the opening of the quarry in 1830. Only one section of these rock faces is designated as a RIGS.

Locality 2: SE 498 239

Exposures of honey coloured dolomitic limestone are seen in a 5m high rock face to the east of Gagge Bridge. The limestone shows parallel bedding varying from 5 to 50cm in thickness. This is largely overgrown and only 10m of the face is exposed.

Locality 3: SE 497 240

Small exposures of limestone are revealed in the north bank of the canal above Gagge Bridge. The limestone is dolomitic with conchoidal fracture showing no reaction to hydrochloric acid. The bedding varies in thickness from 5 to 50cm. At the west end of this band, the dip of the limestone is locally 15°-20°.

Locality 4: SE 499 239

Further exposures of Magnesian Limestone are revealed along the west side of Jackson Bridge, though this site is largely overgrown now. The limestone is very finely bedded with laminations.

Locality 5: SE 501 238

Two exposures of limestone are to be found at right angles immediately to the east of Jackson Bridge. This excellent 7m high exposure exhibits true and apparent dip, faulting, laminated bedding and deposits of weathered sandstone. The faces are difficult to approach because of the growth of brambles and nettles, but the face can still be seen

from a distance. The section under the road bridge is accessible and shows many interesting features.

#### HISTORICAL ASSOCIATIONS:

The Brotherton Formation was quarried for burning for agricultural lime, as it is largely magnesia-free, according to the Wakefield memoir, p167. Three quarries in the Knottingley area were still being worked for agricultural lime in 1940, though the canal side sites are not mentioned, so had presumably stopped working by then. Some of the quarries in the Knottingley area also produced good building stone, used for churches in the area.

#### EDUCATIONAL VALUE:

Localities 1 and 5 are situated further away from the canal bank and have safe flat access to Permian Limestone exposures. The canal side sites are not recommended for educational use.

#### ACCESS AND SAFETY:

There is good access to canal side sites via the newly landscaped areas north of the canal. Sites 2, 3, and 4 are immediately adjacent to the canal and are potentially dangerous. Locality 5 at Jackson Bridge is more suitable for supervised parties being situated further away from the canal. To avoid canal side sites altogether, use Locality 1 at Knottingley Old Hall where there is safe access to the Permian Limestone. All the sites are accessible by wheelchairs along the canal paths.