

Ryedale Vernacular Building Materials Research Group Report 2/03 Hildenley Quarries and Slingsby Castle

Introduction

The group met at The Park Cottage, Hildenley on Saturday 19 July 2003 and noted that the original outbuildings constructed of white Hildenley Limestone have been converted into housing and that the original Gatehouse was undergoing modernization. Much of this area is the site of the former Hildenley House that had extensive gardens and greenhouses, some containing palm trees that can still be seen growing 'wild' in the woods. There are many examples of exotic trees to be found in the woods, for example *Ginkgo biloba*.



*Hildenley Hall,
now demolished*

The Quarries, NGR 743713

A number of Quarries were investigated using maps and material from Senior (1999), fossils collected and conclusions drawn. The group has assigned new names to some of the workings and these are correlated to Senior (1999).

New Quarry (Main Quarry of Senior)

A deep but narrow quarry exposing at least 10 metres of pure white porcellaneous limestone with chert bands. This corresponded to **Section B** in Senior (1999). Of note were vertical joints containing iron rich deposits and broken chert bands. These were interpreted as joint fractures filled with (post) glacial deposits. The industrial archaeological remains of note were the overhead viaducts (which led away from the quarry in a southerly direction but could not be traced due to vegetation cover) and a well-preserved example of a limekiln situated at the entrance to the quarry. The freshness of the exposure led the group to conclude that this was the youngest of the quarries and that some limestone may have been converted to lime.

These workings probably represent the last phase of extraction for internal stonework in South Dalton Church.

Main Quarry

A very large area of disturbed ground with many workings and spoil heaps. The only exposure was on the western side and comprised about 2 metres of thinly bedded limestone overlaid pale sandy limestone, which matches in part to **Section C** of Senior. The colour appeared to match the building stone of the nearby house.

Again, no age could be placed on the workings, but the lack of exposures and degree of vegetation cover suggests that it is older than the new quarry. No archaeological remains were found but a number of trackways led away from the quarry, whilst the westerly field boundary was marked by a dry stone wall of Hildenley Limestone.

Stack Yard Exposure (New exposure)

A former trackway took the group to the road to the main farm. At this point, was a large stack of straw bales behind which a new exposure had been cut into thinly bedded limestones overlying calcareous sandstone? From the rubble, John Wright extracted a number of Ammonites, Bivalves and a Lobster. His identification of the Ammonites is as follows:

Cardioceras persecans and *Cardioceras ashtonense* are indicative of the Birdsall Calcareous Grit (Cordatium subzone).

From the loose material above the exposure, he also found another *Cardioceras ashtonense*, which may indicate the Lower leaf of the Hambleton Oolite (into which the Birdsall Calcareous Grit passes further north).

Hildenley Farm Section (Hildenley Home Quarry of Senior)

Hidden behind a stack of silage bales was **Section A** of Senior. The access was not good due to the bales but some of the section was visible at the side. It was noted that the house and outbuildings were built of the same calcareous sandstones now identified as Birdsall Calcareous Grit. Mr and Mrs Barron senior came out to greet us and were very interested in the work of the group and directed us to the next quarries. On route a number of specimen trees were noted including a fine specimen of *Ginkgo biloba*.

Old Quarries (Swinton Braygate Quarries of Senior)

It was concluded that these were the earliest quarries due to the lack of exposure and almost complete vegetation cover. There was no sign of **Section D** of Senior (1999). The quarry site was bounded on the side by a dry stone wall of Hildenley Limestone but this was the only rock seen. It was proposed to return in the winter for a further study.

Archaeological Background

The historical use of Hildenley Limestone is well documented by Senior (1999) and some of his suggestions for further research are included in this section.

Of note are the industrial archaeological features such as trackways, the viaduct and limekiln, all of which need further study.

Senior advises that future investigators search literature for 'chalk-like objects' (Senior p154). Up to present, I have found the following references:

“Circular molded stone found in fragments... This was made of a softish white limestone of very fine grain...” no parallel for this stone has been traced and its purpose is unknown”
Figured in Senior.

Corder and Kirk. 1932. Pp.75.Fig.2

1. A chalk figure ... 2. A chalk figurine...the two figurines belong to a type known exclusively from East Yorkshire.

Stead in Wenham and Haywood. 1997. Pp.44.Fig.16

‘Chalk’ Figures notably Malton and Sherburn. The rest of the figures recorded are from the southern and eastern Wolds and so are presently thought unlikely to be Hildenley Limestone?

Stead. 1988. Chalk Figurines of the Parisi. Pp12. Fig.3

Geological Background

The Hildenley Limestone is a member in the Late Jurassic (Corallian Group) and has been figured by many researchers over the years including Fox-Strangways (1892), Blake and Hudleston (1877), Wilson (1933), Wright (1971) and Senior (1999). The limestone was considered for the rebuilding of the Houses of Parliament (Lott and Richardson, 1997) and more recently has become an MPP assessed site (Hedley et al, 1999). In its pure form it is a fine-grained white (chalk-like) porcellaneous limestone containing between 80 and 90% Calcium Carbonate (Docking - personal communication), with a clay and sandy residue (Mike Horne, University of Hull). Few fossils are recorded and those that are tend to be preserved in silica, which also occurs as chert bands in the upper part of the sequence. Similar Chert bands can be observed in the Malton Oolite at Slingsby **NGR 695745** and North Grimston **NGR 845674**. Various authors have suggested origins for the Hildenley Limestone and its age in relationship to other rock groups in the area and it is now possible to suggest that the bulk of the Hildenley Limestone is the local equivalent of the Malton Oolite, whilst the top shelly sections may be the equivalent of the Coral Rag. The limestone may have been formed in a fault-bounded basin (?) in the sea floor into which the finest carbonates were washed, together with occasional fossil material from

the surrounding shelf areas. Similar conditions to those at Hildenley may also have occurred in the Wass/Hovingham area. The shelf experienced alternating high and low energy deposition with alternating coarse/fine Oolite sands, storm surge beds, coral reefs and sponge beds which formed bands of chert in the limestone and surrounding Malton Oolite (as illustrated in fig 52 in Senior). These local environmental conditions at the time may also go some way to explain the terrestrial and marine vertebrate remains found in local quarries in the Malton Oolite.

The Ammonites from the Stack Yard Exposure now support the presence of the Birdsall Calcareous Grit below the limestones (John Wright - personal communication).

Further Work

As with all our visits there are more questions than answers!

- Further fieldwork in the old quarries.
- Industrial archaeology study of the viaduct and limekiln.
- Further archaeological literature study of 'chalk-like' artifacts from the Malton area (as suggested by Senior).
- Further geological fieldwork to establish correlation between the Hildenley Limestone, the Malton Oolite and the underlying Birdsall Calcareous Sandstones.
- Discussions with the owners, Ryedale DC and English Nature over possible RIGS or even SSSI status.
- Further fieldwork on local buildings to establish the sphere of influence for primary building use of the Hildenley Limestone and as a reused building stone (see footnote).
- To investigate a non-destructive method to identify 'chalk-like' objects as Hildenley Limestone (ideas please).

Slingsby

The party moved onto Slingsby for lunch full of tales and theories about Hildenley.

Building Stone

The majority of houses (and pub) were built of Malton Oolite, which displayed alternating bands, a coarse and fine ooids (high and low energy environments), which could indicate a close proximity to the Hildenley basin. John Wright is of the opinion that the building stone may have come from the nearby quarry.

Slingsby Castle, NGR 697749

The castle was observed from a distance and its history discussed (Brooke 1904). As to building stone, it was observed that the main walls were built of Malton Oolite, with Birdsall Calcareous Grit quoins, whilst fireplace mantles appear to be made of Hildenley Limestone (Senior p167. Fig 59d). John Wright is of the opinion that the Malton Oolite used in the construction of the castle may have come from Laysthorpe Quarry **NGR. 646785** and was brought across from Caulkleys Bank.

As with Sheriff Hutton there is much still to be done here!

Slingsby Church

An exterior study of the church revealed the main building stone as Birdsall Calcareous Grit with the possible source quarries on the Castle Howard Estate? A copy of the visitors' guide was obtained for the archives.

Some gravestones were studied and example of Aberdeen and Shap Granite were found. Robin Wardell was able to provide some interesting local knowledge and history about some of the graves.

Slingsby Quarry, NGR 696749

Unfortunately, due to lack of time, the quarries could not be visited and the coordinator lost the chance to give a geological answer to the legend of the Slingsby Worm (Walker 1990). The quarry was surveyed as part of the Corallian Project undertaken by Ryedale and Scarborough RIGS (Myerscough and Watts 2001).

The surveyors noted alternating bands of ooids, high-energy 'storm-surge' shell beds, and chert bands and marls (volcanic?) horizons.

Slingsby Brick Works, NGR 696762

A chance discovery in the Church handbook led the group to the site of Slingsby Brickworks at Brickyard Farm (Roberts 1990). A fine example of a surviving brick kiln was seen (although in poor condition for a listed building) with ponds marking the brick pits in Kimmeridge Clay (Upper Jurassic). These clays are faulted against the Corallian in the village as shown by the marked slope off the main road. It should be noted that none of the older houses are on the fault line, only modern Council houses – perhaps the original builders knew something we did not!

Further Work

- Seek permission to Slingsby Castle to research building stones.
- Undertake a building stone survey of Slingsby and Church.
- Local quarries surveyed for their potential RIGS status.
- Visit to Yorkshire Museum, York to study reptilian remains from Slingsby.
- Contact Ryedale DC and English Heritage with concerns over present state of the Kilns at Brickyard Farm.

Thanks

- Mr and Mrs Barren for access to Hildenley Quarries
- Dr David and Dr Susan Neave for historical data and maps of Hildenley quarries and Slingsby Castle
- Robin Wardell for keeping us amused with his knowledge of local history and his extended family
- Dr. John Wright for his continuing support and fossil identification
- Steve Pickering for his local stone knowledge and experience
- Dr Richard Porter (Dartmouth Naval College) for his continuing research into the possible use of Hildenley Limestone at Dartford and Dartmouth (a sample has been sent to him for comparison)
- Matthew Docking (Bridlington School) for initial analysis of Calcium Carbonate content and Mike Horne (University of Hull) for ongoing analysis of residues

Footnote(s)

On returning home following a Field Visit, I stopped at Rillington Church **NGR 853743** which is made of a variety of different rock types, several blocks of which were Hildenley Limestone – more to be done here I think.

David Crook (Yorkshire Vernacular Buildings Study Group) is presently surveying the Castle Howard Station and has come across a reference to Hildenley Limestone.

Update (2007)

Since this paper was submitted, a number of Chalk Figurines have been located at:

- Malton Museum
- East Riding Museum in Hull

At present negotiations are underway to photograph them and take samples of rock to establish the rock type. Some examples in Hull certainly look as if they are made from Hildenley. A similar test has been undertaken on the Folkton Drums and confirmed that they were made of Chalk

(see: <http://www.thebritishmuseum.ac.uk>).

Hildenley Limestone in Church Fabric(s)

The Church Fabric Group will undertake the recording of examples of Hildenley in the fabric of surveyed Churches.

Classification of lithologies associated with Hildenley Limestone

It is proposed to publish a guide to identifying individual forms of Hildenley Limestone, and at present a number of sequences are being tested. The most abundant form is shelly limestone identical to the topmost bed of the Malton Oolite.

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