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THE UNIVERSITY
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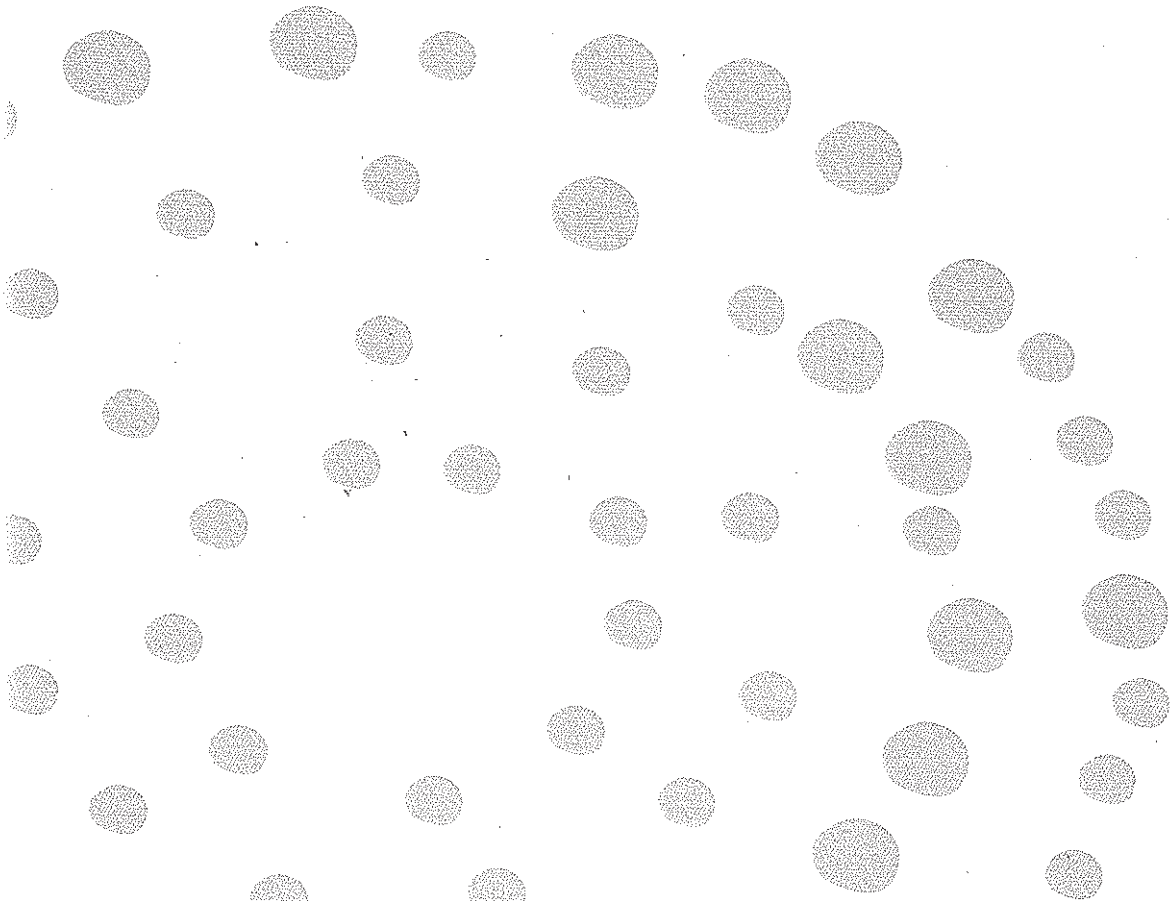
Splashy Mill
Lower Moddershall
Staffordshire

2004



Project No. 1155

Splashy Mill, Lower Moddershall, Staffordshire

An Historic Building Assessment, 2004

For further information please contact:
Alex Jones (Director)
Birmingham Archaeology
The University of Birmingham
Edgbaston
Birmingham B15 2TT
Tel: 0121 414 5513
Fax: 0121 414 5516
E-Mail: bham-arch@bham.ac.uk
Web Address: http://www barch.bham.ac.uk/bufau

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An Historic Building Assessment

Summary

In February 2004 Birmingham Archaeology carried out an historic building assessment at Splashy Mill, Lower Moddershall, Staffordshire (NGR SJ39193366), for Miss L. Benning. The building is a Grade II listed flint grinding mill dating from the late 18th/early 19th century, and the work was carried out in advance of a possible application to convert it to residential use. Most of the original building survived, including the roof, but there was evidence for a major internal refurbishment during the early 20th century. The machinery and equipment, which survives largely intact, probably dates from this period. Splashy Mill was one of a group of ten flint grinding mills to be found within a three mile stretch of the Moddershall Valley in the 19th century, of which six survive in various states of completion.

1.0 Introduction

In February 2004 Birmingham Archaeology carried out an historic building assessment at Splashy Mill, Lower Moddershall, Staffordshire. The work was commissioned by the owner Miss L. Benning and was occasioned by proposals to convert the Mill into residential accommodation. Timber-framing terminology conforms with that proposed by the Council for British Archaeology (Alcock *et al* 1996).

2.0 Site Location (Fig. 1)

Splashy Mill is situated on Mill Lane, Lower Moddershall, Staffordshire, approximately 2 miles northeast of Stone at NGR SJ39193366.

3.0 Objective

To provide an analysis of the historic development of the property and a statement of significance.

4.0 Methods

A rapid record was made of the building, comprising written notes and structural analysis, in order to assess its historical development and the significance of its fittings. These notes were supplemented by colour photography. Historical research was undertaken at Staffordshire Record Office and in the library of the University of Birmingham.

5.0 Descriptive Notes

The building (Plate 1) dates from the late 18th/early 19th century with some later

alterations. It is constructed in 2½-2¾ inch thick red bricks[1] and has a plain tile roof. The mill is aligned east -west with a smaller annexe attached to the west side (Fig.2). The north side is built against a bank, allowing ground-level access to both upper and lower storeys. Access at ground level is via a segmental-arched doorway in the west wall (Fig. 3). Upper level access is from the north, and the original entrance to the annexe, which is at mezzanine level, is from the east via a flight of steps against the north wall of the main building (Fig. 4). The north wall of the annexe had been rebuilt in the later 20th century, to incorporate a new entrance.

On the south side of the main building is a 16ft (4.87m) diameter cast iron overshot wheel with wooden bucket boards (Plate 2), fed by a wooden launder from the millstream to the east (Plate 3). Immediately to the east of the main building are the remains of two kilns. They are currently in a ruinous condition and overgrown though part of the dome of the more northerly one survives.

Interior

The *Gear Room*, at ground level, contains an 11ft (3.35m) diameter iron pit wheel (Plate 4) that turned an 11ft diameter wallower on an 8" (0.20m) square sectioned iron main shaft (Plate 5). The west wall and the curved section of the north wall are constructed of 2½-2¾" like the exterior, and must be original. The rest of the interior walling, however, has been rebuilt or refaced with 3" red brick, probably in the early 20th century. There are clear vertical joints between the two phases. The upper floor is carried on a network of steel I-beams and joists and concrete panels containing large amounts of aggregate, including fragments of white ceramic.

The *grinding room* on the upper floor contains a grinding pan (Plate 6) with iron sweep arms attached to the vertical shaft, one of which is embossed 'Edwards Jones Longton', a company of millwrights and general engineers founded in 1880 (http://www.edwardsandjones.com/history). The sweep arms have vertical timbers bolted to them. The main shaft is held by a pair of longitudinal steel I-beams sited immediately below the tie beams.

Most of the brickwork at this level is contemporary with the exterior, though a doorway has been inserted in the east wall and the concrete lintel bears the inscription '7/11/55'. The king strut roof is 18th/early 19th century in date and part of the original construction. It is jointed and pegged, suggesting a date of before *c.*1830 (Peters 1988) but has some later iron strapping and bolting. The rafters are tenoned and pegged together at the apex.

In the east wall of the *settling room* within the annexe the chute from the grinding room is visible. The ground mixture contains a 6ft 10" (2.08m) diameter iron settlement pan (Plate 7).

[1] The size of the bricks is not particularly diagnostic in respect of date, being compatible with either the late 18th or early 19th century. Similar sized bricks were used in the construction of two covered wharfs of the early 1830s in Wolverhampton (Hislop and Cherrington 2003).

6.0 Historical Notes

The process of wet grinding was developed by Thomas Benson of Newcastle-under-Lyme who took out patents in 1726 and 1732. The crushed flint was ground in a circular pan with a pavement of Flintshire chert. Blocks of Derbyshire chert known as 'runners' were driven round the pan by a number of sweep arms attached to the main vertical shaft. Once the flint and water mixture had reached a creamy consistency it was run off into a settling tank and thence pumped to the kiln for drying (Sherlock 1976, 41-2).

The Moddershall Valley contains one of the three main concentrations of grinding mills in Staffordshire, Splashy Mill being one of ten flint grinding mills to be situated there within a 3 mile length. Not only did the valley provide a source of power, but as the main Stone to Longton Road ran through it, communications were good (Sherlock 1976, 42-3). This combination of favourable circumstances explains the concentrated exploitation of the area by this industry.

A corn mill is said to have been built on the site *c.*1752 (Job, 33), and there is a tradition that James Brindley (1716-72) (Allbutt 1973, 26; Job, 57-8), best known as a pioneering canal engineer, may have been involved in its construction. Brindley completed his apprenticeship as a millwright in 1740 and set up in business on his own account in Leek in 1742. In 1750 he opened a workshop at Burslem. Entries in his diary refer to work on 'Mr John Baddeley's flint mill' at Moddershall. This has been taken as referring to the conversion of another Moddershall Valley mill, Mostylee Mill, from fulling to flint grinding (Allbutt 1973, 25), but the evidence is far from clear and it is not impossible that he worked instead at Splashy Mill (Job, 57-8).

Although in 1834, the owner of Splashy Mill, Adam Malkin, was described as a corn miller (Job, 29-30), by 1841, the then occupant of Splashy Mill, James Bladon, was described as a flint grinder. The mill is depicted on the Moddershall parish tithe map of 1851 (not illustrated), by which time it was one of a pair of mills. In 1854 the premises tenanted by 'Mr John Bladon and others' were described as 'water corn mills' and 'a flint mill'. In 1867 an auction notice recorded 'a flint mill called Moddershall Mill.....with two water wheels of 18ft diameter' (Job, 58), but there is no mention of a corn mill.

The mills appear in much greater detail on the Ordnance Survey 1:2500 map of 1879, being situated at the west end of a mill pool (Fig. 5). The mills are described as 'Lower Moddershall Mills (Flint)', and the existing building is to be identified with the northernmost mill. The southern mill was a larger building whose southern end extended to the road frontage, and possibly incorporated warehousing. There was a third, smaller, mill at the east end of the mill pool, though this had disappeared by 1901. The southern waterwheel was removed *c.*1915 (Sherlock 1976, 195). Splashy Mill closed in 1958 (Allbut 1973, 26) and the main buildings survived until 1973 when the southern mill was demolished (*ibid.*).

7.0 Statement of significance

Regarding the building itself, the late 18th/ early 19th-century structure is to a great extent unchanged externally, a circumstance that might in itself merit its Grade II listing. An additional factor, however, is that it retains its waterwheel and internal workings, which remained in use until the 1950s. This is important, because many mills have lost their machinery and are now mere shells, and indeed it is the function of the building rather than any architectural merit it may have that is the significant element of a watermill, and which undoubtedly influenced the decision to list.

In counterpoise to the positive aspects, however, is the fact that the existing mill is only part of a once larger complex, that the machinery is much more recent than the building, and that its insertion has involved large scale alterations to the interior. In assessing the significance of the building, then, one must consider it in terms of both its 18th/19th century and early 20th-century manifestations. Mill buildings of this date are not particularly rare, and although many redundant mills are now devoid of machinery, numerous examples survive intact, though, like Splashy Mill, few retain their original machinery.

There is also more than one facet to the contextual significance of Splashy Mill. The north Staffordshire district, in which it is situated, was home to numerous flint grinding mills that supplied the pottery industry (Watts 2000, 97). The three main concentrations were, firstly, on the River Churnet, secondly, on the River Trent, and thirdly, in the Moddershall Valley. Splashy Mill, therefore, is important to the industrial archaeology of the Midlands in representing an activity that was characteristic both of the immediate locality of the Moddershall Valley and of the wider region whose industry was dominated by the Potteries.

Regarding the survival rate of the Moddershall Valley mills, a survey carried out by Dr Barry Job in 1994 showed that of the nine flint grinding mills known to have existed in the Moddershall Valley, three (Boar, Lower Moddershall, and Ochre mills) had been demolished, and another (Hayes) had been converted for residential use and the internal machinery removed. However, Mosty Lee Mill had been restored and was in working order, Coppice Mill was in the process of being restored, Wetmore Mill had been converted to other uses though the waterwheel had been restored and was in use, whereas Ivy Mill was largely intact though unrestored.

In the context of the Moddershall Valley, then, Splashy Mill ranks amongst the top five best surviving sites. Furthermore, Sherlock believed that of the Moddershall Valley group Splashy Mill was 'perhaps the best place to study flint grinding' (Sherlock 1976, 196). In a wider context, that of the north Staffordshire flint grinding industry in general, it is perhaps, not quite so significant. Here, pride of place must go to Cheddleton Mill, which survives in full working order as a museum, and whose importance is recognised by it Grade II* listing status.

8.0 Acknowledgements

This project was completed by Dr Malcolm Hislop and edited by Steve Litherland. Thanks are due to Lucy Benning, Dr Barry Job and the staff of Staffordshire Record Office for their assistance. The plans were reproduced from those drawn up by Phoenix Beard Property Consultants. The illustrations for this report were prepared by Nigel Dodds.

9.0 Sources

9.1 Textual Sources

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Job, B. n.d. *c.*1995. *Watermills of the Moddershall Valley.*

Peters, J.E.C. 1988, 'Post-Medieval Roof Trusses in some Staffordshire Farm Buildings', *Vernacular Architecture* 19, 24-31.

Sherlock, R. 1976, *The Industrial Archaeology of Staffordshire.*

Watts, M. 2000, *Water and Wind Power.*

9.2 Cartographic Sources

1851 Revised edition of Tithe Map by Samuel Bate (*Staffordshire Record Office* D4605/7/12)

1879 Ordnance Survey 1: 2500 Sheet XXIV.II

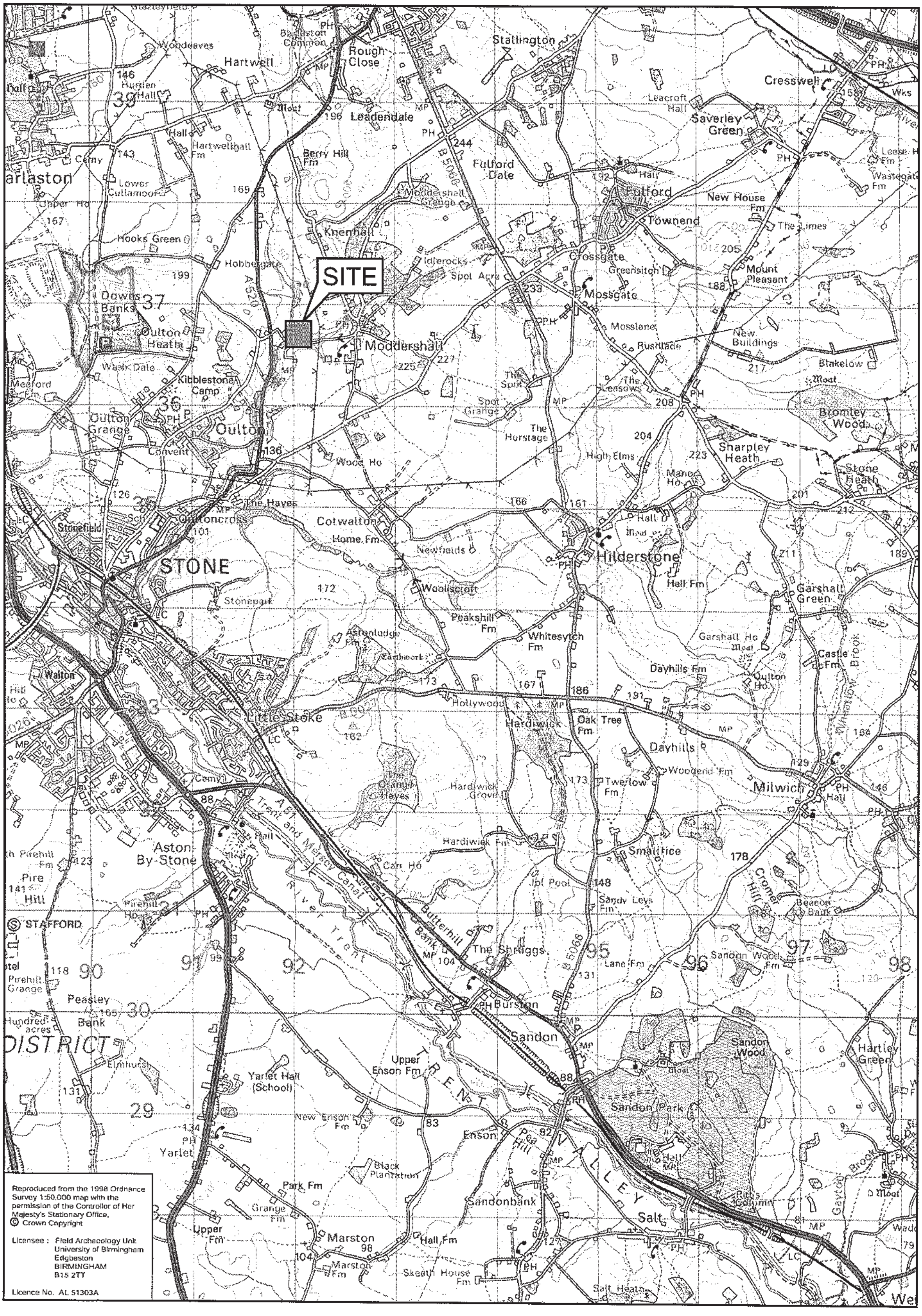
1880 Ordnance Survey 1:10000 Sheet XXIV NE

1901 Ordnance Survey 1:2500 Sheet XXIV.II

1924 Ordnance Survey 1:2500 Sheet XXIV.II

9.3 Internet Sources

http://www.edwardsandjones.com/history


SITE
Hartwell
Rough Close
Stallington
Cresswell
Leadendale
Saverley Green
Fulford Dale
Fulford
Townend
New House Fm
Berry Hill Fm
Moddershall Grange
Knenhall
Idlerocks
Spot Acre
Crossgate
Mossgate
Mount Pleasant
Hobbergate
Hooks Green
Downs Banks
Oulton Heath
Moddershall
Mosslane
New Buildings
Blakelow
Kibblestone Camp
Oulton Grange
Oulton
Convent
The Spot
Spot Grange
The Hurstage
Bromley Wood
Sharpley Heath
High Elms
Stone Heath
The Hayes
Cotwalton
Home Fm
Newfields
Hilderstone
Hall Fm
STONE
Stonefield
Stonepark
Woollscroft
Peakshill Fm
Whitesytch Fm
Garshall Green
Garshall Ho
Dayhills Fm
Castle Fm
Walton
Astonlodge Fm
Earthwork
Hollywood
Hardiwick
Oak Tree Fm
Dayhills
Woodend Fm
Little Stoke
Milwich
Orange Hayes
Hardiwick Grove
Twerlow Fm
Aston By-Stone
Trent and Mersey Canal
Hardiwick Fm
Smallrice
Pirehill
Carr Ho
Jol Pool
Sandy Leys Fm
Cromer Hill
Beacon Bank
STAFFORD
Butterhill Bank
The Shruggs
Lane Fm
Sandon Wood Fm
Pirehill Grange
Peasley Bank
Burston
Sandon
Hartley Green
Hundred-acres
DISTRICT
Elmhurst
Upper Enson Fm
Sandon Wood
Yarlet Hall (School)
Sandon Park
New Enson Fm
Enson
TRENT VALLEY
Yarlet
Black Plantation
Park Fm
Sandonbank
Grange Fm
Salt
Upper Fm
Marston
Hall Fm
Marston Fm
Skeath House Fm
Salt Heath
Reproduced from the 1998 Ordnance Survey 1:50,000 map with the permission of the Controller of Her Majesty's Stationary Office, © Crown Copyright
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Licence No. AL 51303A

Fig.1

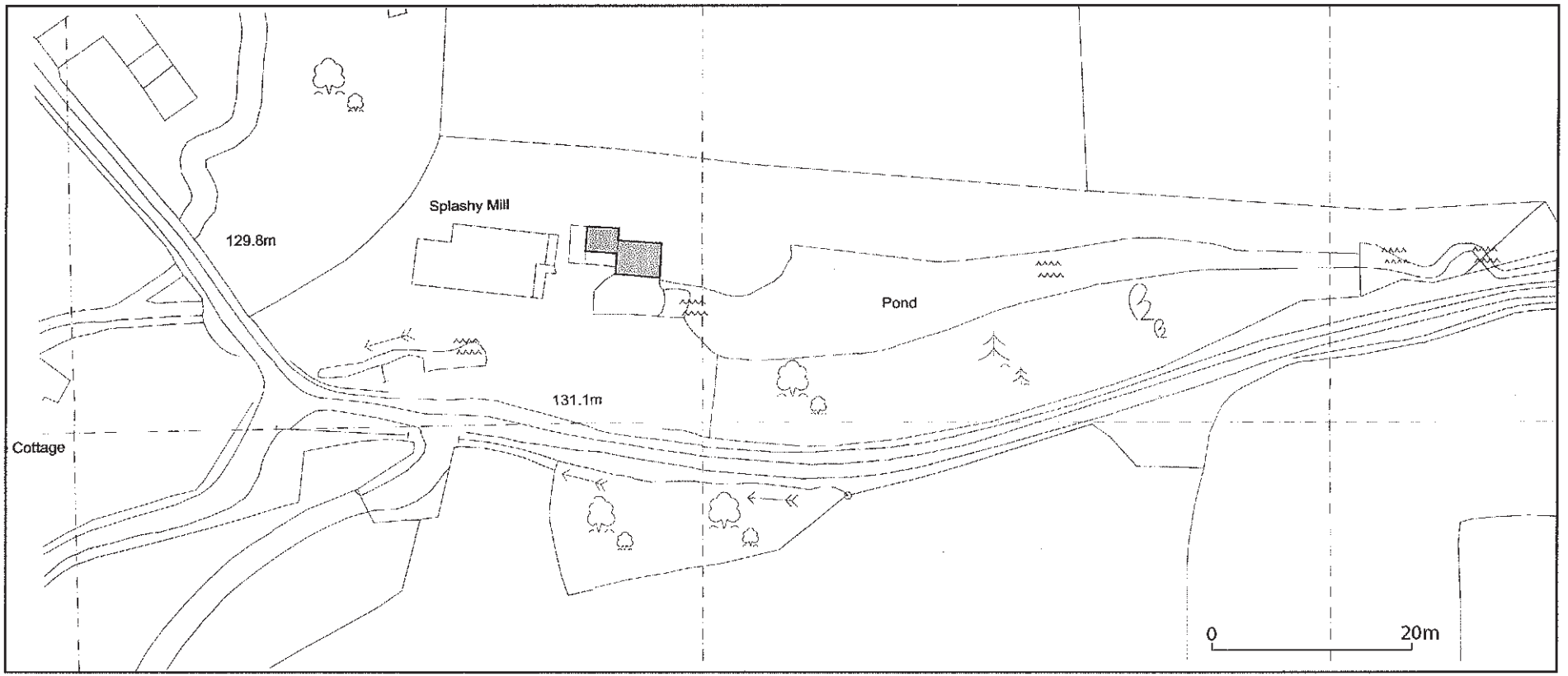


Fig.2

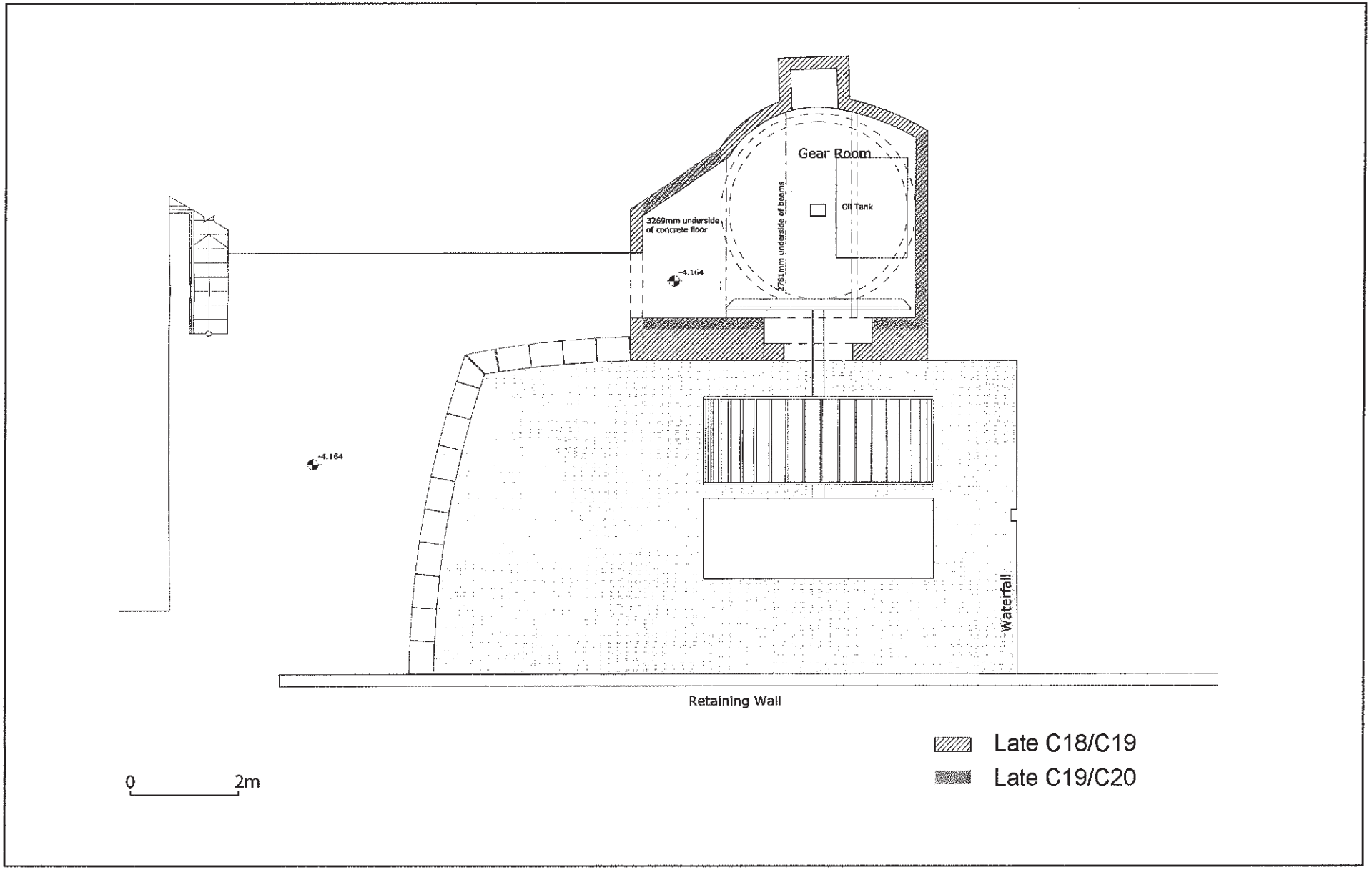

Gear Room
Oil Tank
3269mm underside of concrete floor
2781mm underside of beams
4.164
4.164
Waterfall
Retaining Wall
Late C18/C19
Late C19/C20
0
2m

Fig.3

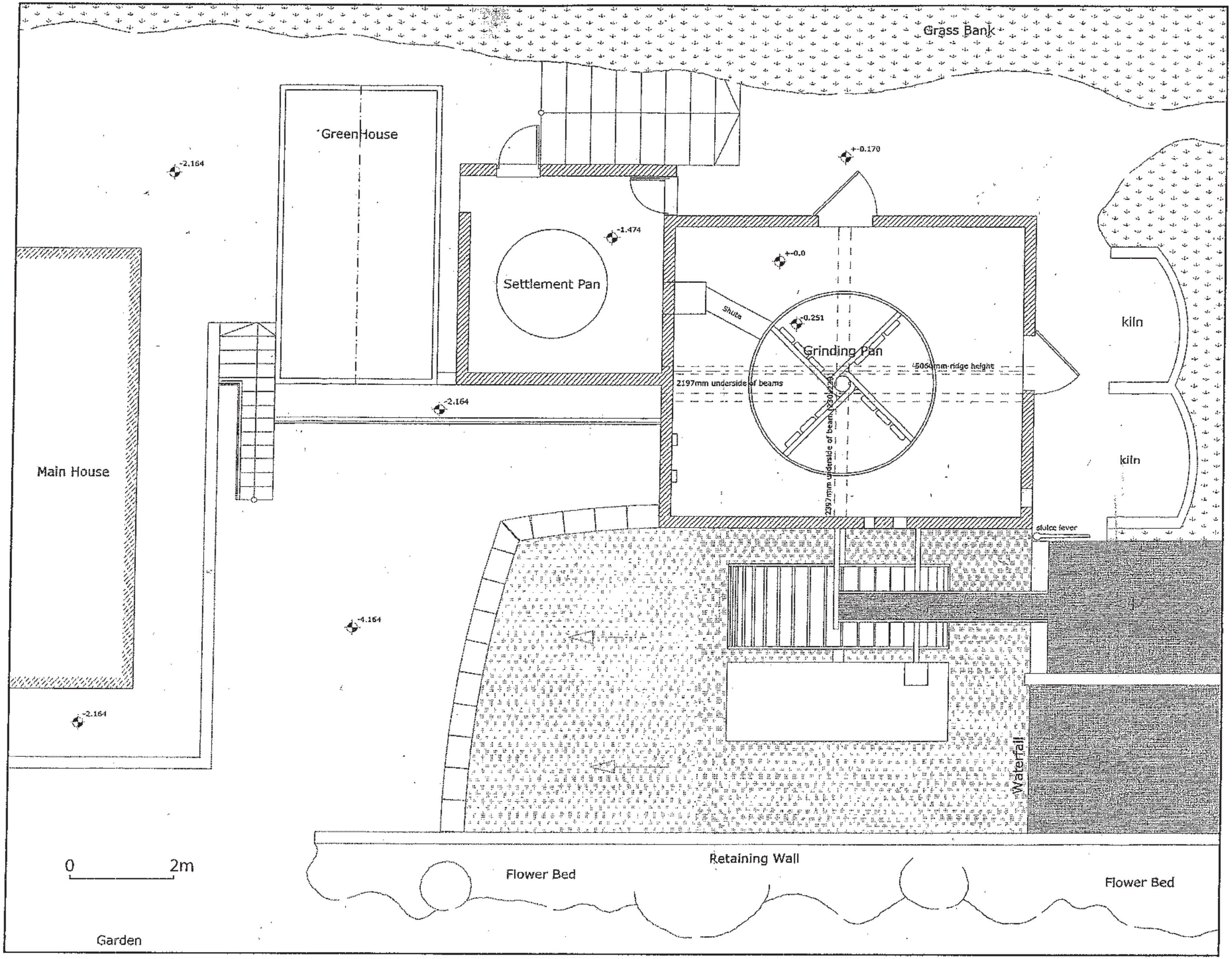

Grass Bank
GreenHouse
Settlement Pan
Grinding Pan
Shute
kiln
kiln
Main House
sluice lever
Waterfall
Retaining Wall
Flower Bed
Flower Bed
Garden
0
2m
-2.164
-1.474
+-0.0
-0.251
+-0.170
-2.164
-4.164
-2.164
2197mm underside of beams

Fig.4

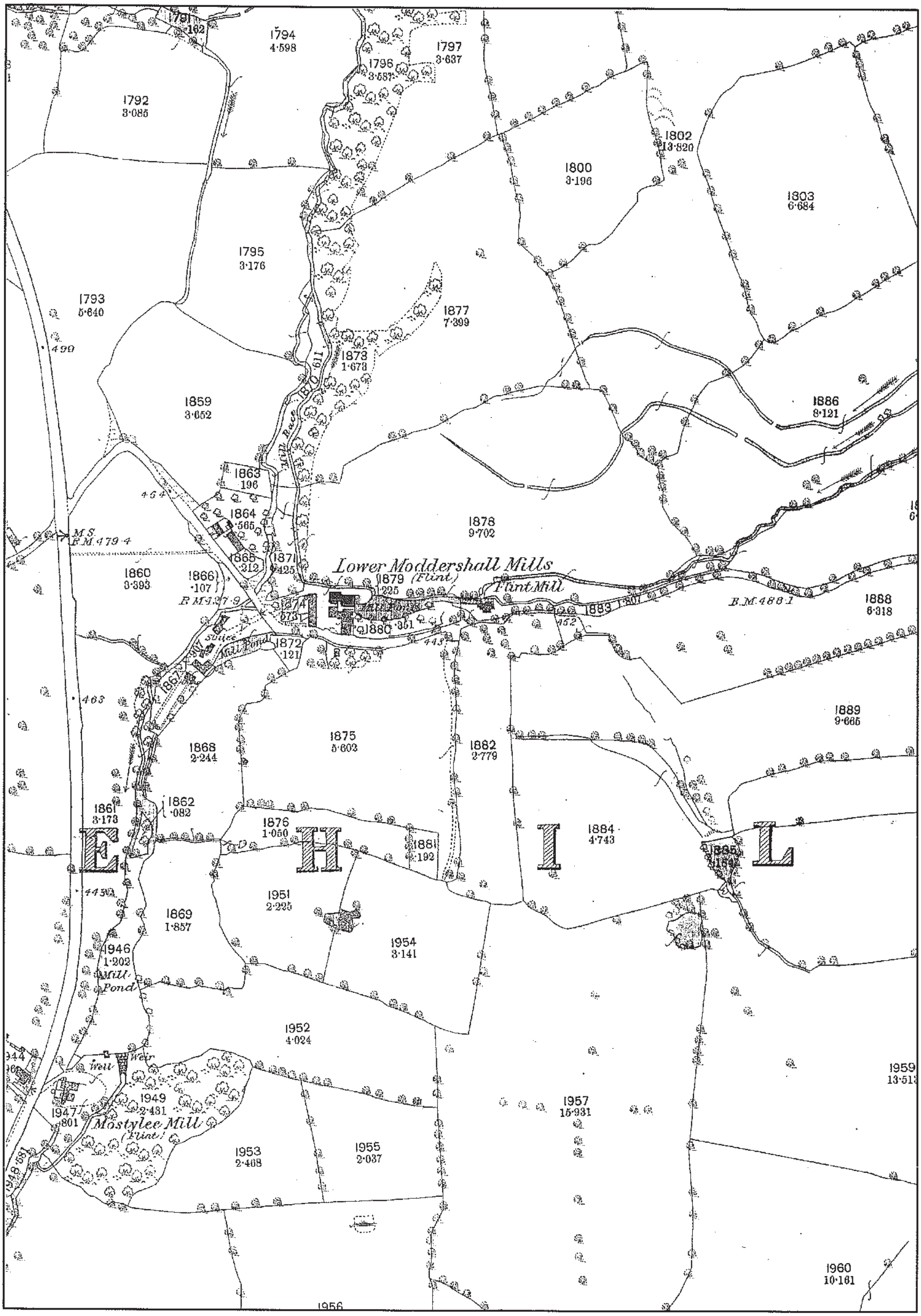

Lower Moddershall Mills
Flint Mill
(Flint)
Mill Race
Mill Pond
Sluice
Mostylee Mill
(Flint)
Mill Pond
Well
Weir
M.S.
B.M. 479·4
B.M. 488·1
B.M. 437·9
E
H
I
L
1792
3·085
1793
5·640
1794
4·598
1795
3·176
1796
3·587
1797
3·637
1800
3·196
1802
13·820
1803
6·684
1859
3·652
1860
3·393
1861
3·173
1862
·082
1863
·196
1864
·565
1865
·312
1866
·107
1868
2·244
1869
1·857
1871
·425
1872
·121
1873
1·678
1875
5·603
1876
1·050
1877
7·399
1878
9·702
1879
·225
1880
·351
1881
·192
1882
2·779
1883
1·307
1884
4·743
1886
8·121
1888
6·318
1889
9·665
1946
1·202
1947
·801
1949
2·431
1951
2·225
1952
4·024
1953
2·468
1954
3·141
1955
2·037
1957
15·931
1959
1960
10·161

Fig.5 (1879)

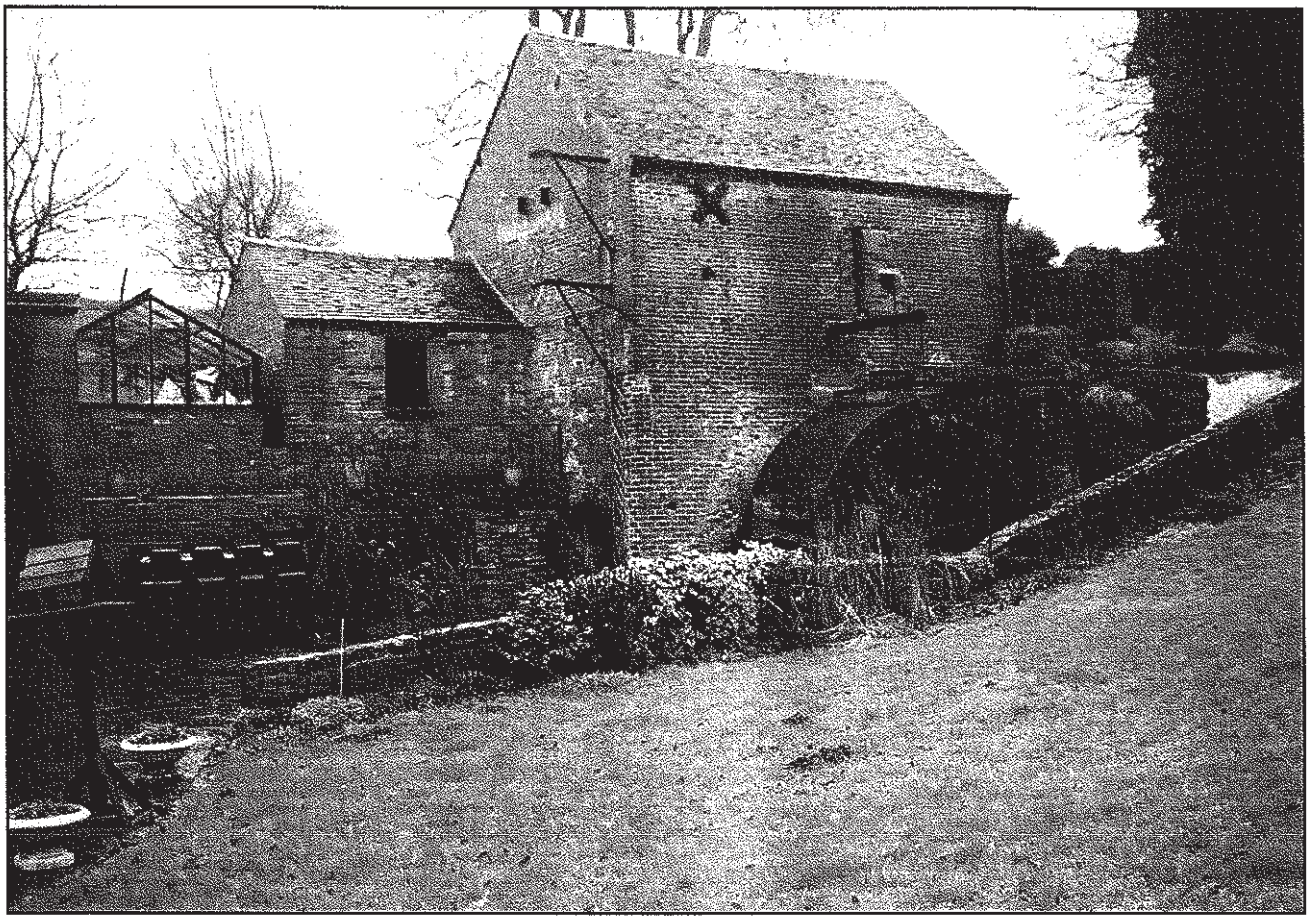


Plate 1

Plate 2

Plate 3

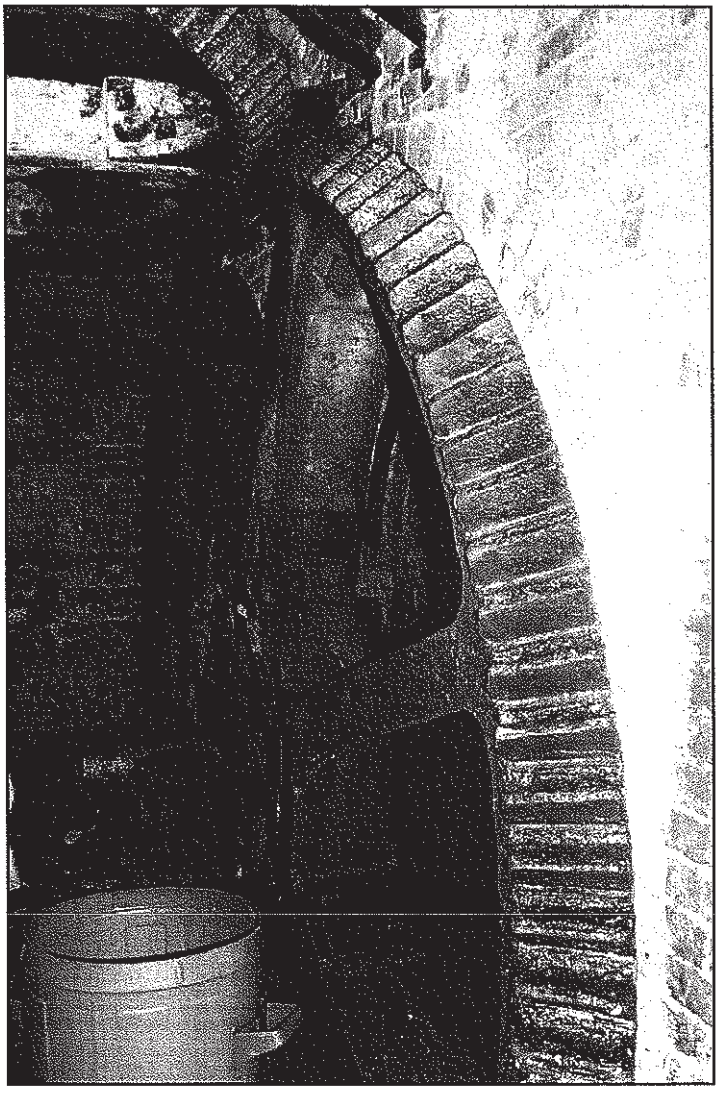
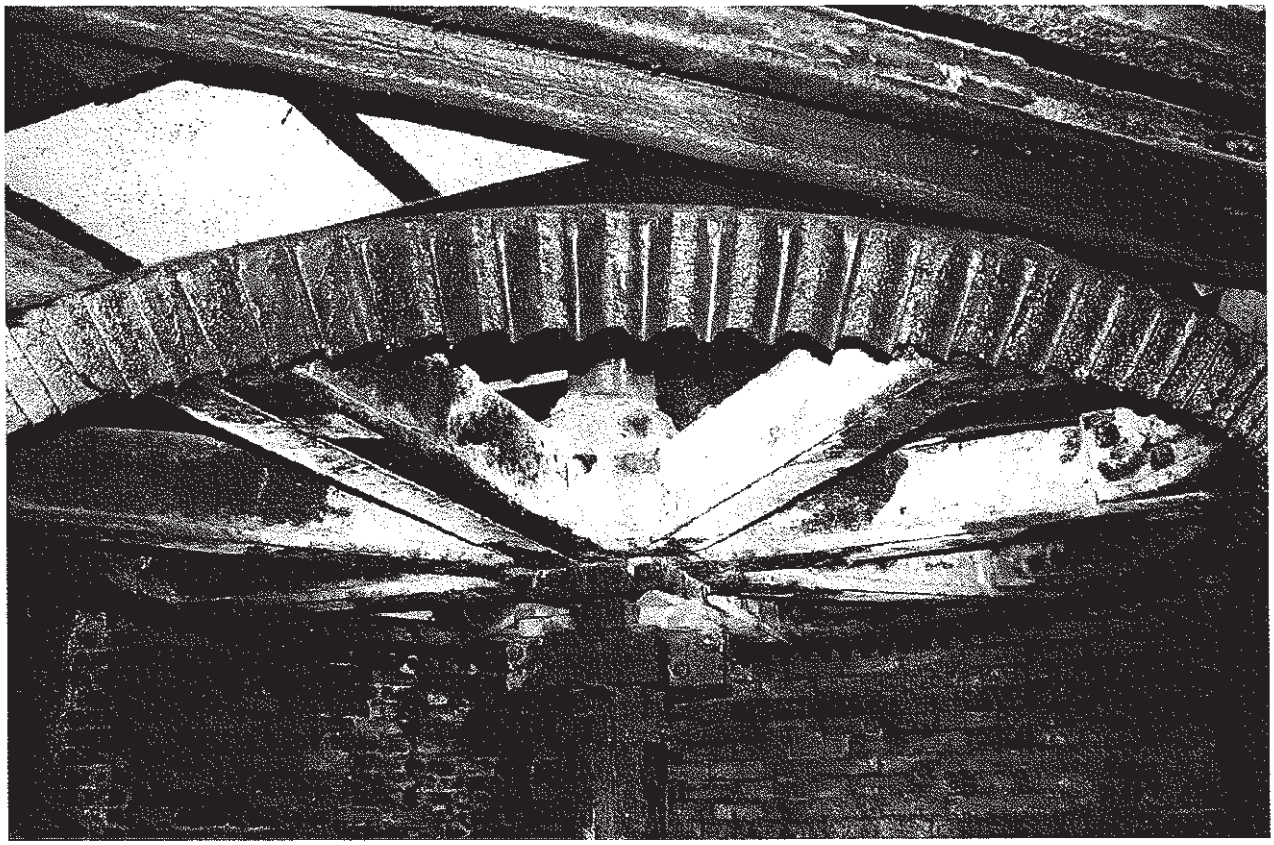


Plate 4



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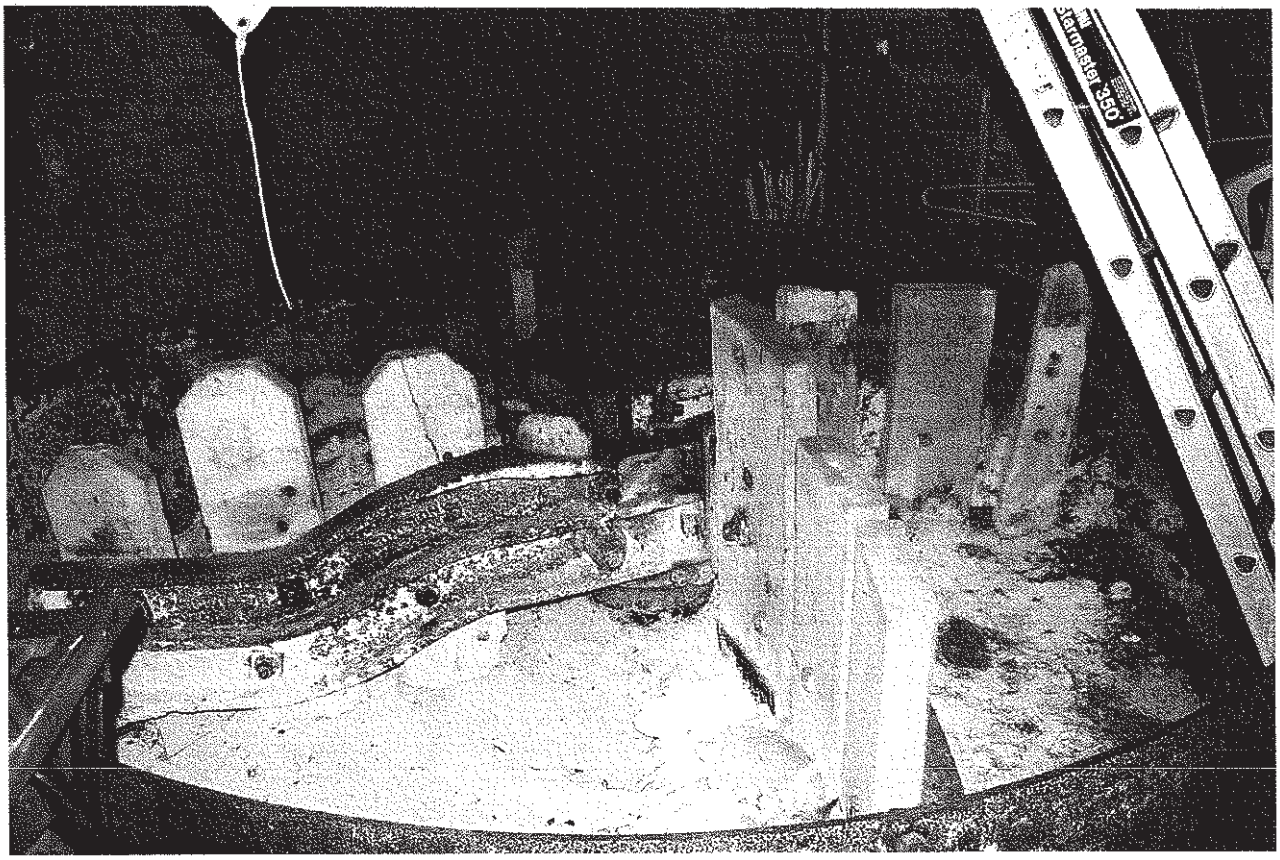

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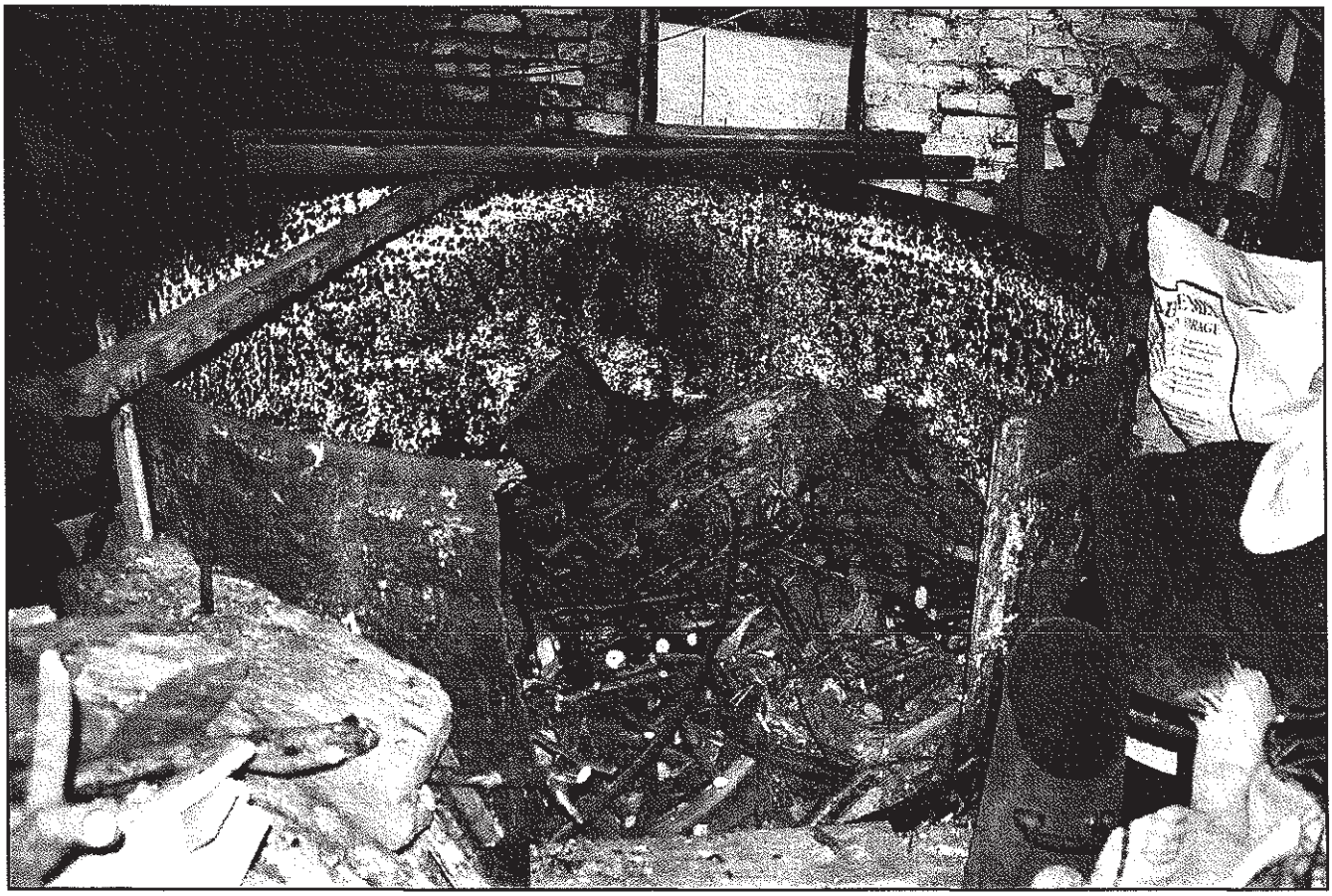

Plate 7