Industrial Archaeology
Notes 1983

Compiled by Stephen J. Betteridge

RE-SURVEYING OF LISTED BUILDINGS

During the year the Industrial Archaeology Sub-Committee members have continued the programme of surveying buildings and structures so as to assist the Department of the Environment’s Inspectors who are now surveying Lincolnshire’s buildings in an attempt to compile a complete and revised ‘Listing’ as soon as possible.

Additionally members have surveyed a threatened lock of unusual design on the Louth Navigation.

Committee members have also conducted some survey work on railway structures scheduled for alteration in connection with the current significant remodelling of Lincoln’s railway facilities.

STONE RAILWAY SLEEPERS AT ST MARK’S STATION, LINCOLN TF 974707

(Notes supplied by Tony Wall, photographs supplied by David Swift)

In 1954 Mr David Swift, a local railway historian, photographed some stone sleepers which had been incorporated into a loading bay retaining wall which was to be demolished to make way for the new Lincolnshire Road Car bus garage on St Mark’s Street. (Figs. 1 and 2). He contacted Derby Museum to establish if the source of these sleeper blocks was known. The Museum referred him to Williams’ History of the Midland Railway published in 1876 which stated that stone sleepers had been used on the Midland Counties Railway Nottingham to Derby line of 1838. The Nottingham to Lincoln line was built using timber sleepers in 1845/6 and so the sleeper blocks were almost certainly recovered from the Nottingham to Derby line which would have been relaid at about that time.

Examination of the St Mark’s station site in 1984 has revealed a number of sleeper blocks incorporated into structures on the site. It is hoped that examples can be preserved if the site is altered.

A 16TH-CENTURY MANORIAL WOAD MILL

Paul Everson

The details of the practice and processes of woad growing and production in Lincolnshire are well known from late 18th, 19th and early 20th-century documentation and surviving remains, but rarely from earlier evidence. Yet woad, whether alone or in combination with other dyes, was a staple of finished cloth production through the medieval as well as post-medieval periods. In the 16th-century, as Dr Thirk reports, its cultivation “was officially encouraged as part of a mercantilist scheme for making England independent of other countries for some of its essential commodities.” Her direct Lincolnshire evidence of a wool mill of this date at Clayby in the Lindsey marshland and of specialised growing near Spalding is hardly surprising in view of the crop’s need for highly productive land that led to later concentration in the Fens: evidence for a similar mill at Brocklesby in the northern Wolds is more unexpected. It occurs in a survey and valuation of Sir William Pelham’s North Lincolnshire estates made in 1585 and copied in 1587. Pelham built up a compact estate that included land and property in Newstead, Cadney and Howsham, Great and Little Limber, Audleye, Brocklesby, Newsham, Kilingholme, East Halton, Habrough, Ulceby, Coatham, Croxton and Immingham exceedingly rapidly in the 1560s and 1570s, that formed the core of the later Yarborough Estate. The manor of Brocklesby was formerly in the hands of the Hanby family and acquired in 1569. Its buildings and curtelage were surveyed as follows:

The manor house of Brockelsie with all the lodgings. Two barns in one of which there is a woad mill, the rounde flour to grinde, the place to make balls in. Two great thick planckes and the drying scaffolds; which myll at the lords; one garner with a stable and two lardg rooms under it; one other garner with a well hose and a stowe hose under it. Two voyd romes in the yard full of ymce and on(e) empité rime adjoyning, a kell house and a dove coate in the vinegar(t); a garden and an orchard replenished with fruet trees adjoyning the hosew.

The mill’s description makes perfect sense in terms of the processes later documented and the buildings that then formed a wool mill complex. For the essential parts were a circular roller house for crushing the wood plants, a bailing house where the pulp was rolled into balls, and drying ranges that were roofed but otherwise open timber structures with tiers of floors on which the balls were dried. Perhaps the ‘great thick planckes’ were loading boards such as were later used to transfer the balls to the drying ranges.

Looking back from the intensive fenland industry of the later 19th and early 20th-centuries, it is assumed that earlier mills were temporary rather than permanent structures. That
at Brocklesby, though apparently fitted into a barn, was clearly a manorial asset.

Notes
3. LAO, Yab 5/1/1; LAOR 17 (1965-6), 34-8, 27 (1977-82), 104-6.
4. Wills, op. cit.

MALTINGS, BRAYFORD WHarf NORTH, LINCOLN
TF 973 713

Tony Barlow Dip. Arch. R.I.B.A.

Situated on the north side of Brayford Pool, these two former maltings were built during the 1860s and 70s and were subsequently occupied by Messrs Bass, Ratcliff & Gretton, Ltd, until the company's purpose-built maltings at Sleaford were completed in 1906 and malt production was concentrated there. The plan and particulars of sale are from this date.

The maltings lie on either side of an alley (some 2.6 metres wide) running north from Brayford Wharf North. The upper storeys form the frontage to Brayford Wharf North bridge over the alley to connect the two maltings.

One of the maltings - that to the east of the alley - has been the subject of major alterations during this century and currently serves as a marine diesel engine repair depot. However sufficient of the external massing of this malthouse exists to enable it to remain of importance to the character of the building group.

West of the alley - behind a rather unprepossessing facade on Brayford Wharf North - lies a remarkably well-preserved malthouse of the mid-Victorian period. (Further detailed description of this building follows below.)

A former foreman's cottage lies to the north of the two maltings.

The 'western' malthouse
For descriptive purposes this building can be divided into four principal elements, lettered below from A to D.

A. A four-storey block forming the frontage to Brayford Wharf North.
B. A four-storey block containing three germinating floors with a barley storage floor above.
C. A two-storey maltkiln (ground floor: furnaces; first floor: kilning floor).
D. Malt garner. Two storeys (ground floor: malt storage; first floor: malt screening).

Building structure and condition (described by element)

A. The earliest part of the building dating from the late 18th century was probably a dovecote house. This element originally consisted of four storeys (including an attic storey). In the malthouse this element served as the barley intake, where grain sampling and probably initial screening occurred. Sales and office accommodation was probably included at ground floor level.

The ground floor was converted to new office accommodation during the 1960s. (New door and window openings were formed at ground-floor level only. First-floor structure removed and non-load bearing ceiling built in some 500 mm. higher up. Elevation to Brayford Wharf North cement-rendered on all floors. Existing central hoist doorways and flanking windows, though bricked up, survive behind rendered facade. Internally, second and third floors unaltered.)

All brick walls (forming a slightly rhomboid plan) appear to have been originally built as external walls. Internally the structure consists of nine bays. Timber-boarded upper floors are laid on joists supported by eight 350 x 250 mm. pine beams. The original 45° pitch close-coupled roof structure remains under the later and higher roof of element B.

B. This includes three low quarry-tiled germinating floors (Fig. 3) with a boarded floor for barley storage over (this latter now largely removed). The structure may be described as follows:

Between brick flanking walls four longitudinal rows of 100 mm. diameter cast iron columns support twelve 350 x 200 mm. transverse pine beams at 2.1 m. centres. The quarry tile floors are bedded in approximately 150 mm. thick lime/gypsum composition supported on pine joists.

The cast iron columns continue up to support the primary elements of the roof structure: strutted 'brusses' at 2.1 m. centres. These support in turn purlins, rafters, pine boarding and Welsh slate roof covering. Dormer windows (between the second and third purlins) illuminate every third bay on both sides of the roof.

Small segmental arched openings in each bay of the external walls provide ventilation and illumination to the three germinating floors. Control of ventilation and lighting is obtained by means of horizontal sliding timber shutters, and security is provided by three horizontal wrought iron bars within each opening.

External walls to germinating floors are generally of 340 mm. brickwork, thickened (to 450 mm.) to form load-bearing piers at the structural bay centres. The 450 mm. thickness is maintained throughout the wall at eaves level. A decorative brick 'dentil' band is incorporated at the head of each resulting recessed panel between piers. The ventilation openings at each floor level are located centrally within each panel.

C. Kiln. (Fig. 4). The furnaces originally contained at ground floor level have been removed and a modern concrete floor laid. The upper floor - originally of perforated tiles - is supported on wrought iron sections at 300 mm. centres laid across wrought iron beams supported by six slender tapering circular cast iron columns. (The original tile flooring has been removed together with one of the six cast iron columns.)
Above, the roof structure consists of five pine cross braced queen post trusses supporting a louvred ridge ventilator at its apex. The ridge of the 45° pitch roof runs laterally, across the building.

Four semi-circular headed windows illuminate the kiln floor.

Fig. 4 Killa, Maltings, Brayford Wharf North, Lincoln. (Photo: Museum of Lincolnshire Life)

D. Ground floor: Original malt storage bins have been removed and a new concrete floor laid. First floor consists of 175 x 65 mm. thick pine, metal splined boards laid over five 450 x 250 mm. pine beams.

Five pine king post trusses support the double pitch roof over.

A new loading bay has been cut at both levels in the north end wall of the building.

Building quality
The western malthouse is in remarkably good condition. The nature and use of materials throughout is of a high quality. The prodigious use of Baltic or Russian pine in the structural timber work is particularly noteworthy. Cast iron work, particularly columns to germinating floors and kilns, is simple, restrained and often elegant. Brickwork in the external walls of germinating floors is especially attractive, its aesthetic quality deriving from response to functional and constructional needs.

The building is in short a fine example of the functional tradition in the mid-Victorian period. In addition the building is a representative of a fast-disappearing building type. It is the last example of a complete maltings in Lincoln, once an important malting centre.

The building group is among the last survivors of the historic buildings for commerce and industry that once lined the edges of Brayford Pool, evoking memories of Lincoln's former port as portrayed in the paintings of J. W. Carmichael.

In January 1984 the SLHA asked the DoE to list these buildings as being of historical or architectural interest, but on 29 February 1984 the DoE replied that they were of 'insufficient interest to warrant inclusions in the statutory list'. The site is currently up for sale and its future is uncertain.

Detailed drawings of the maltings are in the possession of the Industrial Archaeology Sub-Committee and are available for inspection.
Fig. 5  Plan of Maltings in 1906. (S. J. Betteridge)
LOT 2.

ALL THOSE TWO WELL-BUILT BRICK AND SLATED AND TILED

Freehold Malthouses

Situate on the North side of the Wharf, with about 304 feet frontage to Brayford Water (which is connected by River and Canal with the Sea and Inland Districts) and possessing a total area of 4,856 SQUARE YARDS, OR THEREABOUTS.

The Maltings are approached under a Covered Way enclosed by Doors in the centre, admitting to

A GRANITE (PARTLY) PAVED MIDDLE YARD.
THE FURTHER OR LEFT-HAND MALTHOUSE

WILL STEEP 85 QUARTERS,
and contains—

THREE WORKING FLOORS,
one paved Concrete and two paved Quarries.

TILE PAVED KILN, Ceiled and Louvred,
MALTSTERS' CABIN, SPACIOUS COAL CELLARS,
AND STORAGE CAPACITY FOR ABOUT 2,000 QRS. MALT AND 2,500 QRS. BARLEY.

THE SECOND, OR RIGHT-HAND, MALTHOUSE

STEEPS 120 QUARTERS,
and contains—

3 Concrete & 3 Quarry-paved Working Floors
(Two Levels only),
TILED KILN AND STORAGE CAPACITY FOR ABOUT 2,000 QRS. MALT AND 3,000 QRS. BARLEY.

There is a

Granite-paved Yard in the Rear
With Back Approach from NEWLAND, enclosed by two pairs open rail Gates,

AND

A NEAT RED BRICK AND SLATED FOREMAN'S COTTAGE,
containing three Upper and three Lower Rooms, &c., and outside W.C., Coal-house and Shed.

A Capital Red Brick and Tiled 4-Stall Stable
adjoins, Paved Blue Brick and Ceiled; Chaff-house, Manure Pit, Men's Closets, and a

SQUARE PLOT OF ENCLOSED GARDEN.

A Second pair of gates opens on Brayford Wharf, on the right of the Maltings, admitting to another Granite-paved Yard, having

A BRICK AND SLATED 6-ROOMED COTTAGE,
on the Left, and

A NEWLY ERECTED 5-BAY CART LODGE,
with two Loose Boxes on the Right, and Hay and Straw Lofts over; Manure Pit, &c.

N.B.—The Land Tax on above property for the year 1906-6 amounted to the sum of £3 17s. 3d.

Fig. 6 Particulars of the 1906 Sale of the Maltings. (S. J. Betteridge)