

A guide to the Industrial Archaeology of  
**LINCOLNSHIRE**  
including South Humberside

by Neil R Wright



CW

74 Maltings at Sleaford

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A guide to the Industrial Archaeology of

# LINCOLNSHIRE

including South Humberside

The purpose of this booklet is to draw attention to some of the sites of industrial archaeological interest in a county which was the second largest in England. This guide includes museums which have collections of industrial material and preserved industrial buildings. Many of the sites are on private property and although the exteriors can generally be viewed from a public right of way, access to them is by courtesy of the owners and in some cases an appointment is needed. Within this criterion, an attempt has been made to cover a range of sites throughout Lincolnshire, including south Humberside which was part of this county until 1974. County Council museums are open for most of the time, and other museums as well as some windmills and watermills occasionally have open days; please ring the telephone numbers where shown to obtain further information. Some of the buildings and structures listed in this guide

are in danger of demolition and may have gone before you get there, but if this booklet succeeds in increasing interest and knowledge then it will have served one of its purposes.

Windmills, watermills and some other sites contain working machinery and it should always be remembered that such machinery is dangerous and you should **take very great care** in such buildings.

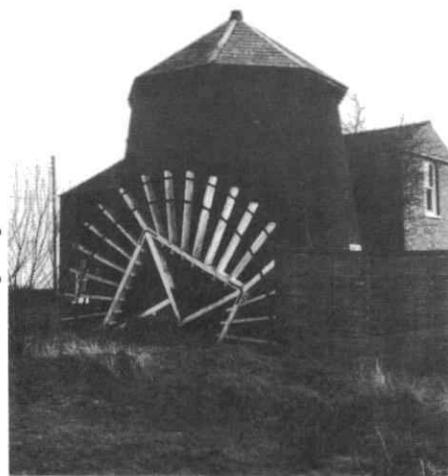
Lincolnshire was, and still is, mainly an agricultural county. But several towns became industrialized, and in the countryside there were wind and water mills, brickyards, a few quarries and other premises processing local materials and producing goods for local consumption.

Lincolnshire's role in the Industrial Revolution was to supply food, wool and agricultural produce to the industrial areas of the Midlands, Yorkshire and Lancashire. This led to the improvement of its navigable rivers during the 18th century and to the creation of new tributary waterways. An important part in the design of many schemes for waterway and drainage improvements in Lincolnshire was played by the Spalding engineer John Grundy (1719-83), one of the pioneers of the civil engineering profession. William Jessop and John Rennie were later active in the same area. Most of the new waterways have since been abandoned though efforts are being made to restore the Grantham canal and the Sleaford navigation.

Roads were improved by turnpike trusts in the late 18th century and later toll bridges were erected at several river crossings. The first railway in Lincolnshire opened in 1845 and a third of the eventual network in the county had been opened within ten years, taking much long-distance traffic off the roads and waterways. The county was dominated by two railway companies, the Great Northern and the Manchester, Sheffield and Lincolnshire (renamed Great Central in 1897). After 1845 docks were built at four places on the Lincolnshire coast; one collapsed immediately but the others are still in business. Shipping also still ties up at Gainsborough, Fosdyke and other river wharves. Railways also led to the development of holiday resorts on the coast.

Lincolnshire grew wool and flax but early in the 19th century attempts to establish textile

CW  
6 Amber Hill drainage engine



factories in the county were largely unsuccessful and have left little trace. Another product of the county was barley, and the many local maltings include several late 19th century ones beside railway lines at Sleaford, Barnetby, Grantham and elsewhere. Lincolnshire also had its share of breweries, corn mills and other premises working to meet the needs of local people. Not all of the county is flat, and water-powered watermills in the west and on the Wolds fulfilled cloth and made paper as well as grinding corn.

Windmill technology reached its peak in the great 19th century brick tower mills such as Sibsey Trader, with their fantails and distinctive ogee caps, but inexorably steam took over during that century. There are still many windmill remains in the county and the most important are included in this booklet, including those that have been preserved or restored and are open to the public. For further information about mills you can contact the Lincolnshire Mills Group at 75 Yarborough Road, Lincoln or the Museum of Lincolnshire Life, Burton Road, Lincoln.

A few industries, such as the brickyards and cement works of the Humber bank, used local materials to serve markets beyond the county. There were also quarries for chalk, limestone and ironstone, and gypsum from the Isle of Axholme was used for floors.

In the fen areas of the county there was a need for scoop wheels and, later, for pumps to raise the surface water from the drains into the main watercourses and rivers. These engines were at first driven by wind, but most were replaced by steam-engines in the early 19th century and then by oil-engines a century or so later. Drainage systems and engines still remain as testimony to the skill of engineers such as John Rennie.

There were small engineering firms in every market town during the 19th century and a surprising number of such Lincolnshire firms rose to international stature. Two Boston firms were the pioneers William Howden and William Tuxford, but after 1840 it was firms in the western towns which rose to greatness: Clayton and Shuttleworth, Hornsby, Ruston, Robey and Marshall. Lincolnshire firms developed steam-powered thrashing sets and exported them world-wide, particularly to the corn-growing areas of eastern Europe and South

America, and Hornsby's of Grantham later developed the heavy-oil engine or 'diesel' engine as it is now known.

**Railways** are referred to in the text by their initials, as follows:-

BR	— British Railways
ELR	— East Lincolnshire Railway (part of GNR)
GCR	— Great Central Railway
GNR	— Great Northern Railway
GNGEJR	— Great Northern and Great Eastern Joint Railway
LLR	— Lincoln and Louth Railway (taken over by GNR)
MGNJR	— Midland and Great Northern Joint Railway
MR	— Midland Railway
MSLR	— Manchester, Sheffield and Lincolnshire Railway (renamed GCR 1897)
SYR	— South Yorkshire Railway (taken over by MSLR)

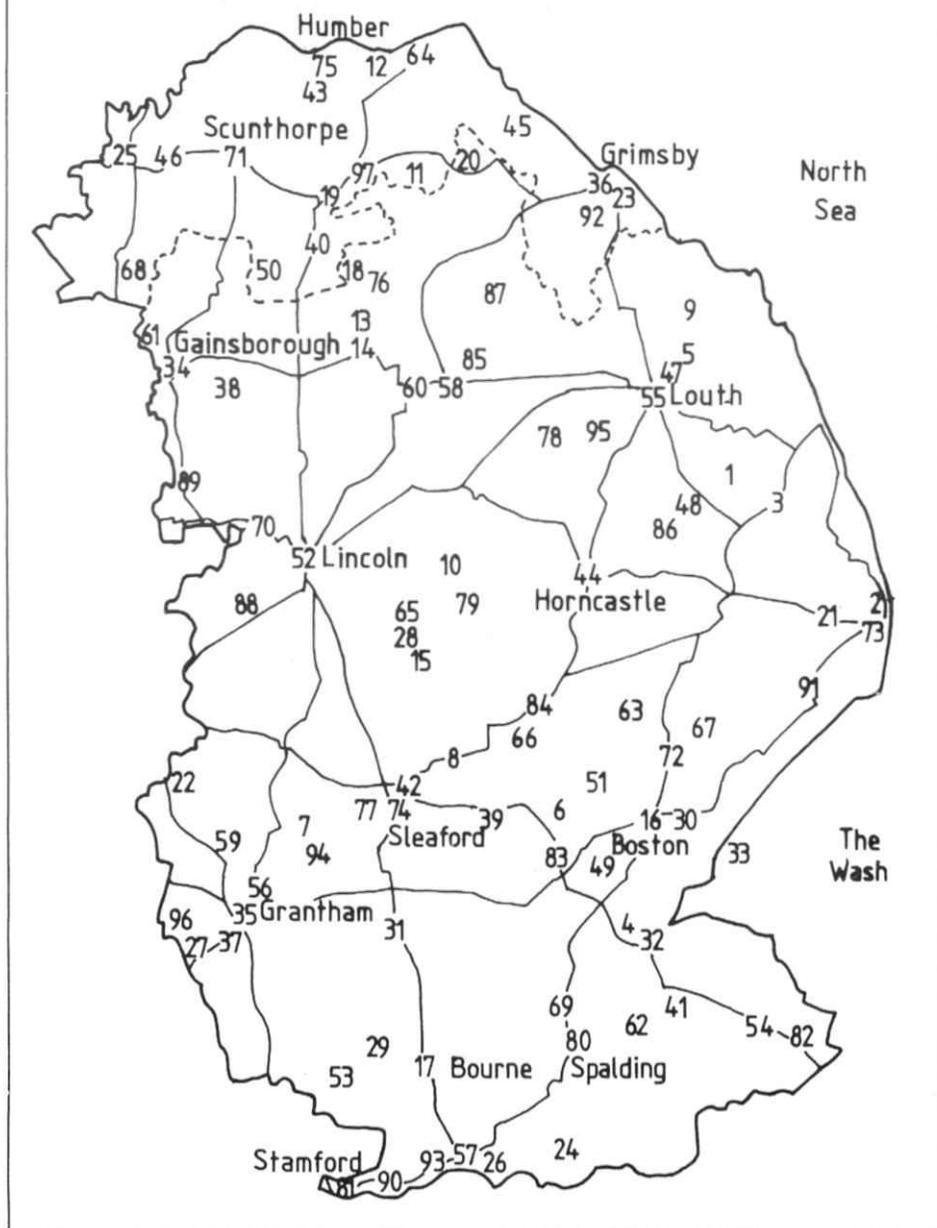
The sites in this booklet are listed by town or village, but to help you find a particular industry or type of monument there is a Classified Index of Sites at the back.

Lincolnshire appears on sheets 98, 99, 104, 105, 113, 114, 122, 123 and 124 of the former 1" O.S. series of maps, and sheets 112, 113, 121, 122, 130 and 131 of the new 1:50,000 First Series.

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# Lincolnshire and South Humberside



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Lincolnshire Industrial Archaeology		1966-74
Lincolnshire History and Archaeology		1974 to date

**Railway station** (TF 446754). Fine example of a small town station, opened in 1848 for the ELR and closed in 1970 by Dr. Beeching. Across the road is the unpretentious depot of the Alford and Sutton Tramway, opened 1884 and closed 1889, now used as a bus garage.

**Turnpike tollhouse** (TF 445754). Moved to its present position 300 yards beyond the level crossing when the railway was built.

**Coates' Folly** (TF 458754). This farmhouse was built as a public house in anticipation of construction of the Alford canal, which was authorised in 1826 but never built.

**Manor House Folk Museum** (TF 453760). This private museum includes some material about local industries.

1. **ABY: Claythorpe watermill** (TF 414790). This 3-storey brick corn mill of c.1820 was the last water mill working regularly in Lincolnshire, but the water power has not been used since 1977. The water wheel was replaced by a turbine after a fire about 100 years ago.

2. **ADDLETHORPE: Windmill** (TF 552675). This mill retains some of its machinery and is still in use as part of a corn merchant's premises.

3. **ALFORD: Hoyle's windmill** (TF 457766). This 5-sail brick tower mill was built by Sam Oxley, an Alford millwright, with ironwork and gearing from Tuxfords of Boston. Its 4 pairs of stones and other equipment are in working order and it is open to the public on bank holidays and some other days during the summer. For further information ring Kirton Lindsey 648382.

**Millwright's workshop** (TF 451758). R Thompson and Sons are one of the few remaining firms of millwrights in Britain, and retain the traditional skills of their craft.

4. **ALGARKIRK: Woad mill** (TF 297341). Shell of steam-powered mill built 1843 to process woad, and row of Woadmen's cottages in front. Mill closed 1931.

5. **ALVINGHAM: Water mill** (TF 365913). The 17th century building was enlarged in 18th century and machinery installed in 1782. Its commercial use as a corn mill ceased in 1960s, but it has been restored since 1972. The breast-shot wheel drives 2 pairs of Peak stones. Its water comes from the river Lud and is culverted under the Louth navigation in a 5 ft dia brick tunnel or syphon 60 yds long. It is open on certain days during the summer; for further information ring South Cockerington 544.

**Lock** (TF 365909). Like others on the Louth navigation designed by John Grundy, this lock has its chamber walls built as four ellipses, rather than as a straight line. Navigation abandoned 1924 – lock gates gone but walls remain. The next lock upstream, **Willows Lock** (TF 356902), is similar. See also **Keddington**.

6. **AMBER HILL: Drainage engines** (TF 229460). If this was originally wind-driven, as seems likely from its shape, then it is an unusual survival because most wind drainage engines were replaced by steam engines on the same site (cf **Dogdyke**). This engine at Spinney Farm has a brick tower, internal gearing and its scoop wheel though its

cap and sails were evidently removed when it was converted to be driven by an external steam engine (portable or traction). About ½ mile south (at TF 234455) the scoop wheel and channel remain of another site.

7. ANCASTER: **Maltings** (SK 986443). 19th century building adjacent to railway station opened in 1857. West of the station are vestigial remains of lime kilns.

ANTON'S GOWT *see Fishtoft.*

8. ANWICK: **Slea navigation** (TF 115500). Most locks on this navigation (opened 1796, closed 1881) are in the section from Cobblers Lock (TF 128497) to Cogglesford Lock in Sleaford; they retain their walls although their gates have gone, and there are active plans to restore the navigation. There is a pleasant walk along the towpath from Anwick to Sleaford.

9. AUSTEN FEN: **Navigation warehouse** (TF 369946). Attractive brick warehouse on bank of Louth navigation in the middle of the Marsh, which served the commercial needs of the local communities during the 19th century. This lower section of the navigation, where it crossed the Marsh, was opened in 1767.

10. BARDNEY: **Sugar Beet factory** (TF 113688). Erected 1927 between GNR Loop Line and river Witham as part of government scheme to reduce dependence on imported sugar. Gantry over river originally gave access to the Nocton Light Railway and now carries the waste pipes to the settling beds on the west bank.

**Railway station** (TF 113691). Built 1848 and extended in 1870s when line to Louth was opened. Lines closed 1951 and 1970, but track between Lincoln and Bardney remained for another ten years as longest 'siding' in the country.

**Railway bridge** (TF 103700). Built 1860 to replace timber bridge of 1848.

**Road bridge** (TF 112691). Built 1893 to replace ferry across Witham.

**Lock** (TF 103700). Rebuilt 1865 to replace original lock of c.1770. It has unusual curved gates like those at Anton's Gowt and Lincoln.

11. BARNETBY: **Railway station** (TA 054099). Rebuilt in 1915, to replace original MSLR station of 1848, following quadrupling of the line between Wrawby junction and Brocklesby to cope with extra traffic from Immingham Dock.

MJTL

5 Lock remains at Alvingham



**Maltings** (TA 055100). Built 1875 next to the MSLR line by the Truswell Brewery Company of Sheffield. Ceased malting 1967.

12. **BARTON-ON-HUMBER: Haven** (TA 029230). Until the 1840s Barton was the terminus of the main ferry across the Humber to Hull, at the end of a stage coach run from London. Features remaining beside the haven are the inn used by travellers and the boatyard operated until 1974 by the Clapson family.

**Ropewalk** (TA 029230). Along the east bank of the haven is a very long single storey brick building which is still in use as part of Hall's Barton Ropery, but access is not normally permitted.

**Brickyards** (TA 041234). Water-filled lagoons stretch along the whole length of Barton's shore line, indicating the position of brickyards which worked during the 19th and 20th centuries. There were large reserves of good quality clay and this area sent large quantities of bricks by water inland to Yorkshire and round the coast to East Anglia and London. One of the yards still produces pantiles. Other abandoned yards contain a few old kilns but are mainly converted to other uses such as sailing and angling. One immediately west of the Humber Bridge is a nature reserve and a good view can be had from the bridge.

**Humber bridge** (TA 020245). Opened by H.M. the Queen on 24 June 1981 after 8 years construction, it is the World's Longest Span Suspension Bridge and links together those parts of Lincolnshire and Yorkshire which since 1974 have formed the new county of Humberside.

13. **BISHOP NORTON: Harlam Hill lock** (TF020944). This is the highest lock on the Ancholme navigation. The upper gate is a guillotine but the lower gate still has the original 1827 casings on the winch paddle. The iron balance beams, of an unusual slender design, may also be original.
14. **BISHOPS BRIDGE: Head of Ancholme navigation** (TF 032911). In 1826 the navigation was extended to this point ten miles above Brigg and a small community developed, with

wharves, warehouses, houses and a chapel. The 4-storey red brick building was a steam mill.

15. **BLANKNEY: Road bridge** (TF 074606). The private road from Blankney Hall to Metheringham railway station (opened 1882) actually passed under a public road, to give extra privacy to the Prince of Wales and other guests of Henry Chaplin.

16. **BOSTON: (1) Grand Sluice** (TF 323445). Built 1764-66 as part of a scheme to improve the drainage of the fens above Boston, devised by Grundy, Smeaton and Edwards. The sluice consists of four arches with a lock under the eastern arch; the lock was widened and enlarged to its present size in 1883. Warehouses, ironworks, ropewalks, the Barge inn, gas works and housing and public houses developed around it as Witham Town, ¼ mile outside the old town.

(2) **Grand Sluice railway bridge** (TF 323445). Built by GNR in 1885 to replace their original timber bridge of 1848.

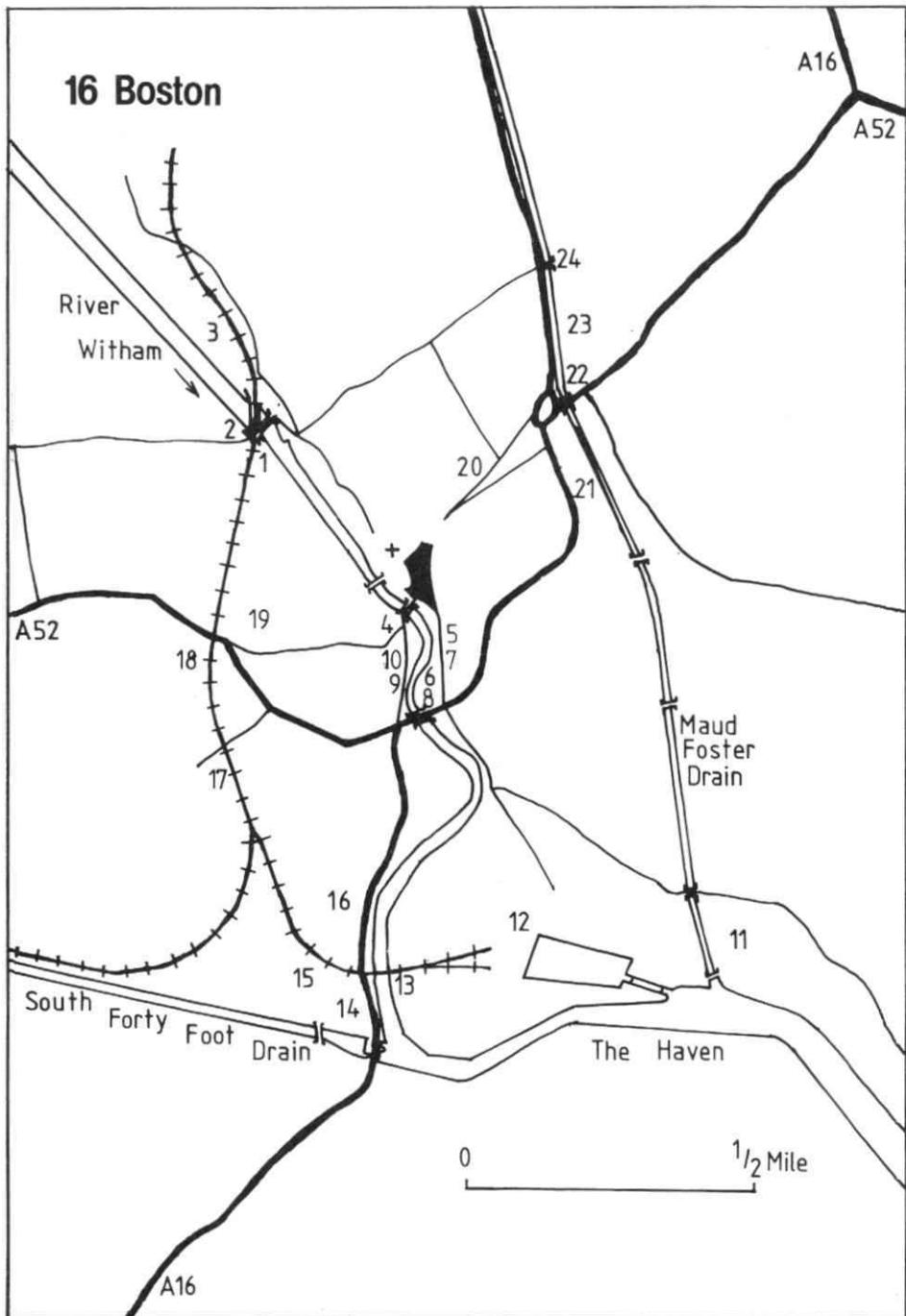
(3) **Grand Sluice iron works** (TF 322446). Fragments remain of William Howden's foundry of 1803, the first foundry in Lincolnshire, including his own house on the river bank with lots of heavy ironwork decoration.

(4) **Town Bridge** (TF 327440). Built 1913 to replace John Rennie's bridge of 1806-8.

(5) **Packhouse Quay** (TF 328439). Principal quay in the port until the dock opened; surrounded by warehouses of which only a few survive. The stone and brick wall of the quay was built 1814-15 on curved line proposed by Rennie.

(6) **Warehouse** (TF 328438). The Sam Newsom Music Centre at the southern end of Packhouse Quay was formed in 1978 out of a warehouse which had been built in stages during the 18th and 19th centuries. The conversion was done by Lincolnshire County Council and retains much of its external appearance and some internal features.

(7) **Britannia Oil Mill** (TF 328439). This former oil mill at the corner of Spain Lane was built c.1850 and was later used as a seed store.



(8) **Warehouses** (TF 327438). Two warehouses survive in South Square, although both are now empty. The one built of stone and brick is dated 1810 and the other is perhaps a little earlier.

(9) **Doughty Quay** (TF 327438). This was the main quay on the west bank of the Haven, with a curving wall similar to Packhouse Quay now lost behind modern piling.

(10) **Warehouse** (TF 327439). Tall and slender warehouse of c.1810 at north end of Doughty Quay, with a low pitched roof and overhanging gables like those of the London warehouse which used to stand on Packhouse Quay.

(11) **Boston and Skirbeck iron works** (TF 336432). William Tuxford and his sons ran one of the principal iron works in Lincolnshire from c.1826 to c.1880 and exported portable and traction engines worldwide. Fragments of their buildings still survive between Maud Foster Drain and Skirbeck Hall. The machinery, cap and sails of their tower windmill were removed to Heckington c.1880 and can still be seen there.

(12) **Boston Dock** (TF 332431). The trade of the port was considerably revived after this dock

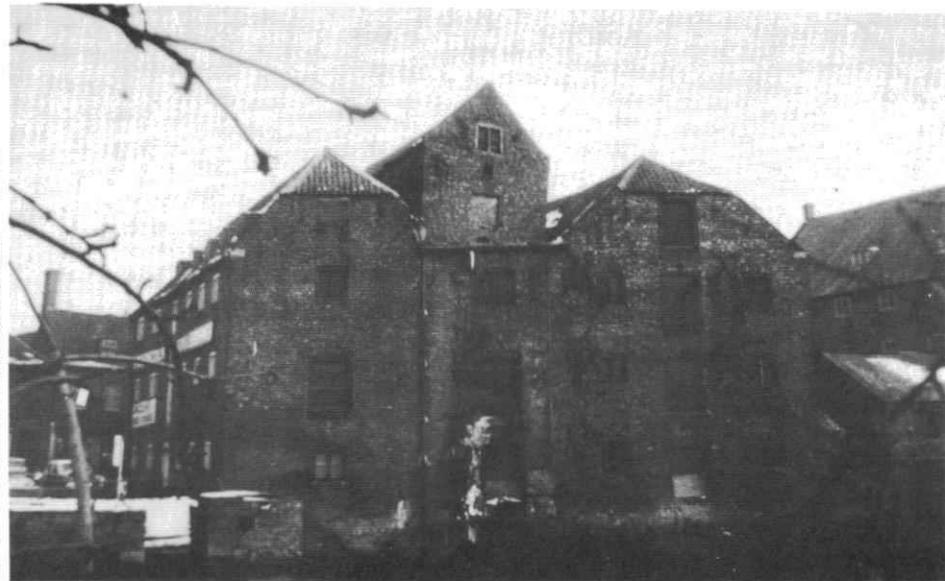
was built in 1882-84, to designs of William Wheeler, and the channel to the Wash was straightened and deepened. Few original buildings survive around the 7-acre basin except a large Granary of 1891 and the now disused Hydraulic Engine House. The entrance lock is 300 ft by 50 ft.

(13) **Swing Bridge** (TF 326430). This single-track railway bridge of 1882-84 connects Boston Dock to the GNR lines and goods yards. It is still operated by hand.

(14) **Skirbeck Quarter Oil Mill** (TF 325429). Large seed crushing mill of 1870, later used for food canning. This was one of the first oil mills to install Anglo-American presses.

(15) **Railway granary** (TF 325431). Built 1848 where GNR crossed Redstone Gowt Drain, with facilities to take in grain from barges and send it out by railway. Nearby was the GNR's Sacking Store for the whole of their Lincolnshire lines.

(16) **W W Johnson & Son's Seed Stores** (TF 324433). These concrete frame warehouses next to the railway were built in 1911.



16 (6) Warehouse before conversion NRW

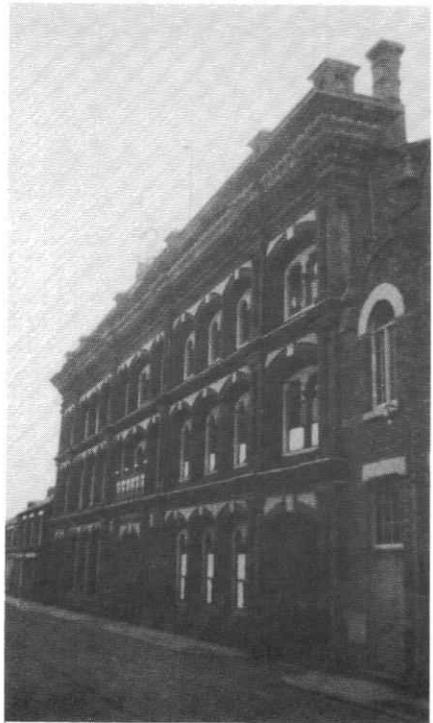
(17) **Broadfield Lane Locomotive Depot** (TF 323435). Only fragments remain of this depot which started as the headquarters of the GNR's Chief Mechanical Engineer from 1848 until 1852, when the Plant was established at Doncaster.

(18) **Civil Engineer's Yard** (TF 321438). Workshops built by the GNR in the 1890s are now occupied by the East Midlands Electricity Board.

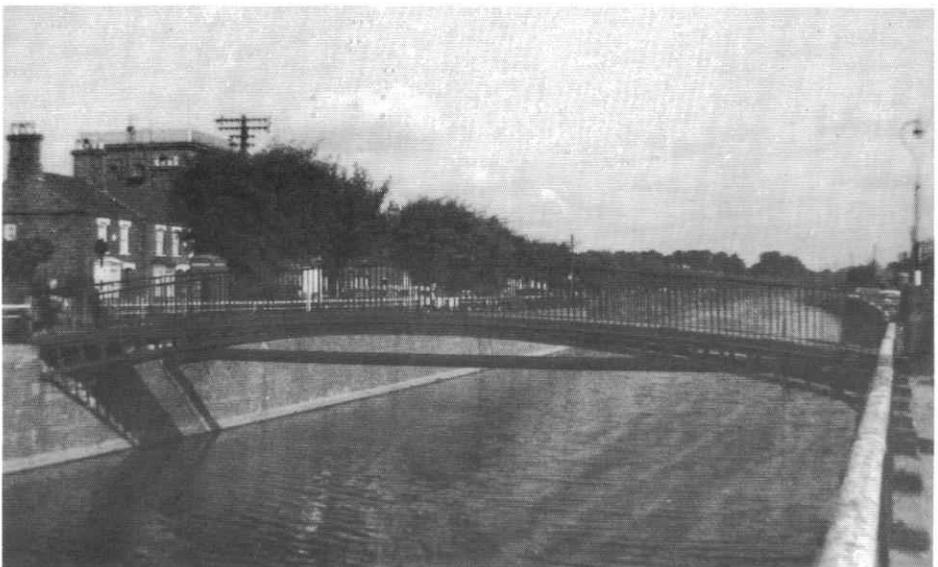
(19) **Trinity Street Feather Factory** (TF 323440). Built in 1877 by Messrs F S Anderson & Company for the purifying of feathers for pillow cases and other products. This is the last surviving 19th century building of this local industry.

(20) **Turnpike boundary marker** (TF 329443). Still surviving in the pavement in front of Cammack's shop is a plaque to indicate the limit of the turnpike trust's responsibility for repairing Wide Bargate.

(21) **Tower Brewery** (TF 332444). This distinctive 19th century tower is now part of a seed store.



16 (19) Boston Feather factory NRW



16 (24) Hospital Bridge, Boston NRW

(22) **Bargate Bridge** (TF 332446). John Rennie's original bridge of c.1810 has recently been widened by taking down and re-erecting the southern facade. Just north of the bridge are steps which were used by passengers on the market packet boats which travelled the navigable drains until early this century.

(23) **Maud Foster windmill** (TF 332447). Tower mill built in 1819; six stories high with 5 sails. Restored by a family trust, but not in working order.

(24) **Hospital bridge** (TF 332448). One of three matching foot bridges cast at Butterley (Derbyshire) in 1811 and erected over the Maud Foster Drain which Rennie was then widening. Designed either by Rennie or William Jessop, with an extremely low arch. Vauxhall Bridge was replaced by a road bridge in 1924 but the foot-bridge at Cowbridge still remains. **See also Fishtoft.**

17. **BOURNE: Eau navigation** (TF 104198). Head of a small navigable stream which had been improved under an act of 1781. The public wharf is now a car park next to the Anchor PH and there are a few warehouses in this Eastgate area.

**Railway station** (TF 095198). Red Hall of c.1600 was used as passenger station and station master's house until line closed in 1959 (though a goods branch remained until 1965). Nearby is the large Victorian goods shed.

**Baldock's Watermill** (TF 096199). Shell of small 19th century corn mill which Bourne Civic Trust hope to make into a local museum. On the opposite side of the road is an attractive 19th century warehouse.

**Smock windmill** (TF 102226). At Dyke is the only remaining smock mill in Lincolnshire. The cap, sails and machinery are missing but the shell has been made watertight. It was originally a drainage mill in Deeping Fen until moved here in 1845 and converted to corn milling.

**Turnpike milestones.** The roads A15 and B676 from Bourne north to Sleaford, south to Peterborough and west to Colsterworth retain quite a few of their turnpike milestones.

18. **BRANDY WHARF: Road bridge** (TF 015970). This cast iron bridge on stone abutments was built in 1831 across the Ancholme navigation. It is subject to a weight restriction and is likely to be replaced or strengthened in the near future. The adjacent warehouse and the Anchor PH are probably of the same vintage. This is now the limit for larger vessels using the Ancholme.
19. **BRIGG: Old river Ancholme** (SE 998072). After the Ancholme was straightened and improved, a loop of the old river was left for craft to reach the town centre, but most industrial buildings which used to line its banks have been demolished.

**County Bridge** (SE 998072). Road bridge over old Ancholme built 1828 by J S Padley, County Surveyor. The parapets have been replaced by modern railings.

**Road bridge** (SE 993069). Built 1827 across; New Ancholme. Designed by Sir John Rennie. Widened sympathetically by reconstructing southern facade further south.

**Yarborough Oil Mills** (SE 992070). Built next to New Ancholme in 1911, after original 1874 building destroyed by fire. Now disused.

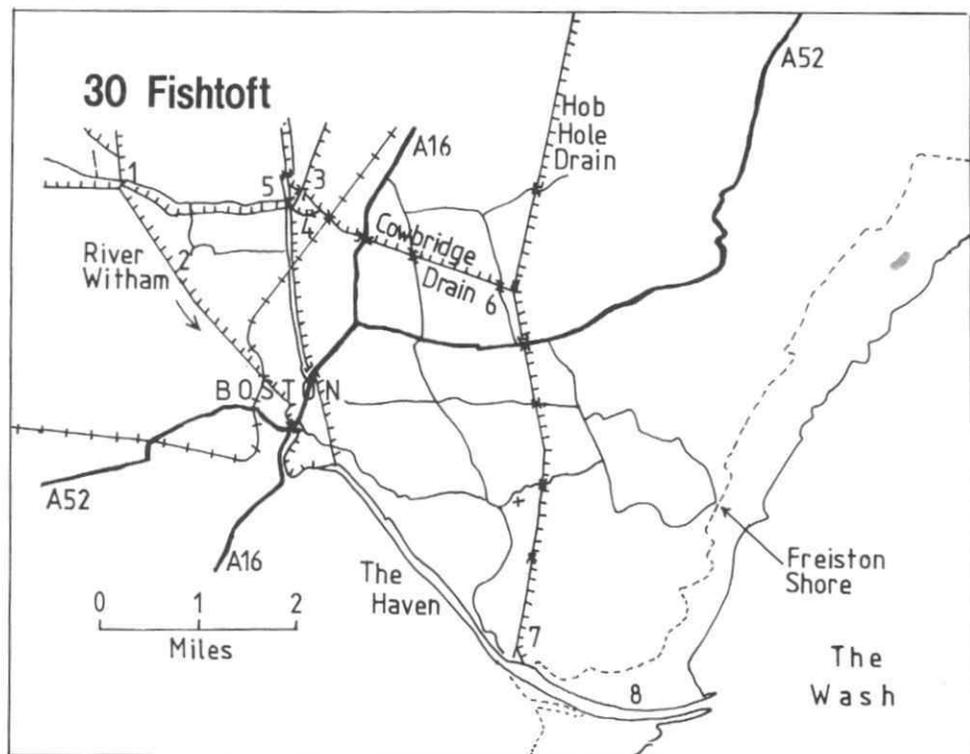
**Sugar Beet factory** (SE 989061). Built 1928-29 as part of scheme to reduce dependence on overseas sugar, and still going strong.

**Coney Court** (TA 000072). Site of factory where hats and muffs were made from rabbit skins, Briggs main industry until c.1830.

20. **BROCKLESBY: Railway station** (TA 119136). Opened 1848 on main line of MSLR, near home of the Earl of Yarborough who was Chairman of the company.
21. **BURGH LE MARSH: Windmill** (TF 503649). This is a 5-storey, 5-sail brick tower mill built c.1833, with a granary now used for exhibitions. It retains its full equipment (including 3 pairs of stones) and it has unusual left-handed sails. It is owned by Lincolnshire County Council and is open to the public every day during daylight hours.

CAISTOR CANAL **see South Kelsey.**

22. **CLAYPOLE: Watermill** (SK 843480). This mill was processing flax by 1797 but had reverted to a corn mill by 1872. It is away from the main village and in the Napoleonic period had a small colony of cottages and workshops around it. It ceased working in 1947 and is now a grain store in a bad state of preservation. The mill race and tail race have since been filled in and grassed over.
23. **CLEETHORPES: Pier** (TA 308090). The pier built in 1872-73 was 1,200 ft long but all that remains today is a stump of 335 ft leading to the new pavilion built in 1905 to replace one destroyed by fire. The pier was breached in 1940 as an anti-invasion precaution and most was subsequently demolished.
- COWBRIDGE see Fishtoft.**
24. **CROWLAND: Triangular bridge** (TF 239102). Until the early 17th century the river Welland flowed through the middle of Crowland village and divided into two channels under this famous bridge which had been built by the local Benedictine Abbey in the 2nd half of the 14th century. All three river channels have since been filled in.
25. **CROWLE: Canal and railway** (SE 784110). The Stainforth and Keadby Canal was authorised in 1793 and opened in 1802 to bypass the lower reaches of the Dun navigation in Yorkshire. It has a wharf where it crosses the main road through the Isle of Axholme. The canal was purchased by the SYR which opened a branch along the north bank in 1859. Half a mile east is an embankment which used to carry the Axholme Joint Railway (opened 1905) over the canal and the 1859 railway.
26. **DEEPING ST. JAMES: Lower Lock** (TF 164089). At the east end of this village are the remains of a turf-sided pound lock, which consisted of two pairs of gates with a short stretch of river between them. Both abutments of the top gate remain, now with a guillotine sluice, as well as the north abutment of the lower gate. This, or part of it, was the staunch built 'for the use of navigation' by John Grundy, Snr, in 1742 and it can be reached by a footpath opposite the junction with road B1166. There are also remains of a later lock 1½ miles west, next to the old stone bridge of 1651. The river west of Deeping had been made navigable as far as Stamford in the 17th century.
27. **DENTON: Reservoir** (SK 870338). This supplies the top pound of the Grantham canal, which was authorised in 1793 and opened at this end in 1797.
- DOGDYKE see Tattershall.**
28. **DUNSTON: Pillar** (TF 008619). On the west side of the road is the lower part of a land lighthouse built in 1751 by Sir Francis Dashwood of nearby Nocton Hall for the guidance of travellers across the desolate expanse of unenclosed Lincoln heath. It was 92 ft tall with a lantern at the top, but after enclosure of the heath and turnpiking of the road the lantern was redundant and it was replaced in 1810 by a Coade stone statue of King George III. The statue and the top of the pillar were removed in 1940 as a possible hazard to aircraft and part of the statue was re-erected in Lincoln Castle in 1974.
- DYKE see Bourne.**
29. **EDENHAM: Dam** (TF 038219). The lake in the park of Grimsthorpe Castle was constructed in 1748 by John Grundy, Jnr of Spalding. Its scientific design was well ahead of its time, and was not followed for a century. The public footpath from Edenham village to Swinstead goes across the dam.
- Disused railway** (TF 058220). Lord Willoughby de Eresby of Trimsthorpe Castle had a private railway from Edenham to the GNR at Little Bytham. Passenger services started in 1857, were intermittent after 1866 and withdrawn 1871. Horse drawn goods service ended in early 1880s. The little weighing office remains beside the road in Edenham.
- Turnpike milestones.** The road B676 from Bourne to Colsterworth has many of its milestones remaining.
30. **FISHTOFT: (1) Anton's Gowt Lock** (TF 300475). This gives access to the navigable



drains on the East, West and Wildmore fens which were drained and enclosed 1802-12 by John Rennie. This lock, like those on the Witham at Bardney and Lincoln, has unusual curved gates. The GNR's Lincolnshire Loop Line went right over the top of this lock, but the bridge was removed after the closure of the line.

(2) **Hall Hills sleeper depot** (TF311461). This was established by the GNR in 1900 for creating railway sleepers made from Baltic timber imported through Boston. It had extensive sidings of both standard and narrow gauge, the latter running inside the former, but nothing remains of these. The depot closed in 1964 and the tracks and wooden buildings were removed but the main brick building and chimney still remain.

(3) **Aqueduct at Cowbridge** (TF 330474). This carries the waters of the Stone Bridge Drain over those of the Cowbridge Drain, but it is almost

an inverted syphon because the waters of the two drains are virtually on the same level.

(4) **Footbridge at Cowbridge** (TF 327471). One of three matching footbridges cast at Butterley (Derbyshire) in 1811 and erected over the Maud Foster Drain. They were designed either by John Rennie or William Jessop. Vauxhall Bridge went in 1924 but Hospital Bridge still remains in Boston.

(5) **Lock at Cowbridge** (TF 328472). This gives access between the West Fen Drain and three other drains which converge on Cowbridge. It is stone built, with a sluice alongside, and has a guillotine at the north end; the other gates are opened by winches. At TF 331470 there was another lock which has been filled in and the bridge over it demolished; this gave access to the Cowbridge Drain.

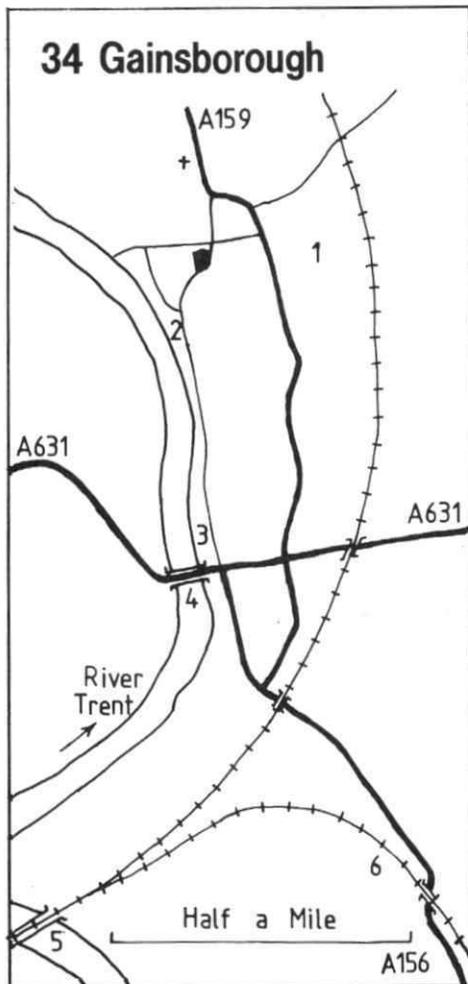
(6) **Road bridge** (TF 362459). Bakers Bridge is one of a series of small attractive brick bridges

over the Cowbridge Drain, dated from c.1805.

(7) **Hob Hole sluice** (TF 364399). This sluice is at the end of the Hob Hole Drain which was a central feature of John Rennie's new drainage scheme for the East, West and Wildmore Fens. The sluice built in 1805-6 and repaired in 1888 has been replaced by a pumping station and new cut constructed in 1957.

(8) **Cut End** (TF 380391). The new outfall channel for the river Witham, 2 miles long, was excavated in 1880-84 to allow larger vessels to reach Boston where a dock was then being built.

31. FOLKINGHAM: **Coaching inn** (TF 072337). The Greyhound inn dominates the sloping market place on the A15 Peterborough-Lincoln road, which was one of the first roads in Lincolnshire to be taken over by a turnpike trust.
32. FOSDYKE: **Swing bridge** (TF 318322). In 1812-15 banks were built to reclaim most of the Welland estuary and the river was confined to a narrow channel crossed by a swing bridge. The present bridge was built in 1910-11 on the site of Rennie's original wooden bridge. During the 19th century a hamlet developed around the bridge, including two public houses, a harbour master's house, coastguard cottages and a wharf which is still in use.
33. FREISTON SHORE: **Coastal resort** (TF 397424). In Georgian times this was a coastal resort with two inns and lodgings in farmhouses and cottages. It was by-passed by the railways and did not grow, but one inn remains and the other only closed about twenty years ago. In recent times the marsh outside the sea bank has been reclaimed.
34. GAINSBOROUGH: (1) **Britannia ironworks** (SK 818898). After c.1860 the firm of William Marshall and Sons came to dominate this town and, though in decline since c.1918, parts of the great ironworks are still prominent features of the skyline. The works was built into the hillside, with the railway on a terrace behind it. 17-25 Spring Gardens were houses built for Henry Marshall and some of his staff.



(2) **Baltic Oil Mill** (SK 814897). This warehouse on the south side of Chapel Staithe was built in the 1860s by W & E Pearson as an oil seed crushing mill, of which there were then several in the town.

(3) **Warehouses** (SK 814899 northwards). Several warehouses, maltings and wharves of 18th and 19th centuries survive along Bridge Street on the east bank of the river Trent, but those between Chapel Staithe and the end of Lord Street have been demolished.

(4) **Road bridge** (SK 814899). The stone arch toll bridge of 1790 across the Trent still has the two original toll booths at the east end, although the tolls were ended on 31 March 1932. The stone balustrades were replaced by iron railings when the cantilevered footpaths were added in 1964.

(5) **Railway bridge** (SK 809881). The cast iron hollow girder bridge which carried the MSLR across the Trent was designed by (Sir) John Fowler and constructed 1848-49. The central girder was added in 1895 to strengthen the bridge which is still in use.

(6) **Railway station** (SK 819883). The GNR used the MSLR station (now demolished) from 1848 until they built the Lea Road Station in 1867. It was a brick building at the foot of the embankment with platforms and shelters at a higher level; waiting rooms were added behind the shelters in 1882 when it was transferred to the GNGEJR. The shelters were reduced from five bays to three in 1981.

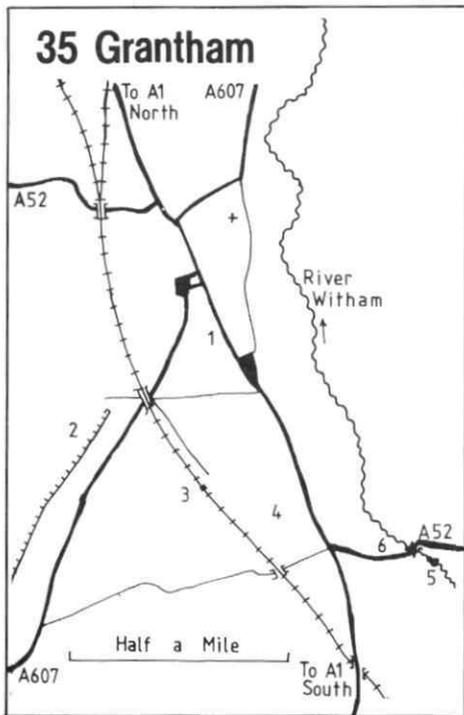
35. **GRANTHAM:** (1) **George Hotel** (SK 913357). In Georgian times this town was one of the main stopping places on the Great North Road, and this led to the reconstruction of the George in 1780 as one of the main coaching inns of the road.

(2) **Canal** (SK 908355 south-westwards). The canal was opened in 1797 and formally abandoned in 1936. The terminus basin and much of the eastern end have been filled in and disappeared but there are active plans for the restoration of the canal westwards from the modern by-pass.

(3) **Railway station** (SK 913351). Built by GNR in 1852 and subsequently enlarged as other GNR branches converged on the main line station. This was the least easy section of the GNR to construct and there are tunnels to the north and south of Grantham, at Peascliffe and Stoke.

(4) **Spittlegate ironworks** (SK 916351). In Victorian and Edwardian times Richard Hornsby





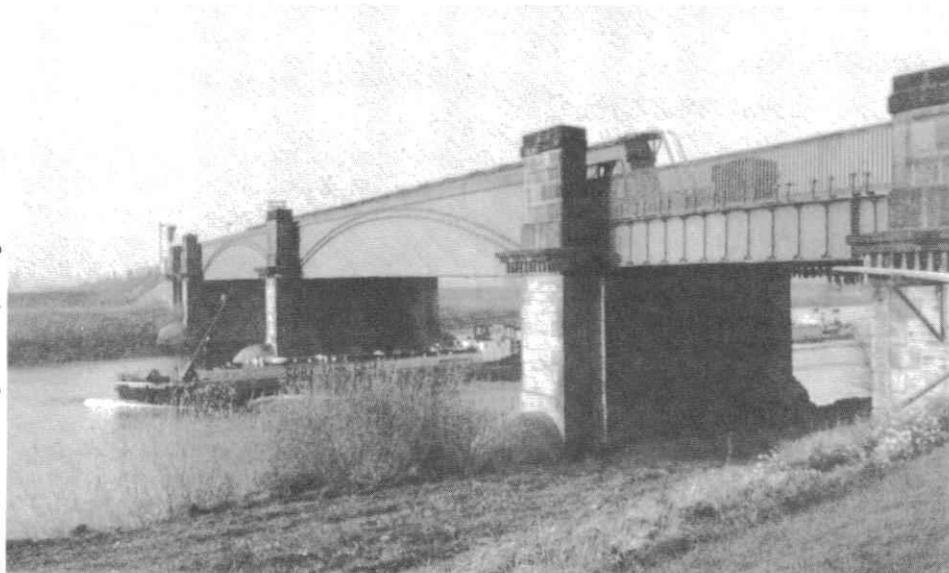
& Sons was one of the great engineering firms of Lincolnshire and did much to develop the first successful diesel engine. In 1918 they amalgamated with Rustons of Lincoln and the works in Grantham were later closed but some of their buildings still remain beside the old Great North Road.

(5) **Spittlegate watermill** (SK 922349). This corn mill dates from the late 18th or early 19th century, but machinery was installed in 1886 and part remains although the building is now used for other purposes.

(6) **Maltings** (SK 921350). The many maltings in Grantham have been replaced by a single large building, but a few of the old buildings remain including this one. Other surviving examples are next to the railway at SK 914350 and SK 903370.

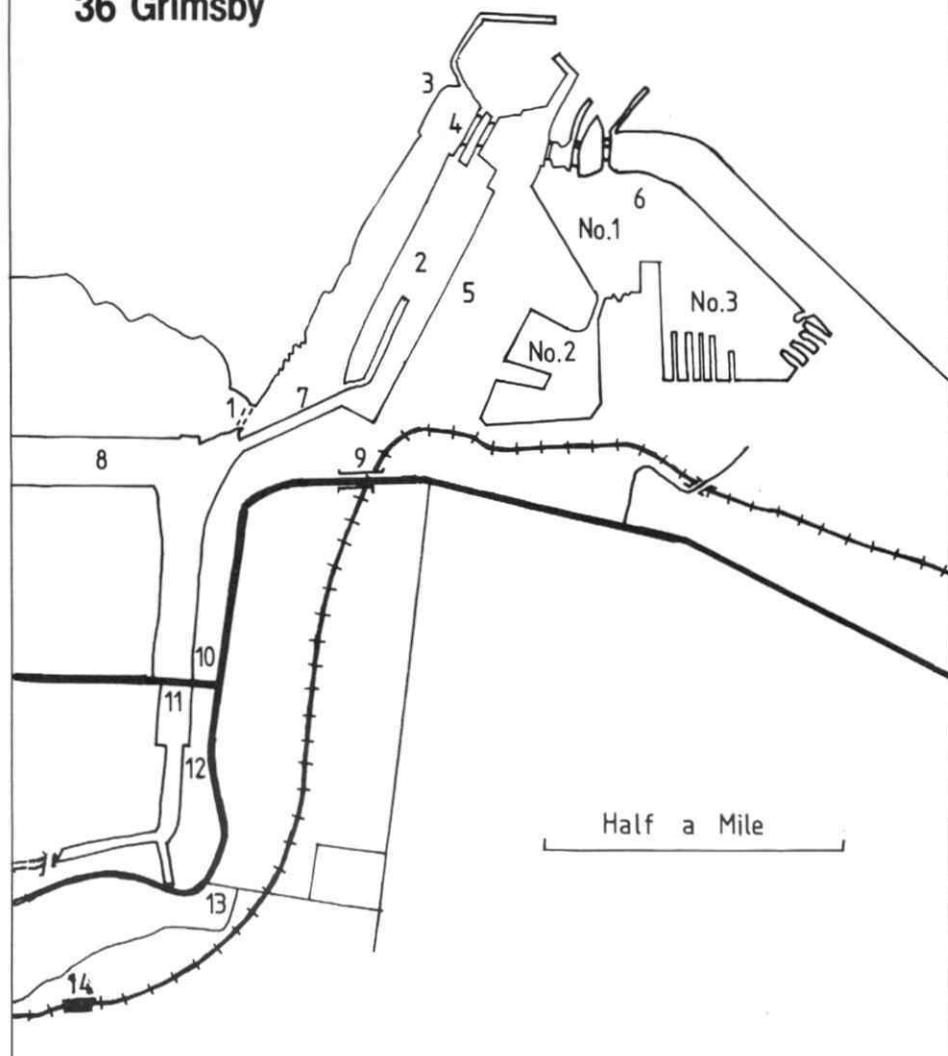
36. **GRIMSBY: (1) Lock** (TA 272106). This was designed by John Rennie and was built in 1798-1800 across the mouth of the original haven to form the first dock at Grimsby. The lock is now filled in but the stonework is still visible at each end.

34 (5) Gainsborough railway bridge MJTL



## 36 Grimsby

The Humber



(2) **Royal Dock** (TA 276110). Built by MSLR in 1846-52 on 138 acres of reclaimed foreshore; engineer James Meadows Rendel. The basin covered about 20 acres. All subsequent docks at Grimsby were also built by the railway company.

(3) **Coffer dam** (TA 277113). Built 1846-48 to complete sea defences and exclude tide from the site of the Royal Dock, so that the locks and dock basin could be built. Most of the dam was removed in 1852 but the western end can still be seen, clearly showing the method of its construction.

(4) **Hydraulic towers** (TA 278113). The Royal Dock was the first major dock to use hydraulic power to operate lock gates, cranes, etc. and the great red brick tower, designed by J W Wild and based on the campanile of the Palazzo Pubblico of Siena, was the source of that power. It was not an accumulator tower in the true sense of that term, but an artificial head of water for the hydraulic mains, consisting of a 33,000 gallon tank into which water was pumped by a steam engine. It is 303 ft high and was built in 1851 between the two locks at the seaward end of the Royal Dock. Nearby is a 78 ft high accumulator tower built in 1892 for a high pressure hydraulic system which replaced the 1851 low pressure installation. The 1851 tower is now used to support aerials and to supply water to wash down the fish pontoon, and the 1892 tower was made redundant in 1980 by the installation of an electrically driven oil-hydraulic operation.

(5) **Goods and Grain store** (TA 279110). Built in 19th century by GNR on east side of Royal Dock; now Grimsby Cold Store.

(6) **Fish Docks** (TA 283110). Built in several stages as this industry, previously unknown in Grimsby, expanded: No 1 — 1855-57, extended 1866; No 2 — 1876-77, extended 1897-1900; No 3 — 1934.

(7) **Union Dock** (TA 273106). Built 1873-74 as a channel to connect Royal Dock to Old Dock after which use of Rennie's lock declined. Officially opened 1879, and later widened. Now crossed by a floating footbridge.

(8) **Alexandra Dock** (TA267105). Built 1878-80 as enlargement of the Old Dock.

(9) **Dock Offices** (TA 275106). Large building erected at Dock Entrance by MSLR in 1884. Statue of Prince Albert was unveiled on another site in 1879 and moved here recently.

(10) **Victoria Flour Mills** (TA 271100). This huge former steam flour mills designed by Sir W A Gelder and erected for William Marshall & Sons in 1906-7 is still one of the tallest buildings in Grimsby. For an industrial building it has the unusual distinction of a foundation stone. Now a grain silo for Nickersons.

(11) **Corporation bridge** (TA 270099). Lifting bridge erected 1869-73 and altered 1928 to give access to the West Marsh area.

(12) **Tramway Depot** (TA 271097). After taking over the trams in the borough, Grimsby Corporation acquired an ex-Admiralty seaplane hanger in 1926 and re-erected it as their depot; it is now part of their bus garage.

(13) **Tower Brewery** (TA 271093). This former brewery in Pasture Street was built in 1908. It is now disused, and the southern end has been demolished.

(14) **Yarborough Hotel** (TA 267092). Built c.1848 next to the MSLR's Grimsby Town Station and still in use. It was named after the Earl of Yarborough who was Chairman of the MSLR and the main landowner in this part of Lincolnshire.

GRIMSTHORPE **see** **Edenham**.

HALL HILLS **see** **Fishtoft**.

HALLINGTON **see** **Louth**.

HARLAM HILL **see** **Bishop Norton**.

37. HARLAXTON: **Canal cutting** (SK 895339 westwards). This cutting takes the Grantham canal through the low ridge separating the Vale of Belvoir from the Witham valley at Grantham, and is the only substantial engineering work on a Lincolnshire waterway. When this section of the canal was opened by February 1797 the cutting was not wide enough for two full-width boats to pass. Two passing-places were made in 1801 and later the whole cutting was widened. The canal was abandoned in 1936 but it is still in water and there are plans afoot for its restoration.
38. HEAPHAM: **Windmill** (SK 873887). This 4-storey brick tower mill of c.1878 has lost its sails and fantail but retains most of its internal machinery.
39. HECKINGTON: **Windmill** (TF 144435). The only remaining 8-sail tower mill in England

retains its sails and most of its internal equipment but is not at present in working order. There were few mills with so much power, and it had 5 pairs of stones although only 3 pairs were worked at a time. The tower was built in 1830 and the cap and sails were brought from Boston in 1892 after a fire destroyed the original woodwork. Open most days on enquiry at the mill office or the Tourist Information Office opposite. For further information ring Sleaford 60765.

**Railway station** (TF 146435). The 1859 station buildings at this unmanned halt were taken over and restored by the Heckington Village Trust in 1976; they use them as offices and meeting rooms.

**Pea Room** (TF 146437). This red brick warehouse, with extensions on each side, was built for the processing of peas and has been adapted by the Village Trust as craft workshops and a Tourist Information Office.

40. **HIBALDSTOW: Wind and Water Mill** (SE 982027). This combined mill still contains

some of its equipment although it has lost the cap, sails and waterwheel. The tower emerges above the first floor on which there are 8 radial vaulted rooms, some of which were lived in at one time.

**Lime kiln** (SE 948013). Impressive remains beside the MSLR north of Kirton tunnel.

**HOB HOLE** *see* **Fishtoft**.

41. **HOLBEACH: Wool Barn** (TF 358269). This barn built c.1795 in Boston Road has staggered flues at each end for wool drying.
42. **HOLDINGHAM: Lock** (TF 088479). On New River Slea or Mill Stream which was made navigable 1794-96. The chamber has brick walls with timber posts at intervals.

**Toll booth** (TF 089480). Curiously sited, only two miles from the head of navigation in Sleaford, this small 8-sided building could only have been a booth for collecting tolls from canal-users.

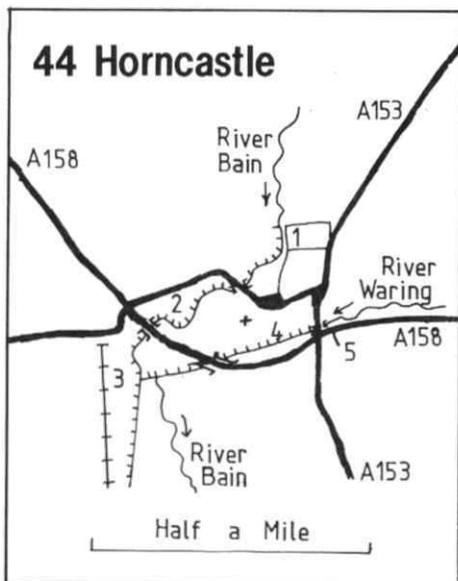


40 Hibaldstow Lime kiln CW

**Watermill** (TF 089479). This corn mill ceased working in 1945 but its wooden undershot wheel of c.1780 with an iron axle still remains under a pantile roof at the side of the building.

43. **HORKSTOW: Suspension bridge** (SE 973190). This fine bridge designed by Sir John Rennie was built in 1834 at the end of a cul-de-sac to give access to fields on the other side of the river Ancholme. The original masonry and ironwork remain, making it one of the oldest suspension bridges in Britain, and it still has a simple plank deck over the span of 130'9". It is a little known gem of civil engineering.
44. **HORNCASTLE: (1) Canal basin** (TF 259698). The northern basin of the Horncastle navigation (opened 1802) is badly silted but still retains its wall and there are several warehouses in the adjacent streets. There are also the remains of a watermill at the northern end of the basin where the little river Bain flows in.

(2) **Warehouses** (TF 255695). All along West Street are several warehouses backing onto the Bain branch of the navigation, including one at the west end of the street with two houses and a warehouse under the same roof.



(3) **Railway station** (TF 254694). This was the terminus of a branch railway opened in 1855 and closed to passengers in 1954. Close by is a maltings.

(4) **Warehouse** (TF 259695). Little remains of the southern 'basin' on the river Waring following a disastrous flood of 1960, except for one warehouse with large front windows made of small panes of glass.

(5) **Leather works** (TF 261695). The last vestige of the towns once-extensive leather industry is Isle's factory in Hammerton Lane, a four-storey red-brick building with pillasters. It was built for the firm about 1860 and closed a century later.

HUBBERT'S BRIDGE see Kirton.

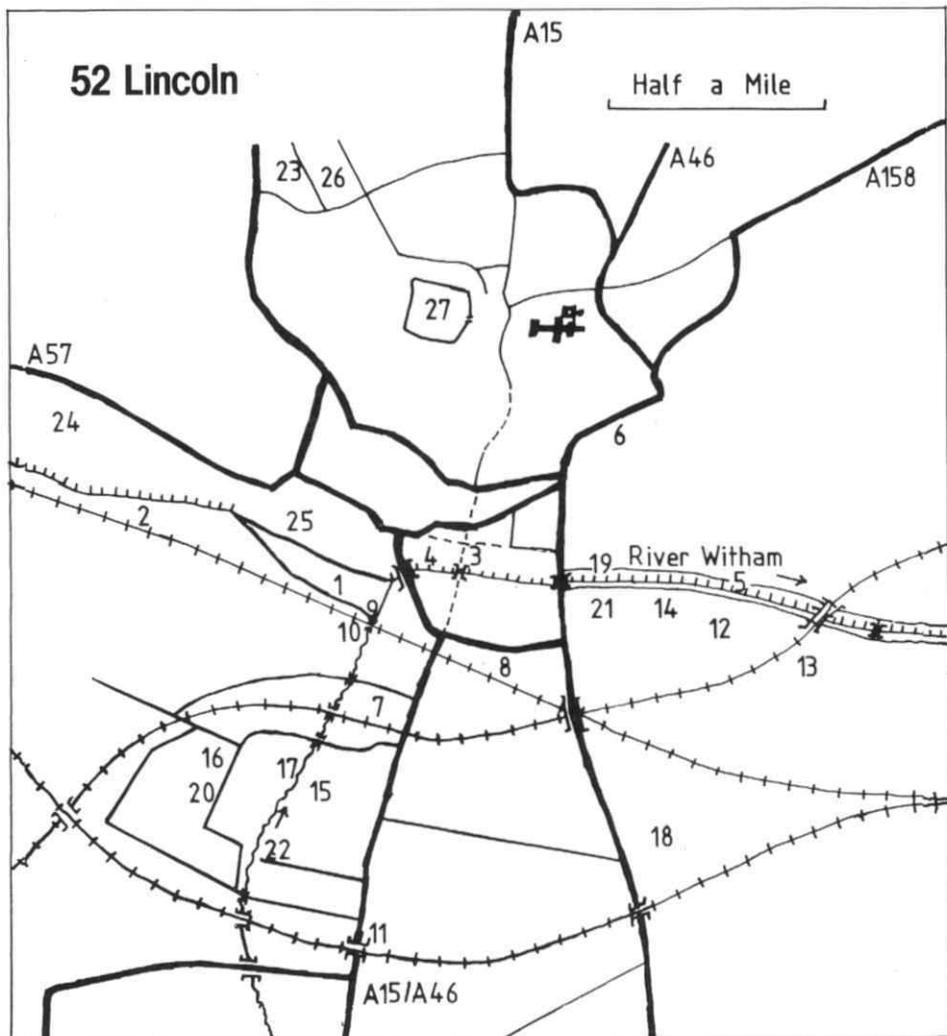
45. **IMMINGHAM: Dock** (TA 195161). Built 1906-12 by GCR at cost of £2,600,000 to take larger vessels which could not enter Grimsby docks. The 45-acre basin was at heart of a 1,000 acre estate, but Immingham is now the busiest port on the Humber and little remains of the original Edwardian structures. Access is restricted.

43 Horkstow suspension bridge CW



46. **KEADBY: Bridge** (SE 841106). The electrically operated Scherzer rolling lift bridge was built by GCR in 1912-16 for road and rail traffic, but has not been lifted for many years. It replaced a swing bridge built by SYR to gain access for trains to the newly-discovered ironstone at Scunthorpe.
- Tidal lock and railway station** (SE 835114). The Stainforth and Keadby canal was built 1793-1802 to by pass the lower reaches of the river Don, and the tidal lock at Keadby controlled its junction with the Trent. The SYR branch was built on the north bank of the canal and opened in 1859. Its original terminus next to the lock was cut off when the line was diverted to the Keadby Bridge five years later.
47. **KEDDINGTON: Keddington Lock** (TF 345886). **Tickle Penny Lock** (TF 351889) and **Carrotts Lock** (TF 352895) on the final section of the Louth navigation opened in 1770 (closed to navigation 1924) are all in this parish. They are each of the unusual design, unique to this waterway, of having a series of curves in the brick walls of the lock chambers. This was presumably intended to resist outward thrust from the land.
48. **KETSBY: Watermill** (TF 369767). This privately preserved mill of c.1864 has a breast shot wheel which was the last iron water wheel to turn in Lincolnshire.
49. **KIRTON: Potato warehouse** (TF 308383). This village was the centre of William Dennis's potato empire about the turn of the century and a large warehouse was built along one side of the Goods Yard at the GNR station. Dennis gave Kirton its 'Town Hall' and later his statue was erected in front of it.
- Hubbert's Bridge** (TF 270437). This bridge replaced the original one which carried a turnpike road across the navigable South Forty Foot Drain. A settlement grew up here, with a wharf and a warehouse beside the drain, and in 1859 a single track railway, later doubled, was built along the north bank.
50. **KIRTON IN LINDSEY: Railway tunnel** (SE 937001). The southern portal of one of the few railway tunnels in Lincolnshire, on the MSLR main line to Grimsby opened in 1849.
- Windmill and railway museum** (SK 939994). Mount Pleasant Mill retains all its machinery.





below the curb. Adjacent buildings house a private railway museum. Open on various Sundays and bank holidays during the summer.

LADE BANK *see* Old Leake.

51. LANGRICK: **Road bridge** (TF 265478). This steel bow girder bridge was built in 1908 at the expense of the GNR (who controlled the navigation) and local authorities on each bank. It replaces a long-established ferry across the river Witham.

52. LINCOLN: (1) **Brayford Pool** (SK 972712). This harbour has been the centre of inland waterways to the city since Roman times, where the Fosdyke joins the lower river Witham. Until the 1970s Brayford was surrounded by steam mills and warehouses but virtually nothing now remains of these.

(2) **Fosdyke navigation** (SK 969713). This waterway to the Trent at Torksey dates from Roman times, but subsequently deteriorated until restoration in 1744. At Lincoln there is

the nearby railway embankment. It is said that the last traction engine to be made in England left here in 1942.

(21) **Doughty's Oil Mill** (SK 978710). Grey-brick classical building of 1863 with later block to the east, now occupied by Barkers and Lee Smith.

(22) **Le Tall's Crown Mill** (SK 970703). This former steam corn mill incorporates the 9-storey tower of the earlier windmill which was retained to support a water tank. The sails were removed in the 1860s when a beam engine was installed, itself later replaced when the buildings were extended.

(23) **Ellis's windmill** (SK 971722). This hill-top tower windmill of c.1840 has only 3 storeys and was restored (from a burnt-out shell) in 1977 as Lincoln Civic Trust's celebration of H.M. the Queen's Silver Jubilee. Open most summer weekends; for further information ring Lincoln 22693.

(24) **Chemical Manure Works** (SK 964715). The mid-19th century building where John Jekyll

started his chemical business in the 1850s still remains on Fisons complex and can be seen from Carholme Road,

(25) **Electricity Works** (SK 971712). The original electricity works built by Lincoln Corporation in 1898 was later converted to offices and still stands empty. Behind it is the shell of the large 1913 extension to the works.

(26) **Museum of Lincolnshire Life** (SK 972721). The county's major social and industrial history museum run by Lincolnshire County Council. Contains much agricultural and industrial machinery built in Lincolnshire including steam, oil and gas engines. Open weekdays and Sunday afternoons; party visits by arrangement. For further information ring Lincoln 28448.

(27) **The Castle** (SK 975719). The County Archives Office contains much material relating to the county's industries including substantial records from the firms of Robey and Ruston and Hornsby.

53. **LITTLE BYTHAM: Brickworks** (TF 013188). The Admantine Clinker Brick Works was



still one warehouse on the north bank of the waterway, which was formerly a maltings.

(3) **High Bridge** (SK 974712). Dates from c.1160 with subsequent extensions and alterations, and on west side are shops in a 3-storey 16th century timber frame building. River underneath deepened and made navigable 1795.

(4) **Brush warehouse** (SK 974712). 18th century 4-storey brick warehouse on edge of Witham, converted to offices in 1975.

(5) **Stamp End lock** (SK 982711). The top lock on the Witham navigation was built in 1770 and rebuilt 1826. The top gates were replaced by a guillotine in 1950 but at the east end the lock still has unusual curving gates.

(6) **Lindum road** (SK 979716). New road built up the hillside in 1786 by Lincoln turnpike trust for north-south traffic to by pass Steep Hill. In 1843 the trust also built Canwick Road/Melville Street as a new road across fields.

(7) **St. Marks station** (SK 973707). MR station of 1846 in austere but elegant classical style. The portico columns have deteriorated in recent years and the line through the station will be closed shortly so its future use is uncertain. Across High Street is an interesting octagonal single-storey signal box.

(8) **Central Station** (SK 975709). GNR station of 1848 in Tudor style with a tower to complement that of nearby St. Mary le Wigford's church.

(9) **Swing bridge** (SK 972710). This low bridge carries the GNR 1849 line across the Upper Witham where it enters Brayford Pool; not opened since 1948.

(10) **West Goods Depot** (SK 972709). Built in 1907 by GCR next to the upper Witham with a loading bay alongside for river craft (filled in in early 1970s); sold to Pattinson & Co in 1967.

(11) **Railway bridge** (SK 972701). The avoiding line for the GNGEJR was built on an embankment in 1882 and closed in 1982; it crossed High Street by this bridge.

(12) **Stamp End ironworks** (SK 982710). Clayton and Shuttleworth established this works in 1842 and most of the present buildings date from the 1860s when it was described as one of the largest ironworks in the world. The waterway through the centre was filled in and until February 1983 the northern end was covered by a building dated 1897. The firm collapsed in 1929 and its buildings were split between different owners; parts occupied by the City Engineers Dept. were demolished in January and February 1983.

(13) **Titanic Works** (SK 985709). Built by Claytons in 1912 and occupied since 1928 by Clayton Dewandre Ltd.

(14) **Sheaf ironworks** (SK 980710). Main premises of Ruston, Procter & Co (formed 1857) and now occupied by Ruston Gas Turbines Ltd.

(15) **Sheaf woodworks** (SK 971706). Established in 1889 to produce the woodwork for Ruston, Procter and Cos. thrashing machines that were exported worldwide. Largely demolished 1983 after being empty several years.

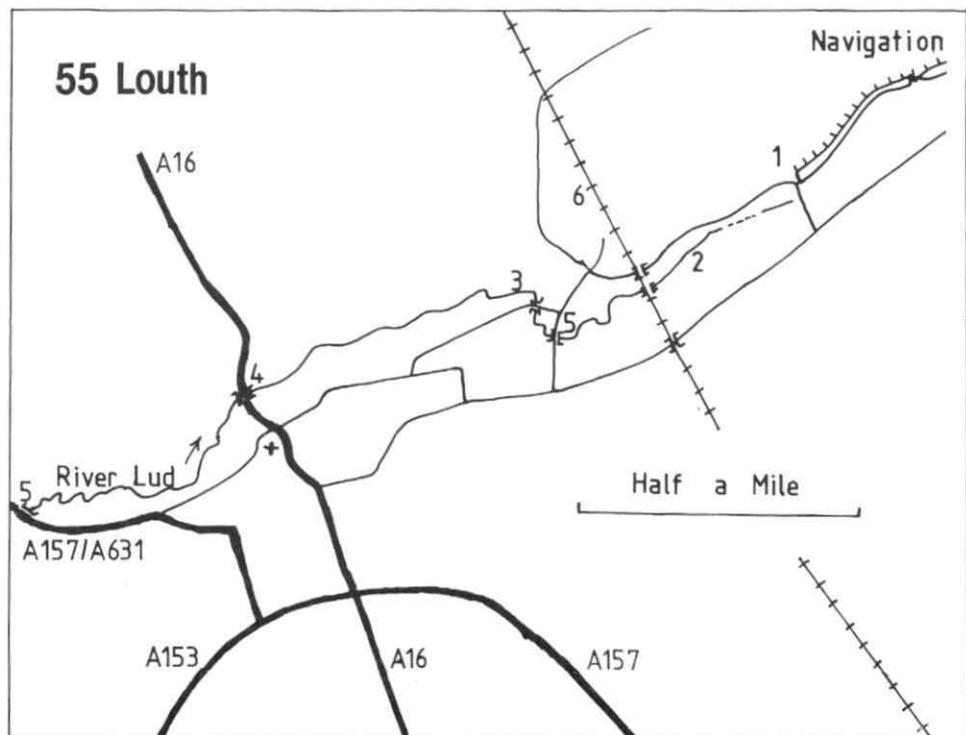
(16) **Ruston's Boiler Works** (SK 967706). This was the third large site occupied by Ruston's at the turn of the century, and still prominently carries their name in its brickwork.

(17) **Lifting bridge** (SK 970705). Erected in 1890s to give railway access over the Witham to Ruston's woodworks. Now static.

(18) **Perseverance Works** (SK 980704). Established by Robert Robey in 1854, most of the premises along Canwick Road were erected by 1882 and a large part is still occupied by Robeys of Lincoln.

(19) **Wellington Foundry (old site)** (SK 978711). William Foster started his business on this site on Waterside North in 1856 and part of his original buildings still remain.

(20) **Wellington Foundry (new site)** (SK 968706). Fosters moved to Spike Island in 1899 and here the British tank was developed during the First World War. Early models were tested south of



established in late Victorian times and produced very hard bricks from the local clay. Buildings now used for agriculture.

54. **LONG SUTTON: Sneath's windmill** (TF 435237). This early tower mill of 1779 at Lutton Gowts is unusual in having eight sides, with timber posts at the corners of the brick structure. It last worked in the early 1930s, since when it has lost its cap and sails and the interior has slowly deteriorated. An interesting contrast to the later preserved mills of the county.

**Brunswick brewery** (TF 430232). Built c.1800 and in use until 1890; now a seed and potato warehouse.

55. **LOUTH:** (1) **Riverhead** (TF 337879). Terminus of the navigation surveyed by John Grundy in 1756 and opened to Louth in 1770. Several warehouses and houses still remain, as well as the Woolpack inn. The locks at Keddington and Alvingham are worth a look.

(2) **Crown Mill** (TF 336879). This 4-storey mill in Ramsgate is about to be converted into a restaurant. It was built as a watermill in 1716 and enlarged in mid and late-19th century, and was later converted to steam and then diesel but still retains part of the waterwheel and the auxiliary Gilkes turbine.

(3) **Carpet factory** (TF 332877). Louth Corporation established a water-powered textile factory in James Street in the 1780s to help the Lincolnshire sheep growers, but it soon became a carpet factory and continued until late 19th century. Only the smaller part on the south bank of the river Lud still remains.

(4) **Old Mill** (TF 325875). Built as a water mill in 1775 by Franz Julien, but it is now a public hall.

(5) **Other watermills** (TF 318869, 320872 and 332876). There were several other watermills over the river Lud through Louth and their

shells, converted to other uses, can be seen at these sites.

(6) **Railway station** (TF 333879). The GNR's East Lincolnshire line opened in 1848 (and closed in 1970) but the brick station with a fine porte-cochere was erected in 1854 in a neo-Jacobean style.

(7) **Turnpike tollhouse** (TF 319860). A brick and slate building at Hallington junction on the Horncastle road, which was turnpiked in 1770. It is a delightful building with its original windows and a door on the angular corner.

56. MANTHORPE: **Londonthorpe watermill** (SK 924380). This 19th century corn mill last worked in 1963 but the eastern half of the brick building still contains 3 pairs of stones and the wooden high breast shot wheel (dia 16 ft) made by Wakes and Lamb of Newark in 1914.

57. MARKET DEEPING: **Warehouse** (TF 141099). Behind a decorative Gothic-style 19th century office is a fine warehouse, across the road from the river Welland which was navigable until c.1860.

**Road bridge** (TF 138098). Built in stone in 1841 to replace an earlier wooden bridge. South of the bridge is a turnpike tollhouse, recently spoilt by insensitive alterations.

**Turnpike mile posts.** There are still several mile posts on the former turnpike roads to Spalding, Peterborough, Stamford and Lincoln. One (at TF 136104) near the church indicates the boundary between two districts of the Lincoln Heath to Peterborough trust.

58. MARKET RASEN: **Watermill** (TF 105893). Church mill was built as a warehouse next to the terminus of a proposed 19th century extension of the navigable Ancholme, but when that scheme failed the building was converted to a corn mill by erecting a two-storey wheel house over the adjacent stream. Waterwheel replaced in 1930s by a turbine which was in use until 1969.

**Turnpike mile posts.** Several still remain on the A631 Louth to Bawtry road.

59. MARSTON: **Turnpike tollhouse** (SK 878416). The modern dual carriageway of the A1 cuts off the bend on the Old Great North Road where this tollhouse stands (behind the Tollbar Garage) at a junction with the road leading to Marston village. The tollhouse was extended about 1960.

60. MIDDLE RASEN: **Watermill** (TF 092894). This 19th century brick corn mill retains most of its machinery. It is privately owned and is being restored.

61. MORTON (near Gainsborough): **Warehouses** (SK 806916). This was a small landing place on the bank of the Trent. The row of warehouses remains but the removal of their distinctive dutch gables has changed their character somewhat.

62. MOULTON: **Windmill** (TF 307240). This 9-storey monster is one of the tallest mills in Britain. It lost its cap and sails in 1895 but retains most of its internal equipment. Part is still used in connection with a corn merchant's business.

63. NEW BOLINGBROKE: This was an unsuccessful attempt to found an industrial market town in the middle of reclaimed fens in the 1820s. Rows of houses along the main road had gaps for cross streets to be built.

**Basin** (TF 308582). The Medlam Drain is navigable and a branch led from it to the proposed town, terminating in a basin with a factory on one side. John Parkinson, the progenitor of the scheme, built a factory to produce crapes and bombazines.

**Market House** (TF 308579). This still remains in the intended Market Square, though the ground floor arches are now bricked up, and on the other side of the main road is a crescent of shops and houses.

**Globe Foundry** (TF 307586). This is still in use producing agricultural machinery and other items; their site includes an old tower mill minus its cap and sails.

64. **NEW HOLLAND: Railway pier** (TA 080246). This 1,375 ft long pier was the eastern terminus of the MSLR, where passengers caught the ferry across the Humber to Hull. The original timber pier of 1848 was replaced by a steel one (encased in concrete) in 1923-28 and the upstream and downstream arms of the pierhead were replaced in 1935-39 and 1946-49 respectively. The planks supporting the slope of the upstream arm were a very early structural use of pre-cast pre-stressed concrete in the country. There were stations at each end of the pier but both closed and the ferry ended when the Humber Bridge opened on 24 June 1981. The future of the pier is uncertain, so see it soon.
- Dock** (TA 082244). A tidal dock built by MSLR in 1848 and used by BR until 1960; basin is now badly silted.
- Railway stations** (TA 081243 and TA 079248). Built 1848 (Town) and 1923-28 (Pier) at either end of pier; both closed 1981.
- Industrial Housing** (TA 083239). MSLR also had a Locomotive Shed, Works, Laundry and other premises at the terminus and a small railway community developed, of which the main evidence is Manchester Square, with 2-storey houses round three sides of a square. The houses have recently been renovated.
- Brickyards** (TA 088244 westwards). Water-filled lagoons stretching along the south bank of the Humber indicate the site of a significant industry producing tiles and bricks which were exported by water to Yorkshire, East Anglia and London in the late 19th century.
65. **NOCTON: Potato warehouse** (TF 056631). This concrete building was erected at Nocton station in 1925-26 where the narrow-gauge railway of the 8,000 acre Nocton potato growing estate met the standard gauge GNGEJR.
36. **NORTH KYME: Bottom Lock** (TF 196523). The Sleaford Navigation was opened in 1794 and closed in 1881 but it is still in water. Bottom lock, which is 2 miles above the junction with the river Witham, still has its walls but no gates. In 1982 an appeal was launched to restore Bottom Lock and so re-open the lower 2/3rds of this waterway.
67. **OLD LEAKE: Lade Bank Pumping Station** (TF 379546). This was built in 1867 when the shrinking of the peat in the East Fen (due to efficient drainage) meant that the fen could no longer be drained by gravity and the water had to be pumped into the higher southern half of the Hob Hole Drain. Diesel pumps were installed in 1940 but the Victorian building and chimney still remain. The 14-mile long navigable drain had been excavated in 1802-6 as part of John Rennie's scheme to drain these fens. Alongside the pumping station are the remains of a lock.
68. **OWSTON FERRY: Pumping station** (SK 813995). This was built in 1910 to pump water from 5,000 acres in the southern part of the Isle of Axholme into the Trent. The station contains one of its original Marshall class 'L' double expansion reciprocating steam engines (not used since 1963), a Ruston and Hornsby class 8HRC diesel engine installed in 1952 and a later Lister Blackstone engine.
- Warehouses** (SK 813999). Most villages on the banks of the Trent had warehouses for goods carried on the river.
69. **PINCHBECK: Pinchbeck Marsh Pumping Station — Beam Engine** (TF 262262). Built 1833 and ceased operating 1952, this was the last steam driven scoop wheel to work in the fens; the Welland and Deepings Internal Drainage Board then diverted the drain to the new engine house alongside so that the old one could be preserved. The engine is a single-cylinder rotative A-frame beam engine of 20 nhp and is the oldest such engine **in situ**. It drove the 24 ft dia. scoop wheel to drain about 4,000 acres.
- Pode Hole Pumping Station** (TF 213220). At one time this was the largest steam installation in the fens, but the engines installed in 1825 ceased in 1925 and were scrapped in 1952. The building remains and the drainage board are establishing a small drainage museum.
- Flax mill** (TF 242269). Late 19th century building.

70. SAXILBY; **Fertilizer factory** (SK 910749). This site between the Fosdyke and the GNGEJR has been a chemical manure works since 1863 though few of the original buildings remain.

71. SCUNTHORPE: **Industrial housing** (SE 900108). The few streets of New Frodingham laid out by Rowland Winn in 1865-70 were intended to be the centre of the new community on the iron-stone field, but instead people chose Scunthorpe ½ mile away. These streets were perhaps a little better than average for industrial housing of this period.

**Museum** (SE891109). The borough museum includes material about local industries. Open Mon-Sat 10am - 5pm, Sun 2pm - 5pm.

72. SIBSEY: **Trader windmill** (TF 344510). This was built by John Saunderson of Louth in 1877 as one of the last tower mills to be erected in Lincolnshire. There are only two six-sail mills surviving (the other is Waltham) and Sibsey Trader has been open to the public since 1980 following an 11-year restoration programme by the Department of the Environment. It is considered to be one of the finest examples of a tower mill and is open April to September, Mon-Sat 9.30am - 6.30pm, Sun 2pm - 6.30pm.

73. SKEGNESS: **Pier** (TF 573634). The pier built in 1881 was the fourth longest in the kingdom, at 1,843 ft, until storms destroyed most of the seaward end (except for the large pierhead itself), on 11/12 January 1978. The landward end had been dramatically re-developed long before then.

**Church Farm Museum** (TF 558636). An agricultural museum run by Lincolnshire County Council on the west side of Skegness, between the Lincoln and Wainfleet roads. In a group of traditional farm buildings are displayed agricultural implements and craft workshops from the Skegness area, and a farmhouse furnished as it would have appeared in 1900. It also includes a reconstructed timber-framed cottage. Open May to September, every day 10.30am - 5.30pm.

74. SLEAFORD: (1) **Bass Maltings** (TF 074452). One of the major industrial monuments in Lincolnshire. It consists of eight maltings plus

a central block of engine house and workshops which were built 1899-1905 for Bass, Ratcliff & Gretton of Burton on Trent and were designed by H A Couchman. It is the largest complex of its kind outside Burton and has a total frontage of nearly 1,000 ft. It closed in 1960 and the two Robey engines were later removed to museums. Since then most parts of the buildings have been occupied by various firms. When built they were highly automated and very advanced, with bridges, elevators and conveyor belts to connect all parts of all the buildings to each other. Three blocks were badly damaged by fire in 1976 but the solid walls are still standing.

(2) **Navigation wharf and weighing office** (TF 069457). This was the terminus of the navigation opened in 1796 and closed in 1881, and it includes a stone weighing office of 1838-39 in the middle of the yard. Later buildings have been erected on the rivers edge since the navigation closed.

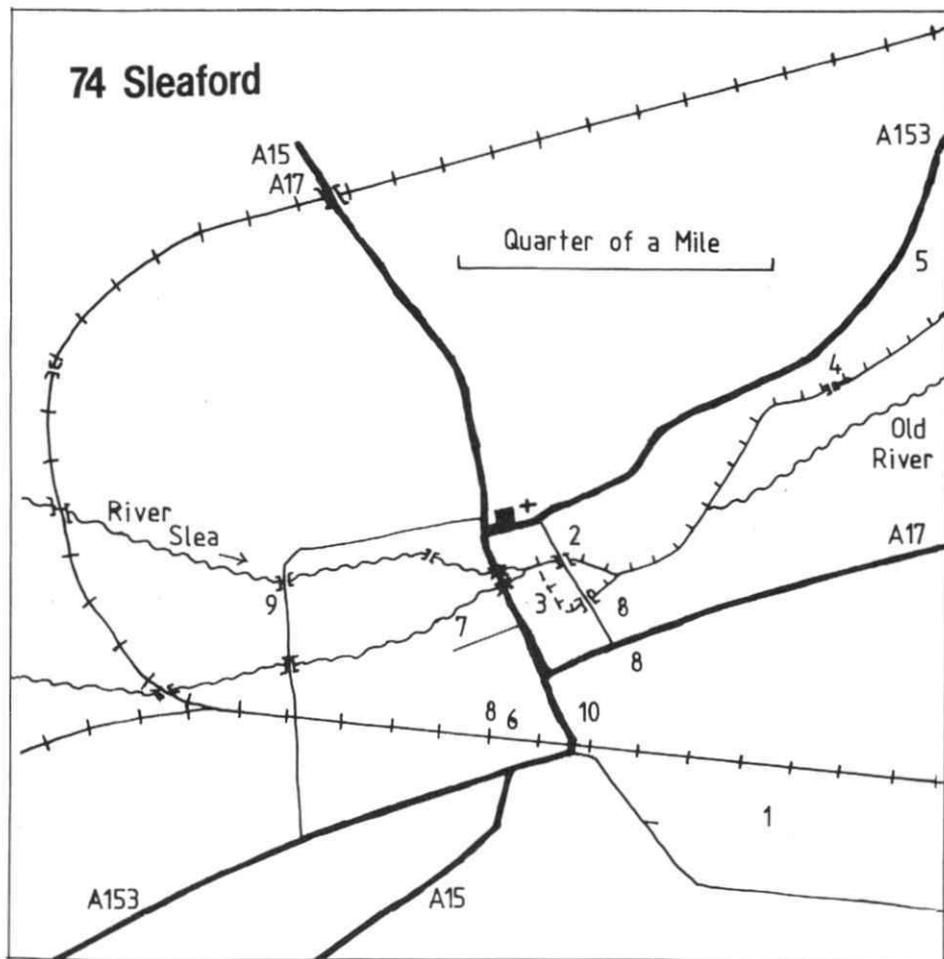
(3) **Navigation cut** (TF 070457). A loop was cut on the south bank to enable vessels to turn, in lieu of a basin, and this created an island on which several industrial buildings were erected. Part of the cut has been filled and the rest was converted to a 'water garden' in 1976.

(4) **Cogglesford watermill and lock** (TF 074461). The top lock on the navigation still has its brickwork although the gates have been replaced by a sluice. Alongside is a neglected corn mill which was built pre-1807. It still has its breast shot wheel.

(5) **Gas works** (TF 076464). The offices and workshops of 1839 still survive, with a Victorian gothic facade to the road. Next door is the shell of the 1896 purification house and meter house.

(6) **Railway station** (TF 068454). The original stone building of 1857 is sandwiched between red brick extensions of 1882, when its importance was increased with the opening of the GNGEJR.

(7) **Steam flour mill** (TF 065456). This large building of 5 and 7 stories was erected in 1857 for Kirk and Parry.



(8) **Seed warehouses.** Charles Sharpe & Co export seeds from Sleaford worldwide and have several warehouses in the town, particularly by their head office in Boston Road (TF 071456) and next to the railway station (TF 068455).

(9) **Electricity works** (TF 063457). This was built in 1901, which was quite early for a town the size of Sleaford. The buildings are now used as a sub-station.

(10) **Cinema** (TF 069455). The Picturedrome of 1922 is one of the oldest remaining cinemas still showing films in Lincolnshire.

**Turnpike mile posts.** Several remain on the A15 from Sleaford to Peterborough, eg at TF 049419.

75. **SOUTH FERRIBY: Sluice and lock** (SE 975210) This was built in 1842-44 by Sir John Rennie on the site of earlier sluices of 1640 and c.1769 to separate the Ancholme navigation from the tidal Humber. It incorporates a lock which was crossed by a swing road bridge; the bridge was replaced in 1982. A small building nearby was formerly the offices of the Ancholme Commissioners.

**Humber sloop 'Amy Howson'.** The Humber



- Keel and Sloop Preservation Society has restored two of the traditional sailing craft of the Humber and its adjacent waterways, and **Amy Howson** is often moored at Clapson's Marina near Ferriby Sluice. She is a steel hulled vessel built at Beverley in 1914, and after 1924 she was mainly engaged in carrying oil seed from Hull to the Yarborough Mills at Brigg. Her sister vessel the keel **Comrade** is based at Beverley in Yorkshire but is occasionally seen on the south bank of the Humber.
76. SOUTH KELSEY: **Caistor canal** (TF 071991 westwards). This abandoned canal was only 6 miles long and terminated at Moortown, only half way to Caistor. It was surveyed by William Jessop and opened 1800. The dried up bed of the channel and the basin can be seen at Moortown (with the eye of faith) and the brickwork or stonework still remains at some of the 6 locks, including one at TF 061985 and another where it entered the navigable Ancholme.
77. SOUTH RAUCEBY: **Lime kilns** (TF043454). These operated in the late 19th and early 20th centuries, and used the upper river Slea for transport.
78. SOUTH WILLINGHAM: **Railway tunnel** (TF 213828). This section of the LLR through the Wolds was opened in 1875 and closed to passengers in 1951. Nearby is the Belmont television transmitter which was built about 20 years ago.
79. SOUTHREY: **Ferry** (TF 138662). This small ferry is the last of several there used to be across the Witham between Lincoln and Boston. It was moved here from Stixwould c.1975. A slack chain crosses the river and the boat is pulled across by hand.
80. SPALDING: (1) **Warehouses** (TF 251228). Sea-going boats sailed up to the town until c.1914 and there are still remains of some

warehouses on each bank of the river Welland, including an old one in Double Street.

(2) **South Holland Mill** (TF 250226). Steam flour mill of c.1807, now occupied by G W Plowman & Sons.

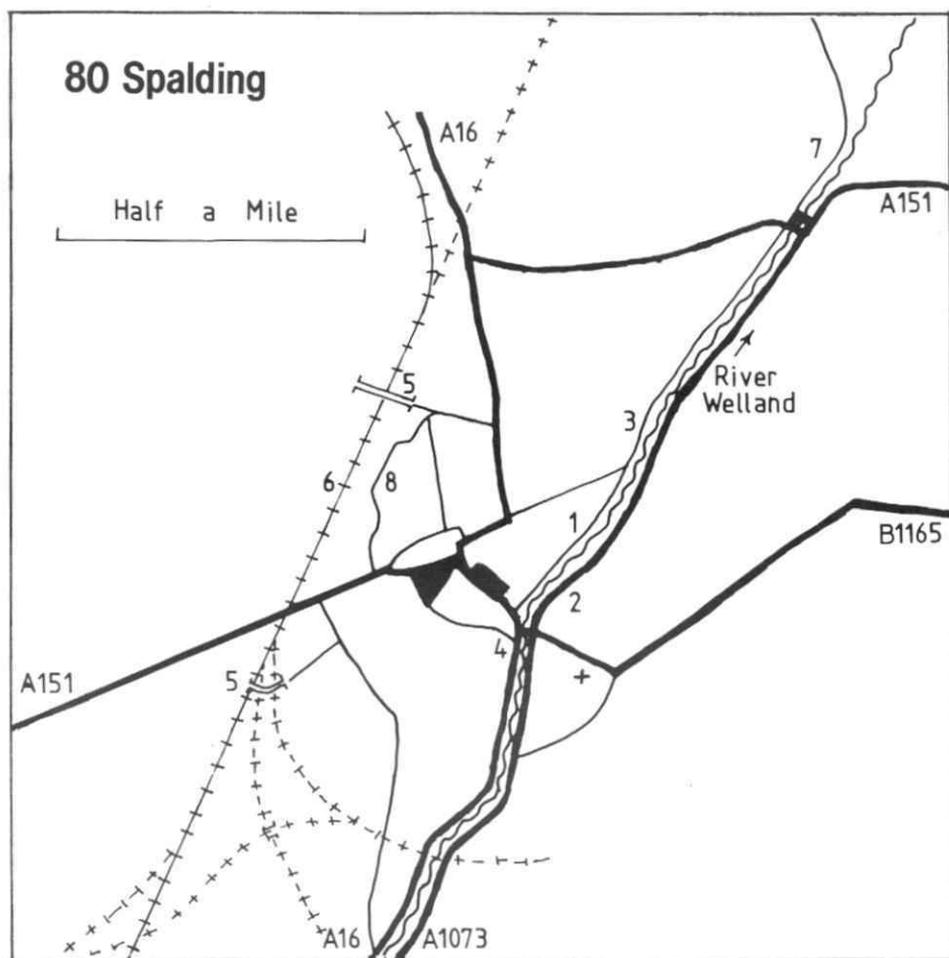
(3) **Albion Mill** (TF 252232). 19th century steam flour mill now converted to the head offices of Geest Industries.

(4) **High Bridge** (TF 248225). Stone road bridge erected 1838 by the Commissioners of Deeping Fen.

(5) **Footbridges** (TF 244231 and 241224). Built over the railways which converged on Spalding between 1848 and 1882, and extended as the railways arrived.

(6) **Railway station** (TF 242229). The original 1848 block remains of the station built by the GNR, with some extensions, but later buildings erected on the island platforms have gone.

(7) **Sugar Beet factory** (TF 258247). Built 1926, when West Elloe Bridge and West Elloe Avenue were built by the Urban District Council



to improve road access. Sited, like most such factories, between railway and river.

(8) **Chatterton tower** (TF 245229). This water tower of 1951 incorporated the 2-storey offices of the UDC's Water Department.

**Turnpike mile posts.** There are still several to be seen on all six main roads out of Spalding, including the back road to Wisbech (B1165).

81. **STAMFORD:** (1) **Turnpike tollhouse** (TF 047078). The Newstead Gate Bar house is in the Tudor style on the Deeping road.
- (2) **Welland navigation** (TF 040073 eastwards). The canalized section of the river from Stamford to Deeping St. James was completed c.1670 and can be traced for much of its length along the north side of the valley, including dried up sections east of Hudd's mill.
- (3) **Hudd's mill** (TF 042074). This 16th century stone watermill still retains its wheel and some equipment. It is at the end of a narrow side lane on the edge of the town.
- (4) **Archway** (TF 032070). The archway entrance of 1845 to Grant's ironworks, later Blashfield's terra cotta works, is now incorporated in the facade of Chas. Gray & Co, having been moved a few feet in 1937.
- (5) **Albert Bridge** (TF 033069). Iron footbridge over Welland near Water Street station.
- (6) **Railway stations.** The architecture of the Water Street station (TF 038069) of 1856 reflects the interest of the Marquess of Exeter, the entrance to whose park is nearby. The station has been closed for many years but was successfully converted to residential and other uses. The present station (TF 029066) was built by the MR in 1848 west of a cutting through St. Martins.
- (7) **Maltings** (TF 032068). Several former maltings remain in the St. Martins area, south of the head of navigation at the Welland bridge.
- (8) **George Hotel, St. Martins** (TF 030067). This was one of the main coaching inns on the

Great North Road, and it was enlarged by the Marquess of Exeter in 1785-92.

(9) **Toll bridge** (TF 030069). This was rebuilt by Lord Exeter in 1849, and the tollhouse at the north east corner still remains. The bridge carried the Great North Road across the river Welland.

(10) **Blashfield's Terra Cotta.** Nothing remains of this factory, but examples of his products can be seen on local buildings including the Scotgate Inn (TF 028071) and No 30 High Street, as well as in the museum.

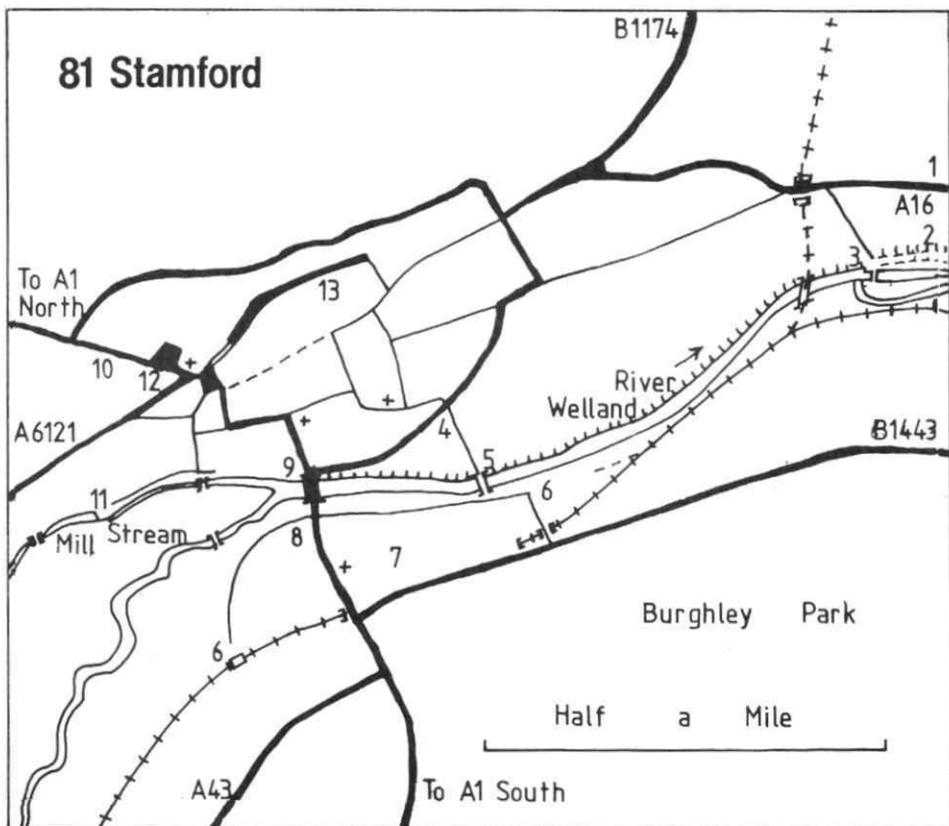
(11) **King's Mill** (TF 026068). This watermill of c.1700 has been converted to a recreation centre for handicapped children.

(12) **Stamford Brewery Museum, All Saints' Brewery** (TF 026070). Preserved 19th century brewery with additional exhibits including the equipment from the estate brewery at Kimbolton Castle. It sells real ale during licensed hours. Open Weds and Suns, 9am-4pm; bank holiday weeks open Mons, not Weds.

(13) **Stamford Museum, Broad Street** (TF 030072). The old industries of Stamford are well represented in this museum recently opened by Lincolnshire County Council. Open Tues to Sat each week, plus Bank Holiday Mons. For further information ring Stamford 55611.

82. **SUTTON BRIDGE: Cross Keys Bridge** (TF 482210). This swing bridge was erected over the river Nene in 1894-97 by MGNJR, with one carriageway for road traffic and the other for the railway; both used for road traffic since 1963. It is still opened regularly for shipping going up to Wisbech. It replaced earlier toll bridges of 1830 and 1850; the tollhouse of 1830 still remains on the east bank. The hydraulic accumulator tower still used to operate the bridge is c.200 yds south, near the river bank.

**Warehouse** (TF 482211). Construction of the 1st bridge and improvement of the Nene out-fall led to the establishment of a village, wharf and warehouses from 1830 onwards.



**Dock** (TF 482217). The 13-acre basin constructed behind the west bank of the Nene in 1878-81 had a substantial lock, but rest of dock had poor foundations and parts of walls collapsed after only one month. Dock disused since then. The basin has been a golf course since then, but most of the timber and concrete facing of the basin still remains and can be viewed from the road along the river bank.

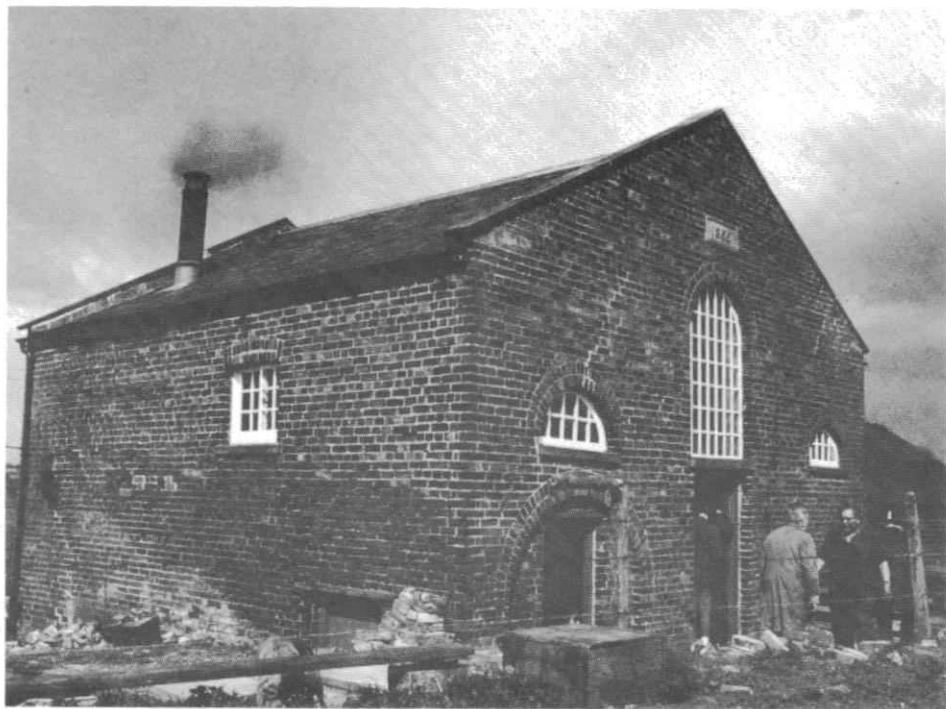
**Landmarks** (TF 492258). When new Nene outfall was constructed c.1830, two tall landmarks or 'lighthouses' were erected to indicate the entrance to the channel for the benefit of shipping. Since then land reclamation has pushed the shore further out into the Wash.

83. **SWINESHEAD: Turnpike mile post** (TF 242388). The manufacturers' name — Howden of Boston — can clearly be seen on this post at Drayton. Other posts still remain on roads south, east and west of Drayton roundabout.

84. **TATTERSHALL: Dogdyke Pumping Station** (TF 205558). The only remaining working steam engine in Lincolnshire was restored by a trust formed in 1973. It is an 1855 single-cylinder rotative beam engine built to replace an earlier wind pump, and was itself in turn replaced by a diesel engine in 1940. Open 1st Sunday in each month 11am - 5pm; approach through Bridge Farm yard on south side of A153, 500 yds east of Tattershall Bridge.

**Tattershall Bridge** (TF 195562). Built across river Witham c.1850 to replace earlier bridge; red brick; stone copings and iron railings of 1920 removed 1977.

**Tattershall canal** (TF 194571 eastwards). Constructed just before 1792, when it became the 1st stage of the Horncastle navigation. Its junction with the Witham is now blocked by an embankment, but it is in water for most of its length.



84 Dogdyke Pumping station CW

- Lincolnshire Aviation Museum** (TF 204569). Private museum in Goods Yard of former railway station. Open Easter to October Suns and Bank Holidays 2pm - 5.30pm.
85. TEALBY: **Watermill** (TF 155903). Thorpe Mill was a corn mill of 1790 on the river Rase and it still retains its machinery in working order. It is being restored by the owner. A 2-storey brick building with a breast shot wheel in the northern end. Open on certain days, as well as by appointment for parties.
86. TETFORD: **Watermill** (TF 332745). This 17th century mill with its original wooden breast shot wheel of c.1650 is preserved as part of a house.
87. THORESWAY: **Waterwheel** (TF 165966). This overshot wheel in its own roadside building was erected c.1818 to provide power for a thrashing machine and other implements in farm buildings on the other side of the road. Pins round the rim of the wheel operated a cog and axle which transferred the power under the road. The wheel remains but the leet which brought water to it has gone.
- Water pump** (TF 178973). Beside a pond in the middle of a field is a tree which conceals the entrance to an underground room where there is a water-powered pump, made in 1881 by Easton and Anderson of Erith, Kent, which used to supply water to a few farms on top of the Wolds.
38. THORPE ON THE HILL: **Railway station** (SK 902665). 1846 MR station of unusual design, with a curved end and steep overhanging roof. Line open but station closed.
39. TORKSEY: **Tide lock** (SK 838780). The only lock on the Fosdyke is where it joins the tidal Trent. The Fosdyke dates from Roman times but deteriorated until restored in 1744. The lock has 4 sets of doors opened by capstans.
- Railway Bridge** (SK 835791). John Fowler designed the bridge over the Trent, opened 1850 on line built by MSLR for benefit of GNR. Line closed 1961 but bridge remains.
90. UFFINGTON: **Welland navigation** (TF 065068). This waterway of the 1670s was abandoned c.1860, but the dry bed can clearly be followed below Uffington Park as far as Stamford. At 050075 stone abutments still support a small wooden footbridge over it.
- Newstead corn mill** (TF 047079). This large mill was originally powered by water and later by steam, oil and then electricity. It is a 4-storey stone building of c.1840, with a modern extension added 1976.
- WADDINGHAM **see Brandy Wharf.**
91. WAINFLEET ALL SAINTS: **Salem Bridge Brewery** (TF 495587). Lincolnshire's last independent brewery was established by George Bateman in 1874 and is still operated by the same family.
92. WALTHAM: **Windmill** (TA 259033). Tower mill built 1880 by John Saunderson of Louth. 85ft high, 6 sails, 6 stories. Being restored by Cleethorpes District Council with the help of a local society. Open during the summer on Sats and Suns; parties by arrangement. For further information ring Grimsby 825368.
93. WEST DEEPING: **Molecey watermill** (TF 124098). The original building is 16th century with larger 18th century additions which are now a private house. The 17th century undershot wheel was modified in 19th century and is the only Lincolnshire example of Poncelet's improved design. It connects to the great spur wheel, but no other equipment remains.
- Paper mill** (TF 108086). This is a small watermill next to West Deeping parish church.
94. WILSFORD: **Quarries** (SK 990410). Ancaster limestone has been quarried here since medieval times and can be seen in many churches. Quarries ceased working 1940.
95. WITHCALL: **Railway tunnel** (TF 265824). On LLR through the Wolds; this section of line opened 1876 and closed to passengers 1951.

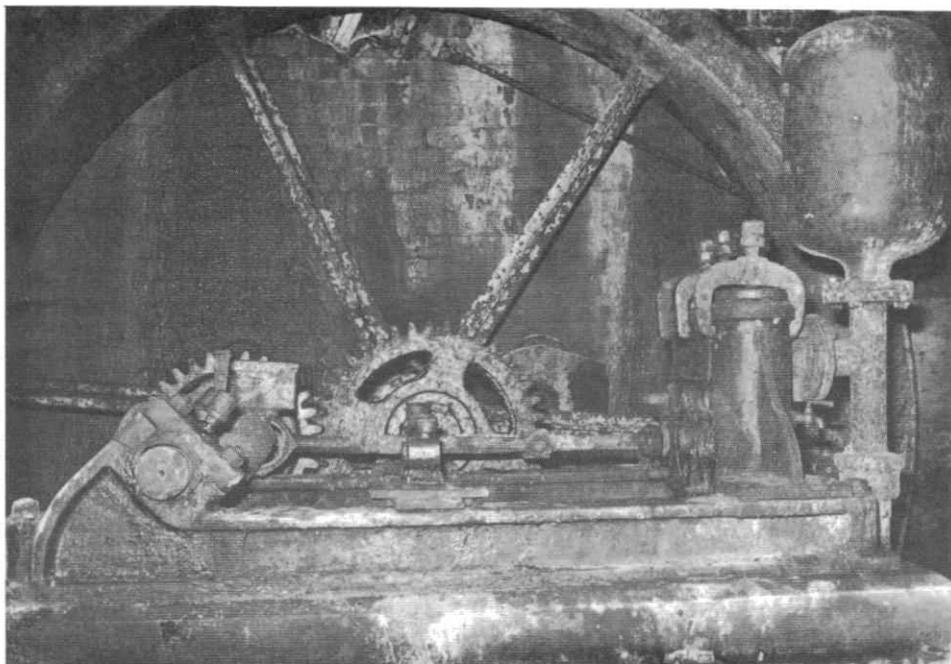


96. WOOLSTHORPE BY BELVOIR: **Flight of locks** (SK 834350). This flight links the top level of the Grantham Canal to the main level which follows the 150ft contour around the Vale of Belvoir. The 7 locks took the canal down 59ft. It was opened by 1797 and formally abandoned in 1936 but there are plans for its restoration. Halfway up the flight (SK 842350) is the lock keeper's house, the workshops of the canal company and the Rutland Arms PH.
97. WRAWBY: **Windmill** (TA 026088). This post mill was built c.1790 and restored to working condition in 1965 by local volunteers. It has 4 spring sails driving 2 pairs of stones, and is usually open Bank Holidays and the last Suns in June and July. For further information ring Brigg 53699.

#### Photographic credits

The pictures which illustrate this booklet come from several sources and identifying initials appear alongside each caption. The key is as follows:

<i>CW</i>	—	<i>Mrs. C Wilson</i>
<i>CJP</i>	—	<i>C J Page</i>
<i>LT</i>	—	<i>L Tebbutt</i>
<i>MJTL</i>	—	<i>Dr M J T Lewis</i>
<i>NRW</i>	—	<i>N R Wright</i>



## Classified Index of Sites

### AGRICULTURE AND FOOD BASED INDUSTRIES

#### Beverages

- Brewing — 16, 36, 54, 81, 91.
- Malting — 7, 11, 35, 52, 74, 81.

#### Feathers — 16.

#### Foodstuffs — 39, 49, 65.

#### Milling

- Steam Mills — 4, 14, 36, 52, 55, 74, 80, 90.
- Waterwheel — 87.
- Watermills — 1, 5, 17, 22, 35, 40, 42, 48, 55, 56, 58, 60, 74, 81, 85, 90, 93.
- Windmills, Post — 97.
- Windmills, Smock — 17.
- Windmills, Tower — 2, 3, 16, 21, 38, 39, 40, 50, 52, 54, 62, 72, 92.
- Millwrights workshop — 3.

#### Rabbit-Skin — 19.

#### Seeds — 16, 74.

#### Sugar Beet — 10, 19, 80.

#### Woad — 4.

#### Wool — m 41.

### BUILDING MATERIALS

#### Brick and Tile — 12, 53, 64.

#### Lime — 7, 40, 77.

#### Stone — 94.

#### Pottery — 81.

### ELECTRICITY — 52, 74.

### GAS — 74.

### HYDRAULICS — 16, 36, 82.

### IRON WORKS — 16, 34, 35, 52, 63.

### MISCELLANEOUS MANUFACTURING

#### Chemical Manure — 52, 70.

#### Leather — 44.

#### Oil-Seed Crushing — 16, 19, 34, 52.

#### Paper — 93.

#### Rope — 12.

**MUSEUMS** — 3, 50, 52, 71, 73, 81, 84.

**SERVICE INDUSTRIES** — 33, 36, 74.

**SETTLEMENTS** — 4, 63, 64, 71, 82.

## **TEXTILES**

**Cotton Mill** — 22.

**Flax Mills** — 22, 69.

### **Wool**

Wool Store — 41.

Mills — 55, 63.

## **TRANSPORT AND COMMUNICATIONS**

**Footbridges** — 16, 30, 80, 81.

### **Harbours and Docks**

Havens — 12, 30, 32, 82.

Coffer-dam — 36.

Docks — 16, 36, 45, 64, 82.

Harbour Installations and Building — 16, 36.

Navigation Aids — 82.

Quays and Wharves — 16, 32, 34, 61, 68,  
80, 82.

Warehouses — 16, 34, 36, 61, 68, 80, 82.

### **Inland Waterways**

Aqueduct — 30.

Basins — 14, 17, 44, 52, 55, 63, 74, 76.

Bridges — 10, 16, 18, 19, 30, 52, 90.

Buildings — 3, 9, 14, 16, 18, 25, 44, 49,  
52, 55, 57, 74, 81, 84, 96.

Cutting — 37.

Ferry — 79.

Locks — 5, 8, 10, 13, 16, 26, 30, 42, 46,  
47, 52, 55, 66, 67, 74, 75, 76,  
89, 96.

Navigable Drains — 30, 49, 63, 67.

Reservoir — 27.

Tide Locks — 16, 46, 75, 89.

Toll Booth — 42.

Wharves — 16, 19, 25, 44, 49, 74.

**Piers** — 23, 64, 73.

## **Railways**

Bridges — 10, 16, 34, 46, 52, 82, 89.

Goods Yards and Warehouses — 16, 29, 36,  
39, 49, 52,  
65.

Housing and Hotels — 36, 64.

Pier — 64.

Signal Box — 52.

Stations — 3, 10, 11, 17, 20, 25, 34, 35,  
39, 44, 46, 52, 55, 64, 67, 74,  
80, 81, 88.

Tunnels — 35, 50, 78, 95.

Workshops — 16, 30.

## **Roads**

Bridges, Brick and Masonry Arch — 15, 16,  
19, 24, 30, 34, 49, 52, 57, 80, 81, 84.

Bridges, Cast Iron — 16, 18.

Bridges, Girder — 10, 51.

Bridges, Suspension — 12, 43.

Bridges, Swing, Lift — 32, 36, 46, 82.

Coaching Inns — 31, 35, 81.

Land Lighthouse — 28.

Mile posts — 17, 29, 57, 58, 74, 80, 83.

New Road — 52.

Tollhouses — 3, 34, 55, 59, 81, 82.

Trams — 36.

Turnpike Boundary Marker — 16.

**Tramroad Engine Shed** — 3.

**Vessels** — 75.

## **WATER SUPPLY AND CONTROL**

### **Water Supply**

Water Powered Pump — 87.

Water Tower — 80.

### **Drainage**

Navigable Drains — 30, 49, 63, 67.

Sluices — 16, 30, 75.

Wind Pumps — 6.

Steam Pumps — 6, 67, 68, 69, 84.

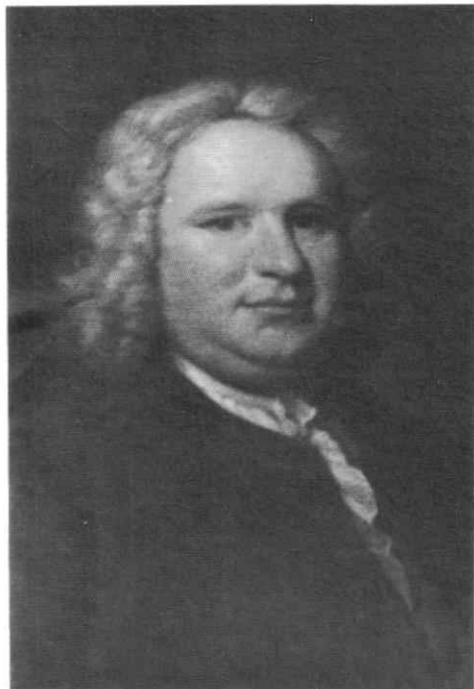
Diesel Pumps — 68, 84.

**Dam** — 29.

## Who was John Grundy ?

In the introduction to this booklet and in several places in the text, there has been mention of John Grundy.

On 15th June 1983 Societies in Lincolnshire and Yorkshire celebrated the Bicentenary of his death and in view of his importance in this area it seems worthwhile to add a little about the man:



**John Grundy** (Junior) was born in Leicestershire in 1719 but spent most of his life in Spalding, Lincolnshire. He was a pioneer of the civil engineering profession and designed or advised on many of the early waterway schemes and drainage improvements in Lincolnshire and the East Riding of Yorkshire, as well as some in other parts of England. He learnt the art from his father, John Grundy (Senior), and was perhaps the first civil engineer to be trained for his profession.

Water was used in many ways by 18th century engineers, and John Grundy was a master of this element. One of his first projects was to supply water to Grimsthorpe Castle for the Duke of Ancaster, and the dam he designed for the ornamental lake in the Duke's park at Grimsthorpe was a milestone in the development of dam design. Grundy designed unusual locks for the Louth navigation in the 1750s and these can still be seen. His other projects included the improvement of the river Witham between Boston and Chapel Hill; the Market Weighton and Driffield navigation, and the drainage of Deeping Fen. It was Grundy who conceived the idea of forming Hull's first dock in the ditches outside the town walls. He also acted as a consultant, giving comments on schemes proposed by other engineers. As a land surveyor he produced very attractive Map Books, with plans of estates and information on tenants, rents, etc. Grundy also had commercial interests, and ran a merchant ship which traded across the North Sea from Spalding.

The great John Smeaton was a friend of Grundy's and had a high regard for his talents; the two worked together on several schemes. John Grundy was one of the first members of the Society of Civil Engineers which Smeaton founded in 1771.



## AIA Bulletin Extra

This booklet is published by the Association for Industrial Archaeology in conjunction with the Society for Lincolnshire History and Archaeology on the occasion of the AIA Annual Conference at Lincoln in September 1983. It sets down brief details of some of the main industrial archaeological sites in Lincolnshire.

If you live in this county you may like to know that the SLHA was formed in 1974 by the amalgamation of earlier societies whose history goes back to 1844. It aims to promote the study of history, archaeology, industrial archaeology, topography, architecture, dialect, manners and customs and other similar subjects of local interest throughout the historic county of Lincolnshire, including south Humberside. The Industrial Archaeology Sub-Committee of

the Society holds meetings, lectures and film shows, arranges visits and tours, conferences and courses, and contributes to the Society's annual journal '**Lincolnshire History and Archaeology**'

Nationally, industrial archaeology is represented by the AIA which produces a **Bulletin** four times a year, and 'special publications' (of which this booklet is one), **Booklists, Exchange and mart leaflets** and organises conferences. The Association also represents local and national 'interests' at public and planning inquiries, and plays a large part in the formation of opinion on conservation issues.

Neil Wright, the editor of this guide, is Chairman of the IA Sub-Committee of the SLHA and a member of Council of the AIA.

If you would like more information about the SLHA write to the Society's Secretary at 25 Westgate, Sleaford, Lincs NG34 7PL. The AIA can be contacted through Stuart Smith, AIA Offices, The Wharfage, Ironbridge, Telford, Shropshire TF8 7AW.