

SCARBOROUGH ARCHAEOLOGICAL AND
HISTORICAL SOCIETY

THE INVESTIGATION OF A
STONE STRUCTURE
AT 100 CASTLE ROAD
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BY
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Report 57 2022

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First published December 2022 by the Scarborough Archaeological and Historical Society
c/o 4c Dunslow Court, Eastfield, Scarborough, YO11 3XT

www.sahs.org.uk

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INVESTIGATION OF A STONE STRUCTURE AT 100 CASTLE ROAD SCARBOROUGH

National Grid Ref TA 04295 89000
National Grid Co-ordinates 504295 489000
Site Code CR22

INTRODUCTION

100 Castle Road is a three-storey end of terrace building on the north side of Castle Road, at its junction with a foot passage named Marlborough Terrace. Until relatively recently this foot passage was named Lime Kiln Hill.

In February 2022 the owner of the property contacted Scarborough Archaeological and Historical Society to draw our attention to the presence of a stone structure found within the ground floor during building works. The owner thought that the structure may be a fragment of the town wall. However, as the course of the Newborough defences in the vicinity of the site is well known to be on the opposite side of Castle Road, evidence being in both the surviving fragment of wall in the nearby car park and early mapping, it was clear that the structure could not be the town wall. However, it did appear, very unusually, to be a lime kiln within a building. It was therefore of sufficient interest to warrant closer inspection and survey. The site was re-visited in December 2022 when the opportunity was also taken to examine the yard wall in 98 Castle Road.

This is a report into those investigations.

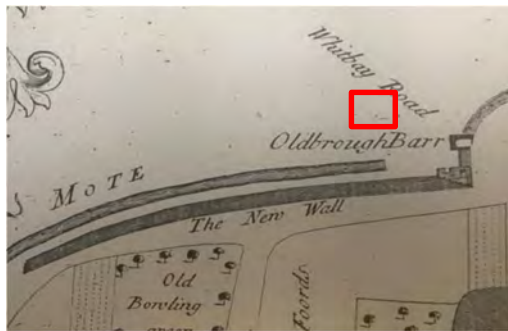


Extract from the Ordnance Survey map at the original scale of 1:500 surveyed in 1891 and published in 1892
The blue line is the north wall which contains the draw arch to the lime kiln
The red line is where the side stone wall is also visible in 98 Castle Road
Map reproduced courtesy Scarborough Museum and Galleries

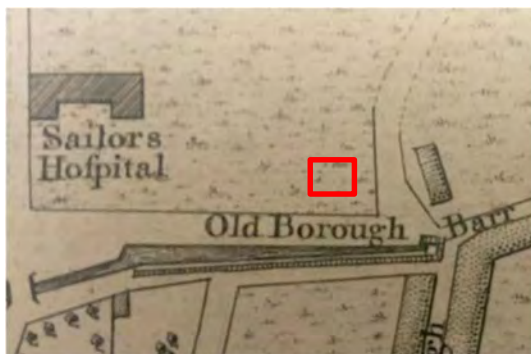
HISTORICAL BACKGROUND

The first reference to a lime kiln (Lyme kylne) is in 1394 although its precise location is unknown. The same document of 1394 also refers to Chalk House (Colchous, from the Old English Cealc meaning chalk or limestone).ⁱ The area in the vicinity of the Oldborough Bar is known from archaeological evidence to be the location of medieval industrial activity such as pottery making, and iron smelting.ⁱⁱ

Early maps such as Cossins (1725), Vincent (1747), Jefferys (1770) and Foord (1782) ⁱⁱⁱ do not refer to a limekiln here or in the immediate vicinity nor do they show a structure.



Early maps with the approximate position of the site outlined in red – left Cossins, 1725, right Vincent 1747

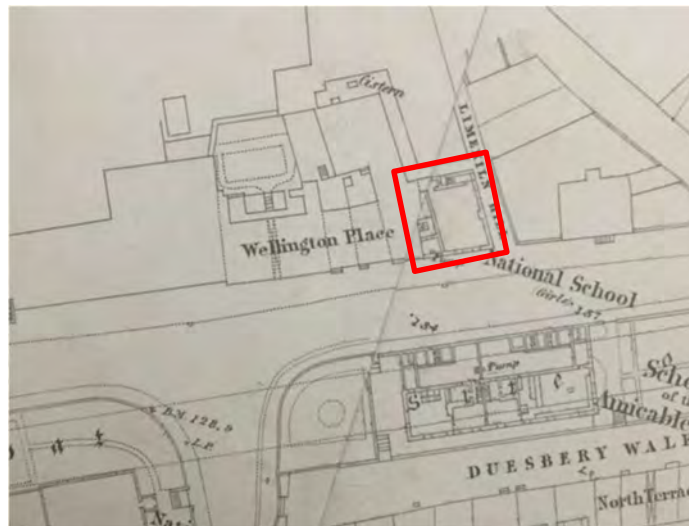


Early maps with the approximate position of the site outlined in red – left Jefferys, 1770, right Foord 1782

The first map to show a building on this site is Wood's map of 1828.^{iv} This shows an inverted U-shaped structure ie a rear range and a right angled wing at each end. This is flanked on the west by another building and then an open area which appears to be the entrance to a service yard which seems to have later been incorporated into 98 Castle Road. At this time Wellington Place, the terrace of which the site now forms a part, was incomplete being separated from the site by the yard access described above.

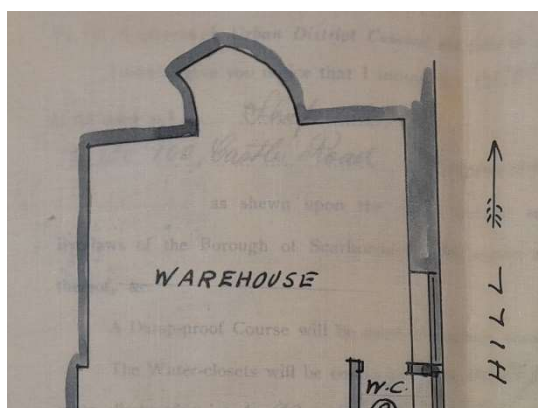


John Wood's map of 1828 – the site outlined in red



The Ordnance Survey plan surveyed in 1850 at the scale of 1:1056 – the site outlined in red

By the time of the first large scale Ordnance Survey map at the scale of 1:1056 surveyed in 1850 and published in 1852 the site is occupied by the National School (girls – the boys' school was on the opposite side of Castle Road). The National School was built in 1836 by John Thompson who was a bricklayer, brickmaker and builder living and owning land in Wellington Place.^{vi} Clearly had there been a lime kiln here, by 1850 it had either been removed or, as now seems likely, the front wall built around. Ordnance Survey maps at this scale of this period showed the ground floor interior of public buildings. Thus, the school consists of a single large room with a small room, probably a privy to the north. To the west are two small rooms one containing a pump the other probably a privy the former presumably accessed from the school room through the arched feature referred to below. The latter rooms seem to occupy the service lane shown on Wood's map and referred to above. In 1982 (but referring back to 1972) it was reported that a limekiln was visible in the rear of shop at the corner of Lime Kiln Hill and Castle Road.^{vii} This National School went out of use in 1859 when the boys' school over the road was demolished and replaced by a new combined National School. The structure of the old girls' school remained however and seems to have been used as a warehouse. Building bye-law approval was given in 1914 for the conversion of part of this into a shop and the submitted plan shows the draw arch as being extant at that time



Extract from the deposited plan of 1914 showing the presence of the draw arch
Note the way in which the inner walls curve
Copyright County Record Office^{viii}

ANALYSIS OF THE STRUCTURE

The structure was photographed both conventionally and by iPhone12 using the Polycam App which was used to create interactive 3D imagery using Structure from Motion (SfM).

The North wall

This wall is marked by the blue line on the 1;500 scale map reproduced above. It is largely built in squared coursed sandstone with course heights varying between 13cm and 25cm. The tooling varies both between courses and within courses including a rather coarse herringbone pattern, a finer herringbone pattern and hammer dressed (though these are generally at the west end of the wall) and no tooling at all.

At the east end there is a large arched opening about 1.2 metres from the corner with the east wall. The voussoirs of the arch are executed in large bricks. The imposts from which the arch springs are two horizontal bricks at each end. The opening is 1.74m wide at the base increasing to 1.79m at the course where the arch springs, that is the side walls have a batter, more pronounced on the east (right) side than the west. The rise of the arch from springing line to apex is about 98cm.



**The arched feature at the east end of the north wall.
Note the batter on the side walls to the opening more pronounced on the eastern side**

The east flank wall of the arch does not run off perpendicular to the main wall but is angled westwards. The west flank wall by contrast is initially almost, but not quite perpendicular to the main wall but both flank walls curve within the structure as seen in the Building bye-law plan above. These constructional details create the curious effect whereby the arch is on a skew at its eastern end only, and conventionally built at the western end



Arch detail showing the skew at the east (right) end

It was not possible to examine within the arched feature in detail due to debris and a collapsed roof, however as noted above one flank wall does not run off perpendicular to the main wall and the east wall in at about 1.73 metres in begins to turn in to fill the end of the feature (note this area has now been infilled with blockwork and is inaccessible). At this point the top three courses of the wall are brick rather than stone. In the arched roof of the structure, 1.12 metres in from the main wall there is an oval opening 1.22 metres across on its longer axis, this must be the 'eye' to the kiln chamber or bowl above. Beyond this the roof continues as a brick arch. One the main elevation, there must have been several more courses of stonework above the arch than now visible since the chamber or bowl would have had to be deep enough to ideally reach a temperature in excess of 800°C.^{ix}. The wall may have been in the region of two metres higher. This masonry must have been taken down to accommodate the first floor

of the building erected in 1836 and possibly even earlier to accommodate some back-to-back houses to the north which were in-situ by 1828.

At its west end, where the wall is abutted by the west wall described below with a straight joint, a short fragment of an arch is visible. This comprises four bricks springing from a 13cm stone course. The opening below had been roughly filled with stone in part angled across the corner with another straight joint at the side wall of the arch. As it abuts this infilled arch with a straight joint, the west wall is clearly later. It is not clear how this arch relates to the arch described above, to the east but it seems likely that it is another draw arch for the lime kiln. The rest of this arch could not be seen at 98 Castle road when that was examined.



The west end of the north wall at its junction with the side wall showing the small section of visible brick arch abutted by the later side wall. Straight joints are indicated by the red lines



Detail of the fragment of arch at the junction between the north and west walls

The north wall has been subject to modifications over the years including a section infilled with concrete blocks to the upper right of the arch

The West wall

This wall consists of two main elements – brick and forward of that stone with some brick infill



The west wall showing the positions of features referred to below

The brick element consists of a wide, fairly shallow brick arch $1\frac{1}{2}$ bricks in depth recessed about 22cm, or 1 brick length behind the stone outer leaf (A1 on the photograph above). Below this, and further recessed by about 12cm (about $\frac{1}{2}$ a brick), the arch is infilled also in brick – A2. This is carried out in English garden wall bond, well-constructed and appears to be contemporaneous with the arch above. Towards the south of the arched feature, there is a section further recessed within the arch fill, this is set back about 16cm (also about $\frac{1}{2}$ a brick) A3. This is slightly more crudely built – some thicker joints – and appears to be the later infilling of an opening. It is considered that this arched feature was designed as an architectural feature and was meant to be seen.



Detail of the arched feature A

About 2.4 metres to the north there is a further section of deeply recessed brickwork (B on the photograph above), the recess being about 35cm suggesting that it is on the same plane as the main arch infill described above although not as well constructed and with the upper courses in loose bricks.

The stone walling is forward of the brick arch, with a 3.23metre wide opening revealing the brick arch feature A referred to above. To the left ie the south of the opening, the wall rises to a height of about 1.42 metres above the new floor level, carried out in squared sandstone. Above this are five courses in a more evenly squared limestone (feature C) and these courses corbel in towards the arch, except that the first 'corbel' is not stone but a timber baulk about



Oblique view of the corbelling 'C'

18cm by 15cm in section, which appears to have been sawn off at a later date – possibly a structure was built into the wall. To the right of the opening, the stonework rises in a similar fashion, though there is a less clear distinction between the courses in sandstone and those in limestone. Spanning between the upper corbel stones is a timber beam or bressummer (feature E) about 18cm (facing the room) by 12 cm in section. This all indicates that in building the stone wall, which must have been later, there was a deliberate intent to retain the brick arch and infill as a visible architectural feature -hence it follows from this that the stone wall is later.

About 0.8 m north of the large opening, the wall construction is poorer and includes a section in brick (feature F) and then the second opening B referred to above, revealing the deeply recessed brickwork. This opening is just over 1 metre wide spanned by another timber beam 15cm by 8cm in section. In this general area the quality of wall construction is rather poor, with some elements carried out in randomly shaped stone, geologically various.

The west wall abuts the north wall with a straight joint and abuts an arch fragment in the north wall – the west wall therefore post-dates the north wall.

On the other side, within the back yard of 98 Castle Road, a short length of the other elevation of this wall can be seen (red line on the introductory 1:500 scale plan). This wall is white washed covering some of the constructional detail, but it appears to be of much better quality than the elevation facing in to 100 Castle Road.



Fragment of stone wall in the yard of 98 Castle Road

The East wall

The east wall makes a straight jointed abutment with the north wall indicating that it is a later feature. The wall is constructed in roughly squared relatively thin coursed rubble and therefore has a different characteristic from the north and south walls, being more akin to the construction of rural buildings in the Scarborough hinterland.

It contains no particularly noteworthy features being of a fairly consistent build



The east wall showing the junction with the north wall and the difference in the masonry between the two walls

INTERPRETATION AND CONCLUSIONS

The location of the building on the north side of Castle Road means that the structure is not part of the town wall, however there may be an association in that some of the masonry in the north wall is of similar character in terms of stone type, its dimensions and finish to the stone visible in the surviving remnant of the town wall. Jefferys map of 1770 seems to show a section of town wall as the same length as on the 1530s ^xview which indicates that if the stone in the lime kiln came from the town wall, then it was robbed after 1770. Foord's map of 1782 appears to show the area occupied by ponds and a garden so the wall may have been robbed by then and it will certainly have gone by 1807 when the first Amicable Society School was built^{xi} - at least above ground. This would give the lime kiln a late 18th century date. Once the lime kiln had gone out of use it is understandable that this front wall was retained as it would in fact be acting as a revetment to the higher land in which the lime kiln is set, the top of Marlborough terrace being about 3.5 metres higher than Castle Road .

The north wall is relatively straightforward consisting of the stone structure, almost certainly one build, punctuated by the draw arch of the kiln, though the relationship with the fragment of arch at the west end is problematic.

The west wall is more complex and appears to be two builds. The first build is the brick wall with the large infilled arch. Clearly this was designed to be seen though what its function was is unclear. It may have been part of the building shown on Wood's map and forming part of the core of the present 98 Castle Road. At a later stage the stone wall was built alongside the brick wall, using reclaimed stone, possibly also from the town wall. This was built in such a way that the brick arched feature was visible meaning that the builder's intention was seen as an architectural feature. For what purpose is unclear. It seems likely that this stone wall was built in 1836 when the National School was built.

The east wall is relatively straightforward and again is likely to date from the building of the National School.

ACKNOWLEDGEMENTS

The owner of the property, Martin Zammit, is thanked for drawing this structure to our attention and allowing us to survey it and John Sexton is thanked for access to 98 Castle Road.

The survey was carried out by the author and Trevor Pearson and Gareth Davies carried out the 3D photography and processing.

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- ⁱ Jack Binns, 'Gazetteer of Scarborough's medieval place- and field-names', *Medieval Scarborough: Studies in Trade and Civic Life*, ed. D. Crouch and T. Pearson (Leeds, 2001), 114, 116
- ⁱⁱ Trevor Pearson, *The Archaeology of Medieval Scarborough: Excavation and Research 1987-2004* (Scarborough, 2005), 55-58
- ⁱⁱⁱ Maps consulted
John Cossins, *A new and exact plan of Scarborough* (1725)
William Vincent, *A plan of Scarborough* (1747)
1770 A plan of Scarborough published in Jefferys
J Foord, *A Plan of the Town of Scarborough* (1782) - manuscript
- ^{iv} John Wood, *A plan of the Town and Environs of Scarborough* (1828)
- ^v Ordnance Survey plan of Scarborough at a scale of 1:1056 (Southampton 1852)
- ^{vi} Christopher Hall, Ann Bayliss, Paul Bayliss, *Architects and Engineers of 19th century Scarborough* revised and expanded edition forthcoming
- ^{vii} P G Farmer and N C Farmer The dating of the Scarborough Ware Pottery Industry in *Medieval Ceramics* 1982. Vol 6 pp 66-84
- ^{viii} Plan deposited under the Building bye-laws with the Scarborough Corporation, 1904
- ^{ix} David Johnson *Lime Kilns: History and Heritage* (Stroud 2018) 31
- ^x J Cole & W Wilson *Ancient View of the Town Castle and Harbour of Scarborough Copied from an original drawing in the British Museum* (Scarborough 1824)
- ^{xi} Anne Morley *Curiosities from Scarborough's Children's Charities* (Scarborough 2017) 122