



SNEATH'S MILL
LONG SUTTON
LINCOLNSHIRE

ARCHAEOLOGICAL ASSESSMENT

REPORT
AUGUST 2010





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REPORT

August 2010



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- A Listed Building Description
- B Glossary

Summary

This document presents an archaeological assessment of Sneath's Mill, Long Sutton, Lincolnshire (NGR: TF 4358 2429). The assessment was undertaken by Field Archaeology Specialists (FAS) Ltd on behalf of Anderson and Glenn, and was carried out between January 2009 and July 2010.

Sneath's Mill lies in the parish of Long Sutton (also known as Sutton St Mary or Sutton in Holland). Documentary evidence, and inscriptions within the mill, have been used to support a construction date between 1777 and 1779 for the mill. Previous studies have used the shape of the structure to suggest that it represents a wooden smock mill that was brought to the site and reconstructed, before being encased in brick, but the historical evidence provides no further support for this idea. Several mill owners can be identified through tithe schedules, trade directories and electoral registers until the 20th century. From the late 19th century onwards, the mill was in the hands of John Sneath, whose name has been given to the surviving structure. The mill eventually ceased working in the 1930s.

A walkover survey of the site, undertaken on the 11th February 2009, informed an updated description of the building and the surviving machinery. It was established that much of the mill machinery remained on site, although in variable condition. The mill tower, with its machinery, appeared to be largely of one phase of construction, but the ancillary buildings to the north had undergone a more complex sequence of development.

Acknowledgements

FAS would like to thank Mark Bennet, Lincolnshire SMR, for providing information on the mill, and the staff at the Lincolnshire Archives for assistance with primary sources.

1.0 INTRODUCTION

This document reports on an archaeological assessment of Sneath's Mill, Long Sutton, Lincolnshire, undertaken by Field Archaeology Specialists (FAS) Ltd on behalf of Anderson and Glenn for the Sneath's Mill Trust Ltd. Documentary and cartographic research, and a walkover survey, was carried out during January 2009 and the assessment was completed during July 2010.

1.1 LOCATION AND LAND USE

Sneath's Mill lies to the south of the settlement of Lutton Gowts, in the northern part of the parish of Long Sutton in southern Lincolnshire (NGR: TF 4358 2429; Figure 1). The mill site is largely surrounded by agricultural land although there has been more recent residential development to the east (Plate 1). There are three buildings on site; the central mill tower on its mound, to the south lies a mid-20th century barn, while to the north lies a group of ancillary buildings. All of the buildings are in poor structural condition.



Plate 1 Sneath's Mill looking northwest

1.2 STATUTORY DESIGNATION

Sneath's Mill is protected as a Grade I Listed Building (Appendix A), and is on the Heritage at Risk register.

1.3 AIMS AND OBJECTIVES

The assessment sought to define the archaeological and historical context of Sneath's Mill, and establish the character, date and development of the buildings.

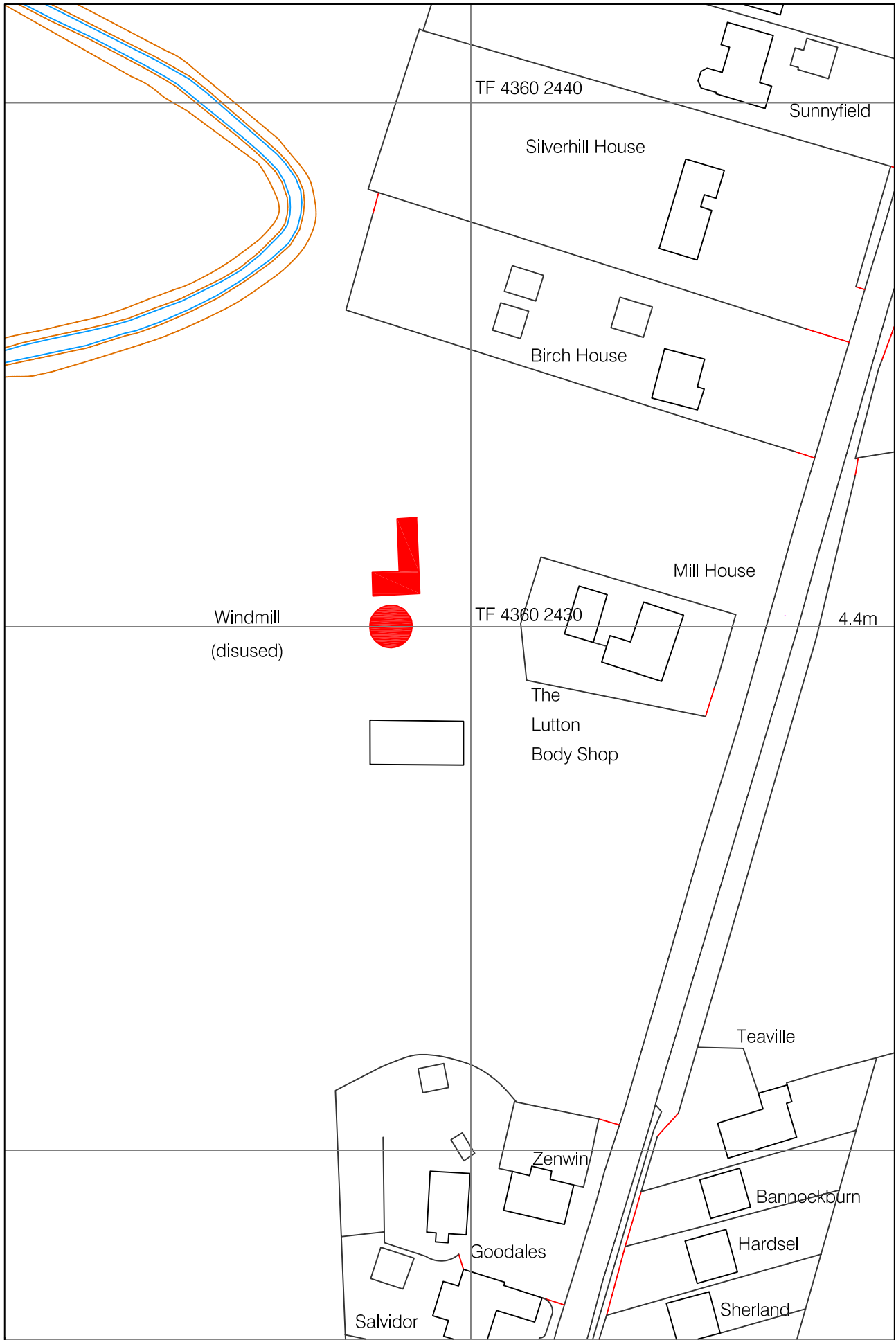
2.0 ASSESSMENT PROCEDURE

2.1 DOCUMENTARY RESEARCH

The Lincolnshire County Council Historic Environment Record (HER) was consulted for information held on Sneath's Mill and the 'Roman Bank' on which it is situated. Archaeological and architectural information held at the National Monuments Record (NMR) Swindon was also consulted. Published and unpublished articles were also used.

2.2 CARTOGRAPHIC RESEARCH

Cartographic sources were consulted at the Lincolnshire Archives (Lincoln) and online at old-maps.co.uk.



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Location map

Scale 1:1000



Figure 1

Where appropriate, copies were obtained.

2.3 WALKOVER SURVEY

A walkover survey of the site was carried out on 11th February 2009. The unsafe structural condition of the buildings restricted the extent of internal inspection.

3.0 HISTORY AND ARCHAEOLOGY OF SNEATH'S MILL

3.1 BEFORE SNEATH'S MILL

Sneath's Mill is said to have been erected on a Roman bank, which has led to the local name 'Roman Bank Mill'. The bank is marked on historic maps dating back to the 19th century; the bank however, despite its nomenclature, is not Roman in date (Lincolnshire HER). The bank represents a marine flood defence defining drained lands to the west and wetland to the east. The bank predates a more easterly 17th-century scheme of flood defences and drainage, and the bank may therefore date to the medieval period. A possible 13th- to 14th-century date has been proposed for medieval land drainage and management in the Sneath's Mill landscape by reference to county studies of medieval land-use (Mark Bennet, pers. comm.).

The landscape is characterised by drainage systems, and numerous dykes cross the area, including a channel to the immediate west of Sneath's Mill.

3.2 CONSTRUCTION OF THE MILL

The construction date of the mill is generally considered to be 1779, and a licence dated 1777 grants licence and permission to William Goe to

'erect a windmill on the Bank called Roman Bank in the Little Common within this Manor [of Sutton Holland] on the north side the outbreak on the said bank, out of Daniels Gate into the Little Common aforesaid but not nearer than one hundred and fifty yards of the said outbreak The Ground made us of for this purpose not to exceed fifty yards in diameter. He the said John Crow or his assigns paying therefore yearly and every year at Michaelmas Day so long as he or his assigns shall enjoy the same the rent of 20 shillings to the Lords of the said Manor the first year to commence from Michaelmas past' (Jackson II/14)

Whether the mill was constructed that year or slightly later, the licence suggests that no previous structure stood at this particular location.

Later sources suggest that a mill at the site was constructed by Thomas Ayliffe (or Aycliffe), rather than the individuals mentioned in the licence. A deed of 1782 states that Thomas Ayliffe, of Sutton St Mary, leased the land from Joshua Peart of Lincolns Inn Field (and Lord of the Manor of Sutton Holland), for 99 years at an annual rent of £1. The land is described as 50 yards in length (which accords with the licence of 1777) and 16

yards breadth,

‘on part therefore a Wind Corn Mill hath lately been erected by the said Thomas Ayliffe lying in Sutton St Marys Aforesaid on the Roman Bank in the Little Common there on the Northside...in the occupation of the said Thomas Ayliffe...since...29th September 1781. To pay to Joshua Peart and his heirs and assigns rent or sum of 20/- on the 29th September (called Michaelmas day) every year, first payment to be made next Michaelmas Day’ (quoted in Wills 1980)

Thomas Ayliffe’s mark can be found on the fabric of the standing building. A stone above the door is inscribed with ‘1779. T.D. Ayliff’ (Plate 2). Sass (1978, 62) states that this stone used to be a sundial. Ayliffe’s name is also found on the first floor beam facing the entrance ‘Thomas Ay...’, which also bears the inscription ‘IOH...RAM’. The latter letters may form part of the name ‘Hillram’; the lower half of an upright shaft in the floor is carved ‘T.A. 1779’ and ‘T.Oliver, W.Hillram 1783’ (Sass 1978, 65).



Plate 2 Inscribed stone above the doorway (Mugg 1978/4)

Although it would appear that the mill was newly constructed at the site in 1777-1779, it has been suggested that the structure itself has earlier origins, and that the current brick construction represents the encasing of a pre-existing smock mill that was brought to the site and converted to a corn mill (Sass 1978, 64). No documentary evidence has yet been identified to support this assertion.

3.2.1 Other mills in the area

Although situated close to Lutton Gowts (parish of Lutton or Sutton St Nicholas), Sneath’s Mill lies just within the parish of Long Sutton (also known as Sutton St Mary’s or Sutton in Holland). The parish boundary follows the line of the adjacent north-south dyke, but veers eastwards to encompass the mill itself. Sneath’s Mill was one of three windmills within the parish, with Brunswick Mill and Harrison’s Mill. Harrison’s Mill (built 1843) lies to the south of Little London, to the east of the Roman Bank road, while Brunswick Mill (built 1817) lies still further south, on the line of the Roman Bank. All three are labelled as corn mills on the 19th-century Ordnance Survey maps.

Two further cornmills are known within the parish of Sutton St Nicholas. One, to the immediate south of Sneath’s Mill, is shown on the Ordnance Survey editions of 1888, but had disappeared by 1904. A second windmill was situated to the west of Lutton Gowts, to the north of Sneath’s Mill. The latter two, with Sneath’s mill, have been described as a group of three similar mills (Sass 1978, 63), and were all depicted on Bryant’s map of 1828 and the Ordnance Survey of 1888 (Sass 1978, 63; OS 1888).

3.3 MILLERS AT SNEATH'S MILL

Tracing the owners and tenants of the mill is problematic, as confusion arises with the other mills in the area. Evidence from the trade directories would indicate that both Sneath's Mill and Harrison's Mill were referred to as 'Roman Bank Mill' at varying times. It has not been possible to disentangle these entries with certainty, although further archival research may produce a more comprehensive list of millers for the site. To further complicate matters, the 19th- and 20th-century trade directories contain further entries for a 'Roman Bank mill' in the parish of Holbeach, some distance to the north (mortgages 1810 to 1840, LAO Misc Don 103/1). The mills in the parish of Sutton St Nicholas are not given distinct names, and are often referred to simply as being at 'Gowts'.

In 1826, two flour dealers and millers are listed in Long Sutton - John Cartwright and son, and Henry Wrout. Specific addresses are not listed, but as Harrison's Mill was not built at this time, the two millers would most likely have worked Sneath's Mill and Brunswick mill.

In 1842, three 'bakers and millers' are listed in the parish of Long Sutton: William Anderson, Joseph Blower and Charles Triffit. Triffit is known to have constructed what later became Harrison's Mill and so either of the former two millers could have occupied Sneath's Mill at this time.

The 1845 Tithe Map for Sutton St Marys ('otherwise Long Sutton otherwise Sutton in Holland') depicts Sneath's Mill. The entry within the Schedule (No. 1041) lists 'Mill buildings and yard', owned and occupied by Thomas Sargisson. The land is listed at 27 perches, with tithe payable to the vicar of £1 1s and 8d. The adjacent drain was held by the Commissioners.

By 1872, the millers of Long Sutton included John Dring (Brunswick Mill), Stephen Major (Little London) and William Cunnington (Roman Bank). In addition, two millers - George Colton and David Goodale - are listed at 'Gowts' (White 1872). Brunswick Mill being clearly identified, the mills at Little London and Roman Bank must refer to Harrison's and Sneath's Mills. The latter lie to the south and north of Brunswick Mill respectively. Ten years later, in 1882, William Cunnington is listed as a corn miller at Gowts (Sutton St Nicholas), while John Dring occupied Brunswick Mill and John Thomas Goulding was at Roman Bank. Harrison's Mill lies some distance from Gowts, and so it is suggested that William Cunnington was miller at Sneath's Mill from at least 1872 to 1882.

3.3.1 John Sneath

The name 'Sneath's Mill' appears to have been due to the last miller, Mr John Sneath. Sass reports that Sneath worked the mill from 1863 until the early 1930s (Sass 1974, 63). However, Sneath does not appear in the trade directories until 1892, and as noted above, different millers are listed at 'Little London', 'Brunswick Mill' and 'Roman bank' in 1882. In 1892, the entry for Long Sutton records 'Sneath, John - miller and farmer, Little London' (White 1892). William Cunnington is also listed at Gowts, but as a baker, not a miller, which could indicate that it was at this time that the working of the mill was transferred.

In 1905, John Sneath is listed at 'Bank', while Samuel Harrison is listed at Roman Bank (Kelly 1905). In 1919, two millers are listed at 'Roman Bank'. John Sneath, miller (wind) is listed at Roman Bank, while Horace Harrison was in control of both Roman Bank and Brunswick Mill (Kelly 1919, 557).

3.4 DISUSE OF THE MILL

The mill was still working at the time of a survey in 1923 (Wills 1980, 1). A series of photographs dating to between 1932 and 1936 record the mill at this time (Plate 3).

After the damage caused to the mill by a storm in the 1930s (HER Record 22392), the cost of repairs was too great, and the mill was abandoned. In 1936, the miller was listed as 'John Sneath, Roman Bank, Long Sutton, retired miller', which presumably indicates that the mill had ceased to function at that time.



Plate 3 Photograph of the mill taken in June 1936 (NMR AA80/5372)

3.5 REPAIR AND CONSERVATION

In 1939, an attempt was made to secure the preservation of the mill. The Society for the Protection of Ancient Buildings had the opportunity to purchase the mill for £75 (detailed in Sass 1978, 65). Various factors, including lack of funds, and the onset of war, have been assigned to this not taking place; instead SPAB secured an option on the mill at £5 per annum. This was paid for three years, but in 1941, an inspection of the mill demonstrated that its condition had deteriorated

'Mr Wailes found that the tail and storm hatch shutters were missing, the boarding of the cap had been torn away on the left hand side of the next and centre beam, windows were missing from the dust bin and stone floors, and as a result the penetration of the weather was causing deterioration of the mill. It was suggested that the mill should be locked, the windows bricked up, and the tail and storm hatch shutters replaced, and the weatherboarding of the cap replaced.' (Sass 1978, 65).

SPAB informed the owner that no further payments would be made unless the mill was in a fit condition when finally purchased. Two years later, further damage had occurred; one sail had fallen off, and the top had been damaged by a gale. The owner then disposed of the mill for demolition.

By 1971, only one part of the sail remained, and the cap of the mill was missing (Dolman 1986, 21-2). Although deterioration occurred rapidly from this date, the temporary waterproof covering of the building will have prevented further deterioration.

In 1992, emergency repairs were made to the mill, to halt further decay; the site is currently on the Heritage at Risk Register (information from NMR).

4.0 DESCRIPTION OF THE MILL

The mill was subject to a survey by the Industrial Archaeology Sub-Committee of SPAB in 1975. These descriptions have been enhanced using map regression and a walkover survey undertaken on 11th February 2009. However, it should be noted that the interior of the mill tower is largely inaccessible due to its poor structural condition and observations can only be currently made from the main door opening. Further, much of the exterior of the mill tower is covered with a mat of dead ivy, which does obscure some features.

4.1 LAYOUT OF THE SITE

Sneath's Mill lies within a curvilinear plot of land which abuts a north-south drain and is connected to the nearby road by an east-west trackway. Evidence from the 1845 Tithe map, and respective Ordnance Survey editions, indicates that the general layout of the site has altered only slightly.

The earliest plan consulted (1845) shows the mill tower, with a roughly square structure situated in the northern part of the site. The 1888 map shows that this smaller building had been either replaced, or added to, to form a north-south aligned, rectangular building, slightly closer to the tower on the eastern side of the site (Plate 4). This plan persisted into the 20th century (OS 1938), until a large agricultural building was added to the southern part of the site in the 1940s or 1950s.

4.2 MILL TOWER

4.2.1 Exterior

Sneath's mill is considered to be the oldest complete tower mill in the county (HER records 22392). The mill is octagonal in plan, slightly asymmetrical and of four storeys. It measures approximately 8.0m in height with a gradual taper.

Externally, the fabric is largely of handmade brick, with timber employed to form lintels and includes the only stone carrying an inscription. The brickwork is largely in English bond, although the pattern is disrupted to accommodate openings and the corners of the structure. The wall-head corbels out, supported upon a dog-tooth course of bricks, to support the timber curb.

Of the eight facets, only the north, east, south and west have features, described below. The remaining northeast, northwest, southeast and southwest facets are largely devoid of features.

South Facet

The southern facet contains the main doorway at ground-floor level (Plate 5). The head of the door opening has been subject to some alteration being now formed by bricks laid as headers and a patch of replacement brick

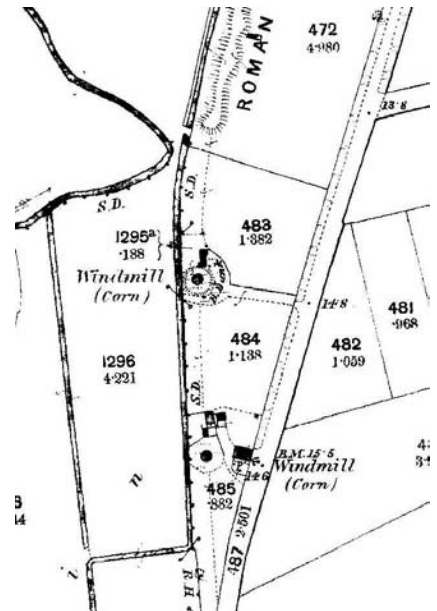


Plate 4 Extract from Ordnance Survey 1888 showing the mill

above. However, there are some traces for an angled springing either side of the doorway, suggesting either a more elegant brick arch or possibly a stone lintel was originally employed. Above the door opening is a square stone which has T. D. Ayliff 1779 inscribed upon it, the date numbers located towards the corners of the stone. Mid-20th-century photographs indicate that the stone was painted with the lettering picked out in a dark colour and a diamond design around the name. It has been suggested that the stone formed a sundial but this seems unlikely.

At first-floor level is a small square window opening that has suffered a partial collapse of its head. It is now devoid of any window frame or glazing, but appears to have originally been a two-over-two light horizontal sliding sash. A further window appears to have been provided at second-floor level, but the opening has been blocked in brick.

West Facet

The west facet has a series of square window openings lighting each of the four floors and diminishing in size towards the top of the building. The ground floor window has been blocked, while those on the upper floors have been boarded over. The blocking of the ground floor window has evidently taken place since the windmill went out of use. Photographs from the 1930s and 1940s show both ground- and first-floor windows containing four light timber windows.

North Facet

The northwest facet has no features of note, but the north facet contains a further door at ground-floor level (Plate 6). The opening has been blocked, a post-disuse addition, although the blocking is in the process of being pushed out by movement of the structure. The head of the doorway is also suffering a similar problem, with its timber lintel and the brickwork above deflected. Like the southern door opening, there is some evidence that the door head has been reformed. There are window openings at first- and second-floor level, currently hidden by a carpet of dead ivy. The window at second-floor level has been blocked; the brick blocking inserted before the 1930s. The first floor window was square and had a four light window in a timber frame; it is possible that this remains *in situ* under a board covering.

East facet

The east elevation is currently covered with dead ivy, but appears to repeat the fenestration of the west facet.



Plate 5 The south facet of the mill tower



Plate 6 The north facet of the mill tower

4.2.2 Interior

The interior of the tower is currently largely inaccessible and in an unsafe condition. It is a four storey structure with the ground floor originally accommodating the flour dresser machine, spouts from the floor above to direct the meal into bags and the miller's desk. Two door openings were provided into the ground floor for safe alternative access depending on the position of the sails. Tracing the access arrangement to the first floor is currently difficult, but was presumably by a timber stair/ladder. The first floor was the stone floor, the second floor the bin floor, while the third floor was the dust floor. Appropriate machinery was housed on each floor described below.

Although the floor structures remain they are in an advanced state of decay and it is currently unclear how much of the original access arrangements remain.

4.3 ANCILLARY BUILDINGS

4.3.1 South Building

To the north of the windmill tower is a single storey complex of buildings which has developed over time (Plate 7). The structure that is closest to the mill tower, a large shed, is timber-framed with some brick infilled panels and a mono-pitched roof of a mixture of materials including corrugated asbestos. The east elevation has been provided with a pair of timber doors mounted on strap hinges, while the some of the panels have been infilled with corrugated iron. Internally, there is further evidence for the development of the building, with all walls unplastered apart from that forming the party wall



Plate 7 The ancillary building to the south

with the structure to the north, which also has a door opening within it. This would suggest that originally the building was smaller, but was subsequently expanded to the west between 1888 and 1932.

The intended function of the structure, in its expanded form, appears to have been as a cart shed. The footprint of the original and smaller building can be further established from the 1888 Ordnance Survey map (see Plate 4). This must have constructed between 1845 and 1888 being absent from the earlier tithe map. The fact that the internal walls were originally plastered suggest that it had a slightly more domestic use than a cart shed in this period.

4.3.2 Centre Building

The centre building is of brick with a pantile roof and has undergone several phases of development. The east elevation has two doorways; that to the south retains a half-door, the other to the north has lost its frame but is of similar proportions (Plate 8). To the north of the latter doorway is a junction in the brickwork where the

building has been extended further to the north. Internally the building has been tiled, masking any junctions in the fabric. In the north wall are a pair of doorways providing access to the building to the north; both doors retain half doors. In the west wall are shuttered square openings, while additional roof lights have been provided in the ceiling.



Plate 8 East elevation of the centre building

Originally the building appears to have been nearly square in proportion and used as a small stable. It was in existence by the time of the 1845 tithe map, although, judging by the brickwork, was constructed later than the mill tower. It was subsequently extended to the north and re-roofed in the period 1845 to 1888 to form a larger building. Before 1888, the two door openings were inserted into the north gable wall to provide access to an additional building to the north, presumably used to hold stock or similar. The final phase of development and use must have been between 1888 and 1932 when the interior surfaces were tiled, presumably for use as a small dairy.

4.3.3 North Building

The northernmost building has suffered extensive disintegration, with the east wall largely gone, the remains of the north wall in the process of collapse and the west wall in poor condition (Plate 9). The roof has caved-in but appears to have followed the pitch and form of the centre building, covered with pan-tiles. The remains of divider on the south wall suggests that the building was internally divided into two stalls for keeping stock or horses.



Plate 9 North building

4.4 MILL MACHINERY

The mill machinery is currently housed in ancillary buildings and within the mill tower; the following description derives from a site visit and historic photographs. A Glossary detailing the terminology employed in these descriptions can be found as Appendix B.

4.4.1 Sails

The mill had a pair of hand cloth sails and a pair of spring sails which appear in various photographs from the 1930s onwards. However, the sails were the first elements of the mill machinery to suffer deterioration and now only some fragmentary elements of the sails remain on the site. The shutters of the sails consisted of cloth stitched onto a wire frame with a wire back.

4.4.2 Cap

The cap was boat-shaped and boarded with a weathercock mounted on the brake to inform the miller of the wind direction. Both cap and weathercock were in photographed in position in the 1930s and 1940s (Plate 10). The boat-shaped cap is a design that predated the more common ogee-shaped caps found on Lincolnshire mills. Elements of the cap frame have been returned to the site recently and are located within the shed to the north of the windmill. According to Sass there were two cap frame centring wheels beneath the main sheers at the front and rear (Sass 1977, 64), but these now appear to be absent. The weather beam carried a bearing for the windshaft, while the beam was carried upon a cast-iron chair which had a cast-iron roller between, mounted on the curb. From the ground, the wooden curb can be seen to be in place, but it is not clear whether the iron face plate, that was fixed on top of it, also remains.



Plate 10 Photograph of the mill taken in June 1935 (NMR AA80/5374)

4.4.3 Windshaft

The sail stocks were mounted on the windshaft *via* a cast-iron canister or poll end. Rex Wailes (1953) noted that the windshaft was the largest in a Lincolnshire windmill. Currently the oak wind shaft, complete with canister lies on the ground to the adjacent to the mill (Plate 11). The canister is fixed to the windshaft by a long iron tongue which has been bolted through and strapped with wrought iron. The canister has been finished with a ball finial in its centre. The brakewheel, which would have been mounted on the windshaft, is absent.



Plate 11 Windshaft and iron canister

4.4.4 Brakewheel and Wallower

The whereabouts and condition of brakewheel is unknown, although it may be still within the mill building. It was photographed *in situ* in 1975. It was apparently fabricated from elm and was of clasp arm construction. It is recorded that it had fifty-two coarse wooden teeth of 5-inch pitch mortised through the rim and pegged at the back (Sass 1977, 64-5). The brake was of iron.

What is assumed to be the wallower, originally driven by the brakewheel, has recently been returned to the site and is currently stored in the shed to the north of the windmill. The gear wheel has wooden pegs for teeth and

is of clasp arm construction. It is recorded that there was a wooden ring eight inches wide by two inches deep on the underside of the wallower mounted on four inch distance pieces (*ibid.*). The friction driven sack hoist drove off this ring.

4.4.5 Upright Shaft

The timber upright shaft remains in position within the mill and is *c.*0.3m square (Plate 12). The shaft passes down through the dust and bin floors and is supported on the stone floor (first floor). According to Sass it is jointed to its lower half by a 'cross gudgeon of iron' at bin floor level (Sass 1977, 64-5); it is currently not possible to inspect this joint. Sass states that the shaft was renewed after the first world war, but if it is jointed it is possible that replacement was only partial; either the upper or lower half. The bottom of the shaft is located in a bearing in an adjustable sprattle beam.



Plate 12 Upright shaft and great spur wheel

4.4.6 Great Spur Wheel

The great spur wheel remains *in situ* in the building, although supported by props, and is visible from the ground floor (see Plate 12). As with the other gear wheels it is of timber clasp arm construction and *c.*2.3m in diameter. The pitch was established by Sass as being 3 3/4in and consisting of seventy-eight teeth; it is thought to be largest great spur wheel in Lincolnshire (Sass 1977, 65). The survey of the site in 1978 provided colour transparencies of the great spur wheel and upright shaft, now part of the Muggeridge Collection (Mugg 1 and 2).

4.4.7 Millstones

There are two stones lying on the ground floor of the mill, detached and presumably lying where they fell from the floor above (Plate 13). Sass (1977, 65) records two pairs of overdriven stones and identified those on the east side as a pair of 4'6" French stones - quartz stones used for mill wheat - with the maker's name plate on the runner, inscribed 'George Marris 1847' and those on the west side as a pair of Peak stones - millstone grit from Derbyshire used for grinding animal feeds. The stones remaining in the building are probably the French stones, since the Peak stones were removed to Penny Hill Mill in Holbeach when the mill fell into disuse.



Plate 13 French mill stones remaining the mill tower

Originally spouts would have been located beneath the stones to direct the meal into bags, but these features are now absent. According to Sass there were also a pair of early type lag governors on the spindles of each pair of stones (Sass 1977, 65).

4.4.8 Flour Dresser

Much of the flour dresser drive mechanism remains *in situ*, although displaced by the failure of the supporting structure. The actual flour dressing machine, used to separate the flour from the rest of the meal, was missing by the time of the 1975 survey; it was originally fixed to the ceiling of the ground floor. The drive mechanism consists of an iron nut with wooden teeth (1ft 4in in diameter according to Sass), which is mounted on a timber octagonal spindle six inches in diameter. It would have been driven from the northern side of the great spur wheel at stone-floor (first floor) level, but has fallen out of mesh. The spindle passes down to the ground floor where it would have turned a wooden cogged iron bevel gear (2ft 3in in diameter), which remains. The Muggeridge Collection contains a colour plate of the drive to the flour dresser (Plate 14).

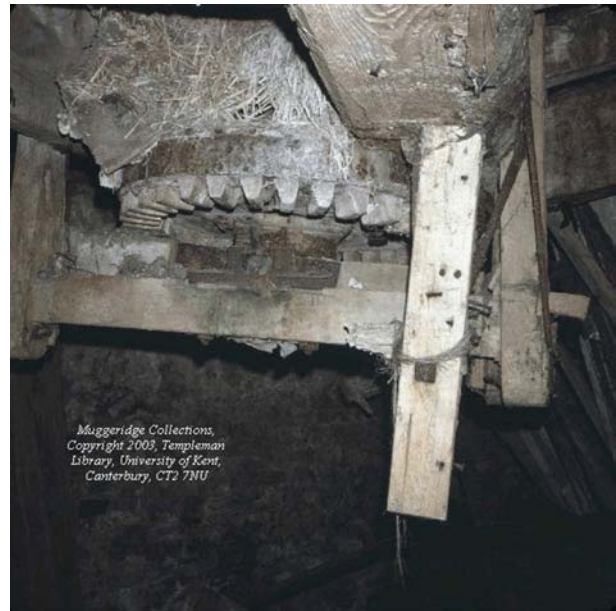


Plate 14 Iron and wooden nut used to drive the flour dresser (Mugg 1978/3)

4.4.9 Winding mechanism

Rather than being automatically controlled by a fan tail, the cap and sails were originally directed by means of a wooden tail pole with a winch and chain mounted on the lower end; the chain being run out to a series of wooden stumps around the mill mound. When not in use, the tailpole was supported and locked by two wooden legs resting diagonally on the ground. The tail pole is recorded in photographs from the 1930s to the 1950s (see Plate 10). There appear to be no elements left attached to the building and it is not clear whether any components are among the detached parts stored around the site.

5.0 ASSESSMENT

5.1 STRUCTURAL REMAINS

In 1978, Sass lamented the possible loss of this mill as;

‘a most interesting example of an early tower mill, the only example left in the county with a poll end sail mounting and trundle gear and, if restored, the only tower mill in the county with an early type boat-shaped cap and tailpole winding mechanism and cloth sails. In conjunction with the well preserved tower mills at Sibsey, Heckington, Alford and Burgh-le-Marsh it would provide a complete record of the

development of tower mills in this county' (Sass 1978, 66)

Since that publication, the buildings and the machinery have deteriorated further. As the earliest and relatively complete surviving example of a mill tower with its machinery in the county of Lincolnshire it is of exceptional significance.

5.2 MACHINERY

5.2.1 Machinery Elements

The majority of the mill's machinery remains on site, although the condition of many of the components is quite poor. The readily identifiable machinery components include the upright shaft, two of the four stones, the great spur wheel, the wallower and wind shaft.

Of the other machinery elements a more systematic search across the site might reveal their presence or absence, including parts of the sails and the winding mechanism. Several mill stones are extant at Penny Hill Mill and the Sneath Peak stones might be preserved among them.

The flour dresser has completely disappeared, but there is a chance that the machine was removed as an entity and might survive in store or in a private collection. Advertising for the return of the machine might yield some results.

5.2.2 Condition

Many of the components, such as the wallower, are in poor condition and it would not be possible to reinstall them in their correct position within the mill tower without considerable restoration. If it was intended to get the mill's machinery into working condition then many of the components would not be suitable for restoration and reuse and would have to be replaced entirely, or where elements are missing altogether, appropriate replica replacements would have to be considered.

If it were desired to reinstate the machinery in working order, a reasonable compromise might be to utilise the main surviving elements which appear to be in good, repairable condition. These elements might include the upright shaft and great spur wheel, while re-manufacturing those elements which are absent or would require extensive repair. Elements not used in the reconstruction could be housed on the site as part of an interpretation scheme.

6.0 RECOMMENDATIONS

6.1 RESEARCH AND RECORDING

6.1.1 Documentary Research

The assessment has included an overview of Trade Directories and cartographic sources held in the Lincolnshire Archive Office. Further research of these sources in Lincoln, in local libraries, and following up local sources, may yield more detailed information relating to the site, and in particular provide a more certain and comprehensive list of millers which would provide avenues for further archival research. In addition to the photographs consulted in the NMR, a further series of seven prints are held in the Donald W Muggeridge collection at the Templeman Library of the University of Kent at Canterbury, dating from 1932 to 1950 (Accession Nos 538800 to 538808).

Further research into Sneath's Mill and its local and regional context could also be considered. Such research would incorporate the construction, use and disuse of nearby mills which would place Sneath's Mill in its historical and technological context. Such research would also inform potential schemes of interpretation at the site.

6.1.2 Investigation and recording

A systematic investigation should be conducted across the site and within the buildings to identify with greater certainty the location of the various parts of the machinery. A full drawn record of the extant machinery should be made to more fully identify what is absent and the form and condition of what remains.

A measured survey and analysis of the historic buildings at the site should be undertaken. The development, function through time and origin of the ancillary buildings to the north remains uncertain, although they appear to post-date the construction of the mill tower by at least 50 years. It is possible that there are archaeological remains of other structures below-ground on the site which are contemporary with the construction of the mill tower.

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APPENDIX A LISTED BUILDING DESCRIPTION

IoE Number: 197918

Location: SNEATHS MILL, LUTTON GOWTS (west side)

LUTTON, SOUTH HOLLAND, LINCOLNSHIRE

Date listed: 05 October 1976

Date of last amendment: 05 October 1976

Grade I

LUTTONLUTTON GOWTSTF 42 SW (west side)4/72Sneath's Mill5/10/76

LUTTON LUTTON GOWTS TF 42 SW (west side) 4/72 Sneath's Mill 5/10/76 I Tower windmill. 1779. Red brick. Dogtooth eaves. Octagonal, 4 storeys. The south side with doorway with ashlar plaque over inscribed 'T.D.Ayliff 1779', on the first floor is a single window opening. The east and west sides with first, second and third floor window openings and the north side with blocked doorways to the ground and first floors and single blocked window opening above. Interior contains oak wind shaft with iron poll end and clasp arm brake wheel. Clasp arm wallower, crudely cogged, being a trundle or face gear-wheel. Wooden upright shaft with a clasp arm great spur wheel. Drive to flour dresser largely intact and mostly of wood driven by a pinion from the great spur wheel. The datestone may refer to the casing in brick in that year of a wooden smock mill moved to this site. Unique to Lincolnshire is the plan of the mill and the poll end and trundle gears are the last surviving examples in Lincolnshire.

Source: P. Dolman. Lincolnshire windmills - a Contemporary Survey.

APPENDIX B GLOSSARY

<i>Brake Wheel</i>	the main driving wheel in a tower mill carried on the <i>windshaft</i> and drives the <i>wallower</i> on the <i>upright shaft</i>
<i>Great Spur Wheel</i>	carried on the <i>upright shaft</i> , drives the <i>stone nuts</i>
<i>Stone Nut</i>	a small gear driven by the <i>great spur wheel</i> which drives the <i>stones</i>
<i>Upright Shaft</i>	the main vertical shaft in a tower mill, carries the <i>wallower</i> at its top end, and a great spur wheel at the bottom end
<i>Wallower</i>	a driven gear at the top of the <i>upright shaft</i> in a tower mill which is driven by the <i>brake wheel</i>
<i>Windshaft</i>	carries the sails and the <i>brake wheel</i>



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