The Sleaford Navigation Office

W. M. Hunt

The River Slea rises at a height of about 240 feet on the north side of Willoughby Heath about 2 miles south-west of Ancaster. It flows north as far as Willoughby Hall and then turns west, through Ancaster and Wilsford. About 1 mile west of Sleaford town it is joined by a rivulet coming from a spring, called ‘Bully Wells’ or ‘Boiling Wells’. The river then divides into two, just before it enters the town from the west, both streams flow through the town and come together again on the east side of the town. The river continues its course eastwards, being known as the ‘Kyme Eau’ beyond South Kyme, and finally enters the River Witham at Chapel Hill.

In the 1830’s Sleaford was a small town with a population of over 2,100 people. It was then, as now, a focus of road routes. It lay on the main London to Hull, via Lincoln, road and there were turnpikes radiating from the market place to the neighbouring market towns of Fillingham, Boston, Tattershall, Donington, Grantham and Newark.

The market place was the centre of urban life, with the parish church of St. Denys in its eastern side. On the south side of the market place are situated the Alms Houses founded by Sir Robert Carr in 1636. Originally this institution had gardens which extended from what is now Eastgate down to the north side of the River Slea but, in 1790, part of this garden was sold to the Company of Proprietors of the Sleaford Navigation for £100 in shares in the company. This land was to be used for the building of the wharf, basin and warehouse of the navigation company and for a roadway giving access to the dock basin. By the 1830’s the site had been developed by the Navigation and there existed on it the warehouse, a one-storey building of brick walls and wood-beam interior, built between 1790 and 1792 and a basin with direct access to the River Slea for the loading and discharge of barges. This warehouse had a small section at the north end which was probably used for administrative purposes by the lessee of the tolls. The road which was built on this purchased land led from the market to a stone portal, inscribed ‘1792 NAVIGATION WHARF’, which was the entrance to the wharf and which can still be seen on the east side of Carre Street.

The Sleaford Navigation was a company which began operation in 1792, during the period known as ‘Canal Mania’, a term applied to the years 1791-4, when there was great speculation, much of it in uneconomic ventures, in any form of canal construction.

Prior to the introduction of navigations and canals the main form of transport for bulk goods were the roads, often in an extremely unsatisfactory state of repair, but from 1760 onwards the economic climate of the country changed. Landlords were eager to improve the markets for their agricultural products and for any mineral deposits (coal, iron ore, etc.) which they had in their land. Farmers required cheaper and larger supplies of lime and manure for increasing their agricultural yield to meet the demands of the rising urban population, especially of the northern industrial towns. Builders consequently needed larger supplies of construction materials and both industrial and domestic fuels were being required in ever increasing quantities.

Navigations and canals had distinct advantages over the roads. As a barge could carry more goods than a horse-drawn wagon, the costs of transport were reduced. Further, as a canal was an artificial waterway and could, theoretically, be constructed anywhere with a relatively constant supply of water, newer and cheaper industrial sites were opened up; manufacturers did not have to scramble for suitable locations in the towns near major roads but were able to move out and set up new premises where land was cheap. Export markets at the ports where the canals terminated not only received export goods more cheaply from inland areas of manufacture but were also given a wider area for the choice of goods. Trade therefore expanded. Agricultural products grown in remote districts could now compete more equally with those grown in the immediate area of a town. The towns, in their turn, had a wider agricultural market in which to buy and the price of foodstuffs was thus steadied. The exchange of surplus goods, which could not always stand the expense of land carriage, could be carried out between counties and the interior counties obtained connections with the four great ports of the east and west coasts through links with the Thames (London), the Severn (Bristol), the Humber (Kingston-upon-Hull) and the Mersey (Liverpool).

These advantages were demonstrated by the first canals and they were quickly followed by others. Between 1771 and 1790, 46 Canal Acts were passed by Parliament and that figure rose by another 215 from 1791 to 1810. The greatest concentration of Acts passed was between 1791 and 1794, the ‘Canal Mania’ era.

Investment in the Sleaford Navigation was largely undertaken by the members of the community of the region which the waterway was to serve, as evidenced by the fact that only 4 of the original 44 shareholders in 1792 lived outside a radius of 20 miles of Sleaford.

These wealthy people, in the main merchants and the landowning gentry, were eager to encourage the development of the trade of the areas from which they derived their incomes. However, unlike some of those canals established by Acts of Parliament at that time which were invested in by people who thought that any canal would be a success, the Sleaford Navigation proved to be a viable concern, although many years were to pass from the beginnings of the company until regular dividends were paid.

The Navigation drew upon the produce of the immediate area and that of Boston and Lincoln by means of the link with the Witham Navigation at Chapel Hill. The link with the port of Boston provided the opportunity of quick and cheap transportation of goods being imported and for those destined for export.

The area around Sleaford was one of diverse agricultural types and rising productivity. To the north and west of the town there was heath land, ranging in soils from loams to sand. Up to the enclosures of 1794 this had been a poor, open field region but, after that date, turnips, peas, beans, clover, bone manure and the machine drill were successfully introduced onto the smaller fields. An example of the increased prosperity can be seen from the rental paid by Mr. John Twiddle who farmed the 400 acres of Manor Farm in North Rauceby, owned by the Earl of Bridol. In 1771 it had a rental of about £225 per annum and which, by 1825, had risen to about £2,000. John Twiddle built a water-driven mill to crush bones to produce bone meal for use on his turnip crop and it would appear that the increased rental was due to enclosure and the enterprise of the farmer himself.

To the south and east, for a distance of 5 to 6 miles, was a clay area given over to the grazing of cattle. This land had been improved by enclosure and by the introduction of underdraining.

The construction of the Sleaford Navigation involved the company in the amassing of debts as the original estimate of the total costs by the engineers, Jessop and
Hudson, had been too low. Thus, it was not until 1811 that sufficient profits were being made from the traffic being carried for dividends to be regularly paid to the shareholders. At first this was a regular 5 per cent which rose from 1832 onwards to 4 per cent. Eventually it reached 6 per cent in 1838 and 8 per cent in 1844.

Profits show a corresponding increase over the same period.

<table>
<thead>
<tr>
<th>Year</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 1810 - May 1811</td>
<td>£44/10/10d.</td>
</tr>
<tr>
<td>May 1825 - May 1826</td>
<td>£275/14/5d.</td>
</tr>
<tr>
<td>May 1831 - May 1832</td>
<td>£972/ 9/6d.</td>
</tr>
<tr>
<td>May 1837 - May 1838</td>
<td>£989/15/11/4d.</td>
</tr>
</tbody>
</table>

A number of shares also came onto the market during this period and from these few sales, and then for specific years only, some assessment of the growing market value of the company can be attempted. In 1816 the sale price of a £100 share was just over £60 (5 shares were sold in that year) while, by 1839, similar £100 shares (5 shares this time) were sold for various sums between £129 and £154 each.

Farming of the tolls was a practice which was soon adopted after the formation of the company as a means of raising a regular income and, prior to the 1830's, the amounts raised had been steadily rising. In 1795 they went for £498, in 1806 for £562 and, in 1824 for £1,010. Enoch Blackburn, of Hunslet, Yorkshire, contracted for the tolls and was awarded them for a three-year period from 1 September 1830 until 31 August 1833, at an annual rent of £1,310. This rose to £1,340 per year for the period 1836-9 when they were rented by Joshua Bower, a glass manufacturer, also of Hunslet. He would appear to have made a sufficient profit from this transaction for it to have been worth his while to tender, and have accepted, a rental of £1,590 per year for the following three years, that is, from 1839 to 1842.

It was against this background of rising prosperity that a meeting was held to view the state of the Navigation on 21 June 1837. This was one of the periodic meetings of the 'Committee of the Company of Proprietors of the Sleaford Navigation', a group of shareholders who held office for one year and who managed the day-to-day organisation and running of the company. Present at this time were Anthony Peacock, the chairman (and partner of the banking firm of Peacock, Handley and Co., of Sleaford), William Foster, the company clerk, Rowland Williams, John Payne, John Mowbray and Edward Harmston. These men, together with Henry Handley (the other banking partner), formed the Committee elected at the Annual General Meeting of shareholders held on the previous May 2nd. On the occasion of the view, amongst other business, it was:

- Ordered that a weighing machine for personal purposes on the most improved principal be provided for the Wharf Yard with suitable Shed Counting House adjoining and that Mr. Williams ascertain the price of the machine and other particulars whatever thereof the Tenders for the Building be obtained.

The reason for the need of a weighing machine is nowhere mentioned officially but it may be guessed at. As a weighing machine was not already installed (at least there is no record of one previously) and all goods carried on the Navigation were tolled at a charge according to their weight, it seems likely that this weighing was done on some form of manually-operated balance. As the profits of the company were rising yearly, so too must the quantities being carried. It is possible that these quantities were now becoming too great for the weighing means then being employed.

Less than a month later, on July 27th the Committee met again. Only five of the members were present, namely Messrs. Peacock, Foster, Payne, Williams and Mowbray.

Three tenders for the manufacture of the weighing machine had been received and the lowest was that of Benjamin Cort of Leicester, who quoted a price of 65 guineas. This was accepted. Some discussion about the 'Shed' proposed at the earlier meeting appears to have taken place during the intervening period and it was now recorded that:

- Mr. Bradley and Mr. Payne be requested to see to the erection of a suitable house (author's italics) and place to be annexed to the said machine.

Thus, the status of the building to be erected with the weighing machine now seems to have been altered and a more substantial construction contemplated. This could well have been determined by the healthy state of the profits and by a desire for an outward expression of municipal pride.

The building's status makes a further change at the next
Committee meeting, on 6 February 1838. The same five members were again present. It is recorded
The Committee received tenders from Mr. Baker of Steaford and Mr. John Bothewray of Grantham for the erection of a weighing office and clerk's dwelling (author's italics) upon the Wharf Yard according to the plan and Specification now produced to be erected . . .
for £166/0/0.
From a 'Shed' and a 'weighing machine' of the previous June, the construction was now to be, after an
interval of only 7½ months, an office and dwelling house, and a substantial one at that.
The contract for the building was signed by John Bothewray and R. Brewin on 10 February 1838 and the
deadline given for completion, to which they agreed, was 1 June 1838, just 5½ months. The forfeit for late
completion was £2 per month.
The building was finished on time for the Committee meeting of 7 May 1839 records the expenses incurred
for the whole of the previous year and the first item on this list is a payment of £191/12/9d.
'To Mr. Bothewray for building the machine house - contract £166, extras £29/12/9d.'
The contract price had been met in full and no
forfeiture payment had been deducted. The second item on
the list reads
'To Cort, for machine - £69/19/0d.'
This figure is £1/14/0d. over the original estimate and probably includes extras, as in the Bothewray case.
That the building must have been finished at least by
the middle of June 1838 is shown by the order of the Minute Book for 16 June of that year.
The Arms of the Company to be carved on proper
stone and put up over the door of the new office in the
Wharf Yard under the supervision of Mr. Bradley'.
The Navigation continued to use the building until the
company was wound up in the 'Sleaford Navigation
Abandonment Act, 1878'. It performed its twin functions
as weighing office and clerk's office up to the end but,
although the construction is not entered in company records,
it would appear that at sometime in the 1870's a brick
extension was made to the eastern side of the original
building and the dwelling house function became more
pronounced. This can be supported by the fact that on
17 October 1878, Sarah Elizabeth Mettam was born here,
as evidenced by her birth certificate. She continued to
live here for the remainder of her life as a tenant of Messrs.
Hubbard and Phillips, seed merchants, who bought
the premises in the 1890's. This firm also purchased the rest of the
Navigation Wharf buildings in Sleaford.

The Navigation Office Today
The Navigation office is now derelict for, like the
company which built it, its present owners are now in
liquidation. Since the end of 1973 there has been much
speculation as to the future of the property and there is
a possibility that redevelopment of the site might mean the
building being destroyed. It was with this in mind that
the following description of the office was undertaken for,
as far as the author is aware, no detailed description and
measurement has been made before.
The ground on which the Navigation Office is built
forms part of a low flood plain, about 3 metres above the
River Slea. The centre line of the building is orientated
NW/SSE. The original building measures 9.09 metres wide
and 4.96 metres long, while the later extension measures
7.35 metres by 3.12 metres. This extension has an outhouse
and w.c. attached to the northern side which are of
irregular shape, as shown in the plan. It must be mentioned
that measures of parts intended to be and apparently
similar, do vary. This is due to subsidence which has taken
place in the foundations on the southern side of the original
building.
A specification for this building is given in the Committee
Minute Book following the entry for 10 February 1838
and mentioned earlier in the reference to the entry for
6 February 1838. However, this specification is
incomplete as it has many words missing i.e. blanks
in sentences probably left for later insertion, and gives few
measurements. A plan and elevation is said to be attached
but this is now also missing. The author has so far been
unable to trace another copy of either the specifications or
the plan.

Description of the Navigation Office.
1 The Original Building
The height of this structure is 6.9 metres, measured to
the apex of the roof from the south side. The roof is
inclined at an angle of 29° to the horizontal and is hung
with blue Welsh slates, which are attached with copper nails.
The roof has an overhang of 23 cms. all round. Two
octagonal chimneys, of Ancaster oolite, are set on the roof.
A ridge board is attached at the northern and southern ends
of the roof and are painted white. A similar board, painted
green, is located below the eaves at the front of the
building, i.e. the western side. All external walls are of
brick faced with Wilford Limestone, the whole forming a
wall 11 cms. thick. All internal room walls are also of brick
and are plastered. Although it cannot be proven at the
moment, as the house is still standing and these parts are
inaccessible, the specification in the Minute Book states
that the roof rafters are 7.62 cms. by 6.35 cms. and not
more than 33 cms. apart. The ceiling joists are of 'Memil'
timber (a pitch-pine imported from Lithuania) 5.08 cms.
by 7.62 cms. The floor joists are of similar wood measuring
6.35 cms. by 17.78 cms. and not more than 91.44 cms.
apart.

Entrance and Entrance Hall
The front door is of red deal, painted green, with the
arms of the company, as mentioned in the Minute Book
entry cited earlier, carved in oolite and set in the external
wall above. The arms consist of a shield supported by a
coat worker and an agricultural worker, representatives of
the commodities which the Navigation was first set up to
transport.
A door step runs the full length of the front opening
and is made of 'Selled Yorkshire Rubbed Stone' (original
specification).
The entrance hall is a rectangular area with the doors to
the Weighing Office and Room 0.1 leading off. (The room
numbering is the author's designation). The east wall
is plain and possibly once contained a door leading to a
cupboard under the staircase.

Weighing Office
Set in the west wall is a window of "Gothic" design. 
It has inward sloping sides through the wall and contains
five vertical window sections, each section being divided
from its neighbour by a limestone column and the individual
glass panes by iron bars. The end sections of this window
are now filled in, leaving only the three centre divisions.
Attached to the wall on the north side of this window
and about half-way up its height is an iron bracket, all that
now remains of the weighing machine, the reason for the
building in the first place, (Figure 1). The fireplace in the
north wall protrudes from that wall, so creating two small
recesses, one on either side. The fireplace itself is a small
black grate type. A plain plastered brick wall forms the
eastern side of this room. Some of the plaster has fallen
away to reveal a bricked up hatch/window (not marked on
Plan No. 5) which would have looked through to the Pantry.
This window is situated 1.01 metres from the north wall,
with the sill 1.15 metres from the floor. It measures 35.5 cms.
high by 29 cms. wide and is surrounded by a 3.7 cms. wood
frame. This room is paved with red floor bricks, as is the
Entrance Hall, Stairwell and Pantry and which continue
into the newer section in the Kitchen and Room A.1.

Room 0.1
This room is possibly the meeting place of the
Committee of Proprietors after 1838. It has a very
Plan No. 4

THE SLEAFORD NAVIGATION OFFICE.

FRONT ELEVATION.
(west side)

SCALE: 0 metres 2

SLATE ROOF

Limestone facing on brick

Dressed limestone window surrounds.
substantial and fine walnut fireplace set in the south wall.
Between this fireplace and the west wall is a small, single
pane 'Gothic' window, framed in dressed Limestone, as
are all the 'Gothic' windows in the house. Another
'Gothic' window, similar in design and construction to that
in the Weighing Office, but with three vertical glass sections
instead of five, is situated in the west wall. (See Figure 2).
The north wall of the room contains two doors, one leading
from the Entrance Hall and the other from the Stairwell.
The east wall is plain. The whole room is floored with deal
boards, 2.54 cms. thick and 17.8 cms. wide.

Pantry
This room is probably the 'Scullery' which is referred
to in the incomplete specifications in the Minute Book. A
cupboard is recessed into the south wall and runs its full
length. It contains three shelves. The west wall is plain
except for shelves running the full length and a work
surface/cupboard unit which does likewise. The north wall
is wood panelled (the wood is stained dark and varnished)
in similar wood to that which covers the kitchen walls. This
would therefore appear not to be the original wall covering.
The east wall, also panelled, has a window set into it. The
design is very 'heavy', more fitting an external window
than an internal hatch. Possibly this is a window which
looked outside before the extension was built. Since that
time it has been converted to give more convenient access
to the Kitchen. The window opens outwards from the
Pantry to the Kitchen in two halves, the division being a
vertical one.

Stairwell
11 stairs lead from the ground floor to the upper rooms.
Each stair flat is made from red deal, 2.5 cms. thick and
FIGURE 1
Diagram of the bracket in the Weighing Office, as mentioned in the text. Bars are 2.5 cms thick.

FIGURE 2
“Gothic” window design
The window in the west wall of Room O.1. A five-section window, of similar design, with the end sections filled in is in the Weighing Office.
21 cms. deep. The width of the stairway is 90 cms. Each riser is 18 cms. in height. A wood bannister of ‘J’-shape runs parallel with the stairs on either side and is fitted directly onto the wall.

**Top Landing**

This rectangular space, corresponding in position to the Entrance Hall below, has the doors of Rooms 0.2 and 0.3 on the south and north sides respectively and a small ‘watch’ window set into the west wall. This window is rectangular with sloping vertical sides, thereby leaving a larger aperture internally than externally. The window is hinged at the bottom with a catch in the top section of the frame and therefore opens inwards and downwards.

**Room 0.2.**

This is the only room in the building which contains three windows, two of which are of the ‘Gothic’ design. Only the largest has sloping sides. This is the one in the west wall and is composed of only two vertical glass sections. Above the window outside is a small gable and this feature is repeated above the corresponding window in Room 0.3. The smaller ‘Gothic’ window is in the south wall and contains one vertical pane, this window corresponding in position to that in the south wall of Room 0.1. The third and smallest window, a ‘watch’ window, is in the east wall.

A fire grate is located in the south wall. The whole room is floored with 2.5 cms. by 17.7 cms. boards, as is also the Top Landing and Room 0.3. The ceiling of the room is unusual, as is that of Room 0.3, in that there is a down-curve in the plastering of about 15 cms. at the east and west ends, starting about 30 cms. from each end. This feature is also found in the two upstairs rooms of the extension i.e. Rooms A.2 and A.5. As this is also found in the newer section it is probable that this is an embellishment added after the original construction.

**Room 0.3.**

A room similar to 0.2. One sloping-design two-section ‘Gothic’ window is in the west wall, of the same shape and dimensions as the one in Room 0.2. A chimney projection protrudes into the room and extends the complete height of the room. There is no opening in this projection to take a fireplace although one possibly existed in the past and has now been blocked up. Today wallpaper and plaster are obscuring any evidence of a previously existing fireplace which may be there. However, there is no fireplace flooring extending into the room from this projection, a feature of all the fireplaces in other rooms. Plan 6 indicates the possible size and shape of the chimney hole itself behind this projection but it has not been possible to check this point. The ground plans of the building do indicate though that the flue bends - see the relationship between the projection in this room with the positioning of the fireplace in the Weighing Office.

A cupboard leads off the south wall, the floor area of which roughly corresponds with the area of the square section at the bottom of the Stairwell.

In the east wall there is another ‘watch’ window of similar size and shape to that in the east wall of Room 0.2. While the window in Room 0.2 still looks outside the building, this one, due to the later building addition, now looks into Room A.3.

**2 The Extension**

This later addition lies to the east of the 1838 building with the east wall of the original structure being common to both. The newer part is not as long as the older and there is still 1.98 metres of the southern end of the eastern wall visible. The building is 6.9 metres high, measured to the apex of the roof on the south side and the angle of inclination of the roof is 41° to the horizontal. The roof is covered with black slates and the walls are of red brick. A brick chimney stack is located on the eastern slope of the
roof and is surmounted by two pot chimney pots. The overall measurements for this extension are given earlier.

All flooring is of red deal boards, 2.3 cms. by 17.7 cms. except in the Kitchen (red floor bricks) and the Outhouse/ w.c. (concrete).

Room A.1
The main entrance to the extension is through the door in the south wall. A small roof cum porch is located over the door and is of wood. The room contains two windows, one in the south wall and the other in the east. Both are of sash type but of uncommon operation. The lower part, consisting of two horizontal rows of three panes each, is fixed. The upper part, one row of three panes, is moveable for ventilation purposes.

The west wall has a door frame in it but no door, so giving a clear access into this room from the bottom of the Stairwell in the original building. The fitting holes for a door are discernible in this frame.

The north wall contains a projection which is the site of a fireplace. The grate has been removed and a board placed across the opening and painted white. Adjoining the projection is a door which gives access into the Kitchen.

Kitchen
All the walls are panelled with vertical wooden strips, 5 cms. wide, of the same type found in the Pantry. Again, the wood is dark stained and varnished.

The south wall contains a corresponding projection to that in the north wall of Room A.1. Similarly it seems to have once contained a fireplace or cooking range, but the gap has been covered with the wood panels.

The east wall contains a sash window of the same type as found in Room A.1. In the corner of this wall and at the junction with the north wall, is fixed a small white enamelled sink.

The north wall has a door leading to the Outhouse. It is not of a very substantial construction, being made of wooden strips (other doors are panelled) and secured by a dropping latch.

The west wall contains the window/hatch noted in the Pantry.

Outhouse
A step down of 5 cms. onto a concrete floor from the Kitchen floor level leads into the Outhouse. This is irregular in shape (see Plan No. 5) and all the walls are whitewashed. The door in the east wall is, like the Kitchen door leading into here, made of vertical wooden strips with a similar latch fastening.

W.C.
Again, irregular in shape. Wood panelling, as in the Kitchen, covers the walls. A low-level white enamelled w.c. suite is situated against the north wall. The roof of this room and the outhouse is of corrugated iron, with a slope of about 30° to the horizontal, with the highest edge against the east wall of the original building. A small window, the only means of illumination in here, is set in the roof. The ceilings themselves are flat.

Room A.2
This room corresponds in size to Room A.1 which is directly beneath on the ground floor. Access to it is gained by way of the door in the east wall of Room 0.3. The west wall is plain while the south wall contains one window of the sash type, nine pane variety mentioned earlier, as does the east wall.

The north wall has a projection extending into the room which corresponds with that in the same wall in Room A.1. This one, though, does not occupy so much wall space horizontally. It has a chimney flue within it.

Room A.3
Corresponding in size with the Kitchen, the dimensions of the south wall are the same as those for the north wall of Room A.2. The east wall is similarly laid out, with one sash window located in it. The west wall, with the 'watch' window, corresponds in all measurements with the west wall of 0.3.

General Decorations
At the time of writing the internal structure and decorations are, in many cases, in a poor state of repair. This particularly applies to the original building. Plain plaster walls exist in the Entrance Hall and Weighing Office with many large expanses of brick showing through where the plaster has fallen away, probably as a result of damp. Rooms 0.2, 0.3, A.2 and A.3 are wallpapered, again with many holes, the result of fallen plaster and damp. The wood panelling in the Pantry, Kitchen and w.c. is in good repair as are the whitewashed walls in the Outhouse.

Rooms 0.1 and A.1 are still quite habitable, the walls being painted white over plaster with no holes. Room 0.1 has been maintained by Messrs. Hubbard and Phillips and only recently has it ceased being used as an office room by that firm.

The ceilings and floors have suffered badly due to subsidence which has taken place in the foundations. Particularly bad in this respect are the floor in the Weighing Office, with differences of 17 cms. in places, and that of the entrance to Room 0.2 where it leads from the Top Landing. There is a difference in the floorboard heights of 15 cms. over a horizontal distance of 1 metre. The ceiling of Room 0.3 has sagged and holed and the floor rafters of the roof space show through in a number of places.

The house has been completely wired for electricity although all fittings and switches have now been removed. The marks of a fluorescent light strip are noticeable in Room 0.1. The electricity meter is in the bottom S.W. corner of the Weighing Office.

NOTES AND REFERENCES
1. O.S. Sheet 150 (1:50,000), Grid reference 564427.
2. O.S. Sheet 150 (1:50,000), Grid reference 045451.
3. A Navigation was the improvement of an existing waterway, that is, straightening, deepening, etc., while a canal was a completely new cut.
4. Such as the Sunken Navigation, built 1755-7 and the Worsley Canal, 1759-61.
6. The Sleaford Navigation was established by the Sleaford Navigation Act, 1792, 32 Geo. 111. cap. 102.
7. John Twiddle's rents are mentioned by James Creasey in Sketches Illustrative of the Topography and History of New and Old Sleaford in the County of Lincoln and of several places in the surrounding neighbourhood, 1825.
9. The estimate presented by Jessop and Hudson was £9,979/4/0d., as given in 'Report on the Means and Expendences, of making Navigable the Kyme Eau and River Slea, from the Witham to Castle Causeway, Above the Town of Sleaford', 26 November 1791, held privately by H. Andrews, Esq., of Carre Street, Sleaford.
10. Figures given in the Annual General Meeting Minute Book, held by T. E. Dagwell, Esq.
12. From Committee of Proprietors Minute Books, held by T. E. Dagwell, Esq.
13. Elected annually, their term of office ran from the first Tuesday in May.
15. Entry for 27 July 1837, Committee of Proprietors Minute Book. (Dagwell). Two names are mentioned in this entry as a Committee rule stated that at least two members of the Committee or Proprietors had to act together in the arrangement of contracts.

The specification given in the Minute Book states that this is a Gothic window. However, like the one in Room 0.1, it is really of composite design: the internal aperture is a flattened Tudor arch, the individual window units are Perpendicular and only the top full-sized shaped panes are Gothic (see Figure 2).
# TABLE OF MEASUREMENTS

## 1 ORIGINAL BUILDING
### A ROOM SIZES

<table>
<thead>
<tr>
<th>Room</th>
<th>North/South</th>
<th>East/West</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance Hall</td>
<td>88 cms.</td>
<td>1.60m.</td>
<td>2.57m.</td>
</tr>
<tr>
<td>Weighing Office</td>
<td>3.81m.</td>
<td>1.94m.</td>
<td>2.39m.</td>
</tr>
<tr>
<td>Pantry</td>
<td>3.00m.</td>
<td>2.33m.</td>
<td>2.39m.</td>
</tr>
<tr>
<td>0.1</td>
<td>3.05m.</td>
<td>4.32m.</td>
<td>2.30m.</td>
</tr>
<tr>
<td>0.2</td>
<td>3.08m.</td>
<td>4.30m.</td>
<td>2.52m.</td>
</tr>
<tr>
<td>0.3</td>
<td>3.79m.</td>
<td>4.28m.</td>
<td>2.52m.</td>
</tr>
<tr>
<td>Top Landing</td>
<td>90 cms.</td>
<td>1.20m.</td>
<td>2.52m.</td>
</tr>
</tbody>
</table>

### B DOOR SIZES

<table>
<thead>
<tr>
<th>Door</th>
<th>Height</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front</td>
<td>2.06m.</td>
<td>82 cms.</td>
</tr>
<tr>
<td>Weighing Office</td>
<td>1.88m.</td>
<td>83 cms.</td>
</tr>
<tr>
<td>Pantry</td>
<td>1.93m.</td>
<td>78 cms.</td>
</tr>
<tr>
<td>0.1</td>
<td>1.95m.</td>
<td>82 cms. - same for both doors.</td>
</tr>
<tr>
<td>0.2</td>
<td>1.98m.</td>
<td>76 cms.</td>
</tr>
<tr>
<td>0.3</td>
<td>all 1.98m.</td>
<td>74 cms. - in west wall.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>74 cms. - cupboard</td>
</tr>
<tr>
<td></td>
<td></td>
<td>78 cms. - in east wall</td>
</tr>
</tbody>
</table>

All doors 3.1 cms. thick except Weighing Office and Room 0.1 = 3.8 cms.

## C WINDOW SIZES

<table>
<thead>
<tr>
<th>Room</th>
<th>Internal Width</th>
<th>Internal Height</th>
<th>Vertical Height</th>
<th>Height of sill from floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighing Office</td>
<td>2.79m.</td>
<td>2.44m.</td>
<td>1.19m.</td>
<td>90 cms.</td>
</tr>
<tr>
<td>Pantry</td>
<td>1.04m.</td>
<td></td>
<td>1.09m.</td>
<td>84 cms.</td>
</tr>
<tr>
<td>Top Landing</td>
<td>63 cms.</td>
<td>52 cms.</td>
<td>54 cms.</td>
<td>1.09m.</td>
</tr>
<tr>
<td>0.1</td>
<td>1.76m.</td>
<td>1.40m.</td>
<td>1.19m.</td>
<td>82 cms.</td>
</tr>
<tr>
<td>0.2</td>
<td>78 cms.</td>
<td>54 cms.</td>
<td>1.19m.</td>
<td>87 cms.</td>
</tr>
<tr>
<td>0.3</td>
<td>1.40m.</td>
<td>1.00m.</td>
<td>1.19m.</td>
<td>79 cms.</td>
</tr>
<tr>
<td></td>
<td>40 cms.</td>
<td></td>
<td>46 cms.</td>
<td>80 cms.</td>
</tr>
</tbody>
</table>

## 2 THE EXTENSION
### A ROOM SIZES

<table>
<thead>
<tr>
<th>Room</th>
<th>North/South</th>
<th>East/West</th>
<th>Height</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchen</td>
<td>2.39m.</td>
<td>3.09m.</td>
<td>2.39m.</td>
</tr>
<tr>
<td>Outhouse: Irregular</td>
<td>2.20m. (east wall)</td>
<td>2.42m. (north)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.78m. (west)</td>
<td>2.52m. (south)</td>
<td></td>
</tr>
<tr>
<td>W.C.</td>
<td>1.35m.</td>
<td>1.17m.</td>
<td>2.19m.</td>
</tr>
<tr>
<td>A.1</td>
<td>4.28m.</td>
<td>3.09m.</td>
<td>2.39m.</td>
</tr>
<tr>
<td>A.2</td>
<td>4.28m.</td>
<td>3.09m.</td>
<td>2.52m.</td>
</tr>
<tr>
<td>A.3</td>
<td>2.38m.</td>
<td>3.09m.</td>
<td>2.52m.</td>
</tr>
</tbody>
</table>

### B DOOR SIZES

<table>
<thead>
<tr>
<th>Room</th>
<th>Wall</th>
<th>Height</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchen</td>
<td>North</td>
<td>1.85m.</td>
<td>75 cms. (i)</td>
</tr>
<tr>
<td></td>
<td>South</td>
<td>2.13m.</td>
<td>86 cms. (ii)</td>
</tr>
<tr>
<td>Outhouse</td>
<td>South</td>
<td>1.85m.</td>
<td>75 cms. (i)</td>
</tr>
<tr>
<td></td>
<td>East</td>
<td>1.85m.</td>
<td>71 cms.</td>
</tr>
<tr>
<td>W.C.</td>
<td>East</td>
<td>1.85m.</td>
<td>75 cms.</td>
</tr>
<tr>
<td>A.1</td>
<td>North</td>
<td>2.13m.</td>
<td>86 cms. (ii)</td>
</tr>
<tr>
<td></td>
<td>South</td>
<td>2.14m.</td>
<td>88 cms.</td>
</tr>
<tr>
<td></td>
<td>West (a gap)</td>
<td>2.13m.</td>
<td>92 cms.</td>
</tr>
<tr>
<td>A.2</td>
<td>North</td>
<td>1.98m.</td>
<td>75 cms. (iii)</td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>1.98m.</td>
<td>78 cms.</td>
</tr>
<tr>
<td>A.3</td>
<td>South</td>
<td>1.98m.</td>
<td>75 cms. (iii)</td>
</tr>
</tbody>
</table>

All doors are 3.1 cms. thick.
The numbers in brackets after the widths indicate the same doors but opening into different walls in adjoining rooms.
### C WINDOW SIZES

<table>
<thead>
<tr>
<th>Room</th>
<th>Wall</th>
<th>Internal Width</th>
<th>Vertical Height</th>
<th>Height of sill from floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kitchen</td>
<td>East</td>
<td>1.06m.</td>
<td>1.42m.</td>
<td>77 cms.</td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>1.04m.</td>
<td>1.09m.</td>
<td>82 cms.</td>
</tr>
<tr>
<td>A.1</td>
<td>South</td>
<td>1.09m.</td>
<td>1.40m.</td>
<td>76 cms.</td>
</tr>
<tr>
<td>A.2</td>
<td>South</td>
<td>1.06m.</td>
<td>1.42m.</td>
<td>69 cms.</td>
</tr>
<tr>
<td>A.3</td>
<td>East</td>
<td>1.06m.</td>
<td>1.42m.</td>
<td>69 cms.</td>
</tr>
<tr>
<td></td>
<td>West</td>
<td>40 cms.</td>
<td>46 cms.</td>
<td>80 cms.</td>
</tr>
</tbody>
</table>

### Acknowledgements

Mr. C. Hubbard, Messrs. Hubbard and Phillips Ltd., Carre Street, Sleaford, for his kind permission to measure and survey the Navigation Office.

Mr. N. H. Power, Messrs. Peake, Snow and Jeudwine, Solicitors, 5, Market Street, Sleaford, for assistance in tracing the Navigation Minute Books and the Share Transfer Book.

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Special acknowledgement is given to the members of the History Dept. of Boston College of Further Education for their assistance with the measurements.

### Book Review

**EXCAVATIONS ON THE SITE OF THE DESERTED MEDIEVAL VILLAGE OF KETTLEBY THORPE, LINCOLNSHIRE, by Eleanor Russell and others,** 40pp., illus., Scunthorpe Museum Society, 1974, 25p.

Deserted medieval villages were once a familiar feature of the landscape of eastern and midland England, and there were a large number of these sites in the historic county of Lincolnshire. However, the demands of modern agriculture have meant that many medieval village sites have now been ploughed up, and it has only been possible to preserve the finer examples in each county. Excavation of these sites, which cover many acres, has to be carried out on a large scale to be meaningful, and it is not always possible to excavate a particular site in advance of ploughing.

The village of Kettleby Thorpe is one such site, occurring in an area where a number of similar villages have also been lost to bulldozing and ploughing. When it was decided to level this site in 1964, Mr. and Mrs. Russell were commissioned to record buildings revealed during levelling and to recover any finds which might show the date range of occupation there. It was possible to carry out limited excavation both before and after bulldozing and further details were recovered after the site was ploughed.

The earthworks of the village were plotted, the manor house and nine other buildings were partially examined, and fifteen other areas showing traces of occupation were recorded. A large quantity of pottery, glass, clay pipes and metal objects were recovered, showing that the village was occupied from at least the twelfth century until the middle of the seventeenth century.

Whilst the limited excavation and watching of the site during and after levelling can hardly be considered the most satisfactory way of recording a medieval village, the operation seems to have produced useful results here. Partial plans of five structures including the manor house are reproduced and they clearly show the complex and multi-period construction that we have come to expect of medieval peasant houses. They also show that a considerable amount survived the actual bulldozing. However, it must be stressed that the plans are only partial, and that only careful excavation could have elucidated the true development of the buildings. Whilst a reasonable plan of the latest phase of Site 3 was recorded, Site 1, the manor house, is complicated by the presence of earlier footings which were incompletely examined. Further excavation would have helped elucidate some of the problems posed here.

Perhaps the most important aspect of Mrs. Russell’s work at Kettleby Thorpe is that it is possible from a study of the artifacts to ascertain which areas of the village were occupied at a particular period. The pottery, studied by Stephen Moorhouse and Peter Brears, is most useful as the only large assemblage of medieval and early post-medieval pottery from the north of Lincolnshire published to date.

Whilst only five of the one hundred and twenty-nine published sherds can be regarded as stratified, this report can be accepted as the basis for any further study of ceramics in the area. The section on clay pipes by Peter Wells and Adrian Oswald is also a valuable contribution, and an interesting group of pipes stamped ‘SV’ is discussed.

It is postulated that these pipes were the products of a maker who had moved from London to Lincolnshire in the mid-seventeenth century. Ian Goodall contributed a report on the metal objects, and whilst the objects he has included would not seem out of place on any medieval village site, this is the first assemblage to be studied in North Lincolnshire.

In spite of the obvious shortcomings of the limited excavation and watching of the site, this is a most useful report. Kettleby Thorpe is the only medieval village site in North Lincolnshire to have been published. The report, the second archaeological paper produced by the Scunthorpe Museum Society, is well presented and illustrated, and should find a valuable place in the library of anyone interested in medieval village studies.

GLYN COPPACK LONDON
THE COURSE OF THE SLEAFORD NAVIGATION - based on the map by John Hudson, navigation engineer, 1792. (Sleaford (Westholme) reference library).
Plan No. 1

SLEAFORD AND THE NAVIGATION IN THEIR GEOGRAPHICAL SETTING.

1 = Sleaford
2 = Lincoln
3 = Ewerby
4 = Evedon
5 = Leasingham
6 = Anwick
7 = South Kyme
8 = North Kyme
9 = Dog Dyke
10 = Walcot
11 = Metheringham
12 = Branston

= Roads

Plan No. 2

KEY
A = Sleaford Navigation Office
B = Navigation warehouse
C = St. Deny's Church
D = Market place

THE RELATIONSHIP OF THE SLEAFORD NAVIGATION OFFICE TO THE CENTRE OF THE TOWN OF SLEAFORD.