GROVE MILL & FORMER CROWN MILL SITE

475 LONDON ROAD, MITCHAM CR4

LONDON BOROUGH OF MERTON

AN ARCHAEOLOGICAL EVALUATION, WATCHING BRIEF AND STANDING BUILDING RECORD

August 2004

COMPASS ARCHAEOLOGY

GROVE MILL & FORMER CROWN MILL SITE, 475 LONDON ROAD

MITCHAM CR4

LONDON BOROUGH OF MERTON

AN ARCHAEOLOGICAL EVALUATION, WATCHING BRIEF & STANDING BUILDING RECORD

SITE CODE: GCM04

SITE CENTRE NGR: TQ 27300 67830

PLANNING APPLICATION REFERENCE: 02/P0594

COMPASS ARCHAEOLOGY LIMITED
63 UNION STREET
LONDON SE1 1SG

Telephone: 020 7403 9660
Facsimile: 020 7403 9661

e-mail: mail@compassarchaeology.co.uk

August 2004

Project 158

Abstract

An archaeological evaluation, watching brief and standing building recording took place between January and April 2004 on a site adjoining the River Wandle, to the south of the historic centre of Mitcham. This work was carried out as part of the planning process prior to and during residential redevelopment, and followed a previous desk-based assessment.

The site contained one major standing building, Grove Mill, the core of which dated from the 1860s with substantial alteration and addition in the early 20th century. This structure was recorded and analysed prior to its conversion within the new development. A record was also made of an adjacent and later waterwheel housing, and briefly of two other small 19th century buildings, prior to demolition.

Archaeologically the site had potential for a range of remains relating to the development of milling. Documentary sources record the existence of two watermills on the site from the 16th century, and it is possible that there are medieval structures in the vicinity.

Three trial trenches, each of approximately 2m by 12m in plan at base, were opened within the proposed new development footprint in the eastern part of the site. These produced evidence for 19th century activity that can be related to contemporary maps, but there were no significant finds or remains. Brick construction within a channel to the east of Crown Mill reflected the proximity of a former weir and sluice. Pottery finds on land further to the east showed that the area had been utilised from the 1830s, although there was no trace of the buildings that appear on plans of this period. Below the 19th century surfaces were sterile alluvial deposits, and thence natural Terrace gravels.

More significant results were produced by a watching brief carried out during development groundworks within the standing structure of Grove Mill. The main finding was of brick structures that almost certainly relate to a late 18th century mill, described in a contemporary account as 'brick built and timber cover'd with Tarr'd Paper and Gravel'. *Of particular note were the remains of a waterwheel housing inside the former mill, large enough for a wheel of approximately 5m diameter.*

There was also some evidence for earlier activity in this area, in the form of chalk footings and a timber structure as well as underlying waterlain deposits. The latter suggest that a much wider channel or millpond once existed below the present Grove Mill.

Contents **page**

Figures **page**

Fig 3 based on Philip Design Associates Dwg no. 03 50 02. rev C

Figs 6 & 9 based on Siteline Dwg No. 04MTBS03

1. Introduction

1.1 This report covers three phases of work undertaken on a development site in the southern part of Mitcham, adjoining the River Wandle and just east of the London Road (Fig 1). The work was carried out prior to and during redevelopment between January and April 2004. The project comprised building recording and analysis together with investigation of three archaeological trial trenches and a subsequent watching brief during contractors' groundworks.

1.2 The archaeological investigation and building recording were required as part of the planning process prior to residential redevelopment, which included both new build and conversion of the main part of the existing Grove Mill (Planning Reference No. 02/P0594). The works were carried out in consultation with English Heritage's Greater London Archaeology Advisory Service.

1.3 The site lies within an Archaeological Priority Zone and a Conservation Area as defined by the London Borough of Merton UDP, and in addition the standing Grove Mill building is locally listed. It was considered that the site had potential for archaeological remains and finds, particularly in relation to the post-medieval watermilling industry.

1.4 The archaeological trial trenches were located within the area of the new development, in the eastern part of the site and adjacent to the former Crown Mill. The building recording concentrated on the main historic part of Grove Mill, which dated to the 1860s and early 20th century. The watching brief was also largely confined to the area of Grove Mill. All three elements of the project included a series of drawn and photographic records as well as written descriptions.

2. Acknowledgements

The archaeological evaluation was commissioned by Steve Parks, Associate Technical Director, Bewley Homes Plc. Further assistance during the fieldwork was given by the site manager, Mike Donkin.

Diane Walls and Robert Whytehead (English Heritage Greater London Archaeology Advisory Service) monitored the project on behalf of the London Borough of Merton.

Information on the history and background of the site was provided in particular by Merton Local Studies Centre and by Eric Montague of the Merton Historical Society.

3. Site background

3.1 Location and topography

The site lies on fairly level ground at about 19m to 19.5m OD, immediately to the north of the present course of the River Wandle, and is approximately centred at NGR TQ 27300 67830.

Overall dimensions of the plot are approximately 70m north-south by 160m east-west, including access. Prior to the redevelopment the land was partly built over, with substantial open areas to the south and east.

The British Geological Survey (BGS 1998) indicates a natural ground surface of recent alluvium, over sand and gravel of the Taplow Terrace.

3.2 Archaeology and history

The historical and archaeological background to the site has already been considered in detail within a desk-based assessment (Compass Archaeology 2002). This document also discussed the standing buildings on the site in terms of their architectural and local historical significance. The following therefore forms a brief summary of the site's background and of the main conclusions of the assessment.

Prehistoric, Roman and Saxon remains are recorded in the locality, although there is no direct evidence from the site itself and the potential was therefore considered to be relatively low.

The site may well have formed the location of one or more of the medieval mills that are recorded in the area. There is there is no conclusive evidence of this, but the existence of two watermills on the site is documented from the 16th century, and this is borne out by later cartographic evidence. The latter also illustrate the major changes in the course of the Wandle, which historically ran though and partly along the northern boundary of the site.

The siting of the archaeological evaluation trenches and watching brief is shown in relation to the historic site by Figure 2, the Mitcham Tithe map of 1847. The main buildings here precede the final construction of both Grove and Crown Mills (in the 1860s and 70s) but lie in roughly the same area. Other map evidence shows that the land to the east of Crown Mill was utilized at least from the 1820s, and that the principal water channels also date from this period. However, there are no detailed plans for the earlier layout of the site.

At the time of the assessment the western of the two mills (Grove Mill) survived as a structure dating from the 1860s with later additions, notably of 1907/8 and with the remains of a later waterwheel housing to the rear. The eastern mill (Crown Mill) was burnt out and demolished in the 1960s, and was only visible as partial footings and floor surface. The site also contained a number of smaller structures, of which two were of limited historical note (defined in the assessment as Buildings B & C).

4. Background to the archaeological project

4.1 Archaeology and planning

It was proposed to redevelop the site for primarily residential occupation (LB Merton Planning Reference 02/P0594). The proposal included conversion of the main (mid 19th to early 20th century) parts of Grove Mill, together with the erection of a new residential building in the eastern part of the site and provision of associated access and parking facilities (Application No. 02/P0594). The large southern addition to Grove Mill which dates to the 1930s and several other vacant 19th century and later buildings of little or no significance were to be demolished (Fig 3).

Following English Heritage advice archaeological conditions were attached by the local planning authority to permission for redevelopment (condition nos. 14 & 15).

A programme of standing building recording, archaeological evaluation and a watching brief during groundworks was agreed with English Heritage as part of the planning process, to take place before and during development.

Plans and elevations at 1:100 and 1:200 have been supplied by the client to show the pre-development site layout, the structure of Grove Mill, and the proposed development.

4.2 Research questions

Several research questions were outlined in the preliminary *Written Scheme of Investigation* for the standing building and archaeological project (Compass Archaeology 2003). These were as follows:

- Is there any evidence for prehistoric activity, and what is the date range? How does this relate to other finds made in the Wandle valley?
- Is there any evidence for Roman or Saxon/early medieval activity, and can the nature of this be defined? In particular, does it include any evidence for early watermilling?
- What evidence is there for late medieval and post-medieval activity? Does this include any remains of the earlier watermills that are documented from the 16th century, and in later 18th and 19th century maps?

The building recording programme also presented an opportunity to study the construction and development of Grove Mill from the later 19th century.

5. Methodology

5.1 The proposed standing building programme as set out in the *Written Scheme of Investigation* included the following:

- Recording and analysis of the principal parts of Grove Mill, basically the core construction of the 1860s and the rebuild/western extension which followed the disastrous fire of 1907, plus remains of the mid 20th century waterwheel housing on the eastern side of the Mill (see Fig 4).
- A supplementary photographic record of the two small later 19th century buildings (B & C within the desk-based assessment), and also a record of the extant footings of Crown Mill adjacent to the evaluation area.

The recording programme was self-contained, but was also based on and forms a continuation of the previous assessment document (Compass Archaeology 2002).

5.2 The archaeological field evaluation was carried out in accordance with the *WSI*, and also followed English Heritage and IFA guidelines (in particular, *Standards and Practices in Archaeological Fieldwork,* 1998; & *Standard and Guidance for Field Evaluation,* 1999).

5.3 The evaluation comprised three trial trenches, each measuring *c* 12m by 2m in plan at base and set out as shown in Figures 1 and 33. The trenches were located within or immediately adjacent to the new building footprint, in the eastern part of the site.

The trenches were opened by a mechanical excavator (JCB 3CX) using toothed and ditching buckets and breaker as appropriate. Deposits were removed to a general depth of about 1.5m to 2m, with all three trenches dug larger than specified at ground level to provide for stepping of the sides and safe working conditions.

Following machine clearance the evaluation trenches were investigated by hand by the on-site archaeologists. Exposed deposits and features were excavated and recorded, and finds dating evidence recovered.

5.4 The watching brief was carried out after the evaluation, and principally during preliminary groundworks for piling within the standing structure of Grove Mill.

5.5 The deposits and features exposed in the evaluation and watching brief were recorded on *pro forma* context sheets (nos. [1] to [63]) and by scaled plans and sections (generally at 1:20 or 1:50), supplemented by 35mm photography. The building recording work was undertaken on a compatible basis, although with written descriptions on drawings replacing individual contexts.

Levels taken during the fieldwork were derived from an OSBM located at the northwest side of the London Road bridge over the Wandle, value 20.46m OD (see Fig 1). The evaluation trench positions were located on the existing 1:200 site survey (*Siteline Dwg. No. 04MT001*) whilst the watching brief investigations were related to the 1:100 ground plan of Grove Mill. These were in turn related as a 'best fit' to the Ordnance Survey grid derived from the 1:1250 plan.

The OS coordinates to nearest metre for the local evaluation trench grid are as follows:

Trench 1 - west point: 27313 67831 // east point: 27323 67824
Trench 2 - north " 27324 67816 // south " 27315 67802
Trench 3 - west " 27302 67807 // east " 27315 67802

The records and finds from the archaeological and building recording project have been allocated the site code: GCM04. The site archive will be ordered in line with the MoL *Guidelines for the Preparation of Archives* and will be deposited in the Museum of London Archaeological Archive.

6. The standing building record of Grove Mill

6.1 Introduction

The recording work concentrated on the principal (1860s & 1907/8) parts of the Mill, plus the later wheelhouse remains to the east. These elements had been defined in the previous desk-based assessment and are illustrated in Figure 4. The main building and wheelhouse are considered separately below, under 6.2 and 6.3.

6.2 The main building *(Figs 4-13)*

The building that was recorded was a two-storey brick built structure with a double-pitched gabled roof, measuring overall some 29m by 18.5m in plan (Fig 5).

The structure incorporated two basic elements: to the east the shell of the 1860s mill, originally constructed to three storeys but gutted by fire in 1907, and to the west an extension built soon after the fire. The west frontage of the 19th century mill now forms a central internal wall between these two elements, although retaining some recognisable original features.

The interior of the building incorporated a number of later divisions but appeared to have been built with only the two large rooms on each floor. The roof space was also originally open but had been partly enclosed, by lightweight ceilings and also some additional floorspace. There were three internal staircases from the ground to first floor.

6.2.1 The external elevations

The principal western and eastern elevations – representing the separate builds of 1907/8 and the 1860s – are illustrated below (Figs 6 & 9). The eastern elevation includes a partial reconstruction in the area of the subsequent southern extension. The original third storey is not shown but was probably of similar form to the floor below: one window opening of this type is shown in the post-fire photograph of 1907.

The southern end of the 1860s construction included three further openings on the ground floor, also subsequently obscured and/or blocked by later extension (Fig 13). All three appear to have been windows and were of identical form to those on the original west face, now within the building (see 6.2.2 below).

The northern elevation of the 1860s build showed no evidence for original windows or doors, the ground floor door in the northeast corner forming a later insertion.

The walls themselves are more substantially constructed within the earlier part of the building – perhaps reflecting the extra storey. Average thickness is approximately 048m, as opposed to 0.36m within the 1907 extension.

6.2.2 The interior

The interior of the building was wholly refurbished in 1907/8. The first floor was supported on a series of cast iron columns, of identical form throughout and arranged in two north-south rows in each part of the building (six columns to the east and five to the west, reflecting the different number of bays). The floor itself was principally of timber, with transverse iron beams supported on the central columns.

The original west front of the 1860s mill is shown as recorded on site and in reconstruction (Figs 7 & 8). The ground floor retains the basic form of its windows and doors with their distinctive sandstone lintels with a carved roll decoration. In 1907 two of these are shown as blind windows, and this clearly formed an original feature (as demonstrated by the internal form of the heads, shown in Fig 12). Additionally, only the original windows exhibit a chamfer on their inside vertical edges.

On the first floor the original windows and openings also survive, but have been lowered and given arched heads (as opposed to the original lintels matching those on the ground floor).

There was no remaining milling machinery or associated fittings within either part of the building.

6.2.3 Roof construction

The roof was also wholly reconstructed in 1907/8, and is more or less identical within the two parts of the main building – the span being about 0.5m greater to the west.

The roof employs a renaissance truss construction – a king-post, tie beam, raking struts and principal rafters framed together, and additionally secured at four points by iron straps (Fig 10). There are four purlins on either side, set slightly into the adjacent rafters.

The roof trusses conform to the basic bay divisions of the building, and thus also lie in the same east-west plane as the ground floor columns.

6.3 The wheelhouse *(Figs 14-24; element 5 on Fig 4)*

The remains of the wheelhouse lay to the rear of Grove Mill, straddling the former millstream that ran east to west under the building. The structure incorporated modern frogged brick and was evidently built between the OS map records of 1932 and 1953. It is possible that its construction resulted from bomb damage in November 1940: a direct hit is recorded in this area, blasting much debris into the tailrace (Hedger 1953, 5).

The wheelhouse had lost its roof and much of its southern wall. However, it retained significant features including one bracket for the wheel axle (which would have held a white metal bearing) and parts of the former sluice mechanism. A void in the brick wall above the iron channel indicates where a crank would have passed allowing the gate to be raised and lowered.

On the southern side of the wheelhouse was a separate chamber – apparently not roofed – which would have held the pit wheel and other machinery to translate the rotation of the water wheel into the adjacent mill.

7. Other buildings

7.1 Building B *(Figs 1, 25-26, 34)*

A small single-room building, *c* 6.7m by 5.4m in plan, and standing nearly 4m in height to the apex of the gabled roof (2.3m to the eaves). The building dates to the later 19th century and appears on the OS plan surveyed in 1894, although not that of *c* 1866 (Fig 34).

The walls were of yellow frogged brick, and the interior faces originally limewashed without plastering. The walls were subsequently scored and plastered, although this latter had since been largely lost. There was no evidence for internal heating.

The building had been fire damaged and very hastily repaired, with a roof constructed from two rows of scaffold boards and re-used corrugated asbestos sheeting. There were two opposed window openings on the northwest and southeast faces, plus a door opening and further window near the south-western corner. The window and door surrounds were either missing or heavily charred, and had not been replaced.

There was no evidence for the building's original function, although its isolated position on the other side of the channel from Crown Mill and to the rear of the site suggests that it may not have been directly linked to the commercial operation. Possibly it was associated with maintenance of the site and/or the water channels.

Clearance work in the area immediately to the south of Building B produced a cast iron boundary marker for Mitcham Parish (Fig 31). This appears to be the feature recorded as *BP* on Ordnance Survey maps after 1910, and may have replaced an earlier boundary stone.

7.2 Building C *(Figs 1, 27-30)*

An originally two-room building, measuring just over 5m by 10m in plan and standing 3.9m in height to the apex of the gabled roof (*c* 2.2m to the eaves). The building is shown on the OS plan of 1894 (Fig 34), and seems to have replaced an earlier structure on a similar footprint that appears on plans between 1828 and *c* 1866.

As in the case of Building B the walls were of yellow stock brick, and the interior faces originally limewashed without plastering. The walls were subsequently scored and plastered, and a lathe-and-plaster ceiling installed. The roof was of quite simple rafter construction, with slate covering and red clay ridge tiles.

The original internal division created a small southern room of about 2.3m by 4.5m, and a larger to the north (later subdivided) of just over 7m by 4.5m. Both rooms had original external doorways to the west, but additional windows had been inserted on the eastern, western and northern elevations. An additional door had also been created – and then blocked – at the northern end of the building, and an original window had been infilled in the east face.

Most recently the building was used as offices, and although there is no conclusive evidence this may reflect the original function.

7.3 Crown Mill *(Figs 33-34, 40,* etc.*)*

The last building to bear the name Crown Mill was constructed *c* 1870 and burnt out and demolished in 1964. The Mill was elongated two-storey brick-built structure, as shown by contemporary OS maps and glimpsed in illustrations (Figs 8 (a) & 34).

Some traces of the Mill survived at ground level, including an area of stone-flagged floor and limewashed brick wall in the former northeast corner of the building (visible in the top left corner of Fig 48). Further examination of the extant footings established overall dimension for the Mill: just over 42m north-south by 12.6m east west.

8. The archaeological evaluation *(Figs 32-48: see also context list & matrix below)*

8.1 Summary

Three archaeological trial trenches were dug, each *c* 12m by 2m in plan at the base. The trenches were located in the eastern part of the site, overlying and to the east of the former Crown Mill. Trench 1 was positioned to expose the eastern side of a building that appears on the 1828 *Estate Plan* and the 1847 Tithe map (Fig 2). The other two trenches (2 & 3) were aligned east-west to expose the eastern side of Crown Mill and an adjacent north-south channel that was associated with the mill operation. Both these features appear on OS plans up to the 1960s, but are also recorded at least as early as 1828.

The evaluation trenches were dug from a level of about 19.2m to 19.7m OD, through existing surfaces and – in the eastern part of the area – considerable depths of recent made ground.

The sequence of deposits that was exposed was generally quite straightforward, with recent deposits overlying evidence for 19th and early 20th century activity. There were no earlier finds or remains, and where not otherwise truncated natural sands and gravels were encountered at depths of between 1m and 2m.

8.2 Description of recorded deposits and features

8.2.1 Trench 1

This north-south trench revealed a simple sequence of sterile sand and gravel [5] sealed by a fairly shallow alluvial layer [4] and thence a reworked and probably partly imported soil [3]. The first of these deposits is identified as the natural Taplow Terrace (BGS 1998), and was exposed in plan throughout the trench. The natural surface was fairly level, although with some undulations and deeper hollows over a range of about 0.2m.

Context [3] produced a number of finds which give a 19th century date, and probably post-1830 when taken in association with layer [6] in Trench 2 (Appendix I). However, there was no evidence for the buildings that are shown in this area on the Estate and Tithe maps of 1828 and 1847. It is possible that these were light timber structures, built on rather than into the ground.

The surface of [3] was overlaid by a series of quite recent made ground deposits [1] & [2], which cumulatively built the land surface up by some 0.8m (Fig 37).

8.2.2 Trench 2

The sequence within the eastern part of Trench 2 was similar to that in Trench 1, although the recent made ground [1] was also underlain by a concrete slab (context [9]; Fig 43). The underlying surface [6] was probably a simple continuation of context [3].

The central part of the trench was cut by the north-south channel that is shown on maps between 1828 and the 1960s. This contained recent backfill and was retained by a modern concrete wall to the east: a later drain had also been inserted along the centre line of the infilled cutting. On its western side the channel was bordered by the brick wall of Crown Mill [12], dating to *c* 1870.

Behind the wall [12] and its associated construction cut/backfill [11/13] at the western end of the trench were some stratified deposits ([10], [14] to [16]), but no significantly earlier remains (Fig 41).

8.2.3 Trench 3

Trench 3 was dug from west to east at the northeast corner of Crown Mill and across the adjacent backfilled channel.

The central and eastern part of the trench revealed an extensive deposit of 19th century backfill [26]/[27]. This underlay and probably quite closely predated the 1870 Mill construction, and certainly there was no evidence for intervening surfaces or other activity. However, it is unclear what this represents: the backfill extended well below the contemporary water level, but contemporary map evidence appears to show the area as dry land with standing buildings immediately to the south. Towards the eastern end of the trench the fill [27] appeared to be contained within a cut line which truncated the earlier and probably waterlain deposit [29] (and possibly also the underlying layer [30]; see Fig 47).

The later 19th century Crown Mill was represented by the continuation of the north-south brick wall [12] seen in Trench 2, and by an adjacent internal stone floor and make-up [25]. However, the external face of the wall had been reinforced to foundation level by concrete [18] so removing any direct association with deposits and features to the east.

The infilled water channel to the east of the Mill was principally represented by brick 'floor' [19], by the lower parts of flanking brick walls [22] and [23] to the east and west, and by an apparent extension to the south [20] and [24]. The eastern wall [22] rested on a reused timber base plate approximately 165mm square, a similar feature appeared to underlie the southern edge of [19], and it is likely that the same had been removed from below the slumped and fragmentary western wall [23]. However, there was no sign of timber below [20] and [24].

The purpose of this solid base was doubtless to prevent scouring and erosion from an adjacent weir and sluice, which historic maps show to have stood just to the north against the higher water level of the millpond (see Fig 34). This arrangement appears to been established by 1828 and to have remained broadly unchanged until final backfilling in the 1960s, although it is likely that the brick structures exposed were of mid or later 19th century date.

To the east of the channel and adjoining the wall [22] was a further brick structure [21]. This may well represent the base for a footbridge that is shown on OS maps between 1895 and 1935. On its western side the channel appeared to have been widened by about a metre, a concrete surface being laid up to the wall addition [18] – and probably as part of the same event. Map evidence suggests that this took place between 1913 and 1935.

9. The watching brief *(Figs 49-59: see also context list & matrix, 10/11 below))*

9.1 Summary

The evaluation was followed by a watching brief, principally undertaken during probing and grubbing out for piles within the later 19th and early 20th century standing structure of Grove Mill. This produced evidence at several points for the previous mill on the site, which appears to have been built c. 1789 and was replaced by the present structure in the 1860s. The mill was described at the time of its construction as *brick built and timber cover'd with Tarr'd Paper and Gravel*.

9.2 Earlier features

The watching brief also produced some evidence for earlier activity. Potentially this includes two sections of chalk wall footing about 0.65m wide in the northern part of the site (contexts [54] and [57]), although both of these may have been reused in the 1789 construction. Wall [54] appeared to be cut into a deposit [53] that produced one sherd of green glazed post-medieval slipped redware (*c* 1480-1650).

Also apparently preceding the 1789 construction was the timber platform or raft [60], underling wall [58] on the western side of the site. This feature was only briefly observed over 3m below ground level, but was formed by a series of roughly worked planks (or horizontal timbers) laid north-south over upright timber posts which had been driven into the existing alluvial deposits (Fig 59). Although tentative, this may represent part of an earlier mill, perhaps at the base of a channel to prevent water erosion in proximity to a sluice or waterwheel (and therefore similar to the brick 'floor' [19] in evaluation Trench 3).

Although undated the various underlying waterlain deposits [49], [61], [63], *etc.* provide evidence for earlier archaeology in this part of the site, potentially of medieval date. These could relate to infilling of a much wider river channel, or perhaps a millpond further to the west than that which is historically recorded. Natural gravel was only exposed at shallow depth in one area to the north, below context [36].

9.3 Possible remains of the 1789 mill

The central part of the investigated area was cut by an east-west channel constructed between the 1860s and 1907, to flow below the floor of the present Grove Mill (contexts [32] & [33]). This cutting had removed all earlier remains in an area at least 3.6m and up to 5.5m wide. However, either side of this were a series of remains which relate to the preceding mill, and may well be part of the documented construction of 1789.

The most significant earlier remains lay immediately to the north of the 19th century channel and within the eastern part of the present Mill. An area of solid brickwork [47] formed the northern part of the housing for a waterwheel of *c* 5m (16 feet 6 ins.) diameter, with water coming in from the east at least 1.5m above the base of the wheel (and therefore forming a low breastshot operation; see Fig 52). Part of the structure was incorporated into the later channel wall [33] and could be seen in the exposed southern face. To the west the northern side of the tailrace running from the wheel was indicated by separate sections of brick wall [45 & 58]. To the east the infilled millrace was just visible below the later mill wall, its base just above that of the wheel.

Although much less well preserved there appeared to be a comparable waterwheel housing [44] to the south of the later channel. Clearly the intervening area was too great for a single wheel, so this would mark the position of a second wheel. Again there was evidence to the west for an associated brick-lined channel (tailrace), with the survival of parts of the southern wall [43]. It is also worth noting that the wheels were located within the contemporary mill, rather than in an adjoining but separate building as subsequently.

The width of the waterwheels is unknown, but a minimum of 2m (6 feet 6ins.) is given by the remains to the north. It is possible that there was solid ground between the two wheels, but this area may also have contained the sluice channel which allowed the flow of water to be regulated. It may be significant that the 1847 Tithe map (Fig 2) gives a

very irregular line to mark the reappearance of the river to the west of the contemporary Mill. There appear to be three separate channels issuing from below the adjacent road, which might well equate to north and south tailraces and a central sluice.

A point of access to the postulated sluice is indicated by the brick floor [39], just to the west of the probable waterwheel housing [44]. The existence of this also means that the waterwheel itself would be smaller than that to the north, perhaps 3.5m or 4m diameter.

The northern waterwheel housing [47] was constructed on a substantial timber raft [48], with north-south sleepers supporting a series of 0.3m wide oak planks laid at right angles. This construction was set into the relatively soft underlying alluvial clay/silt [49], and may well have been reiterated to the south (below [44]) although not directly observed.

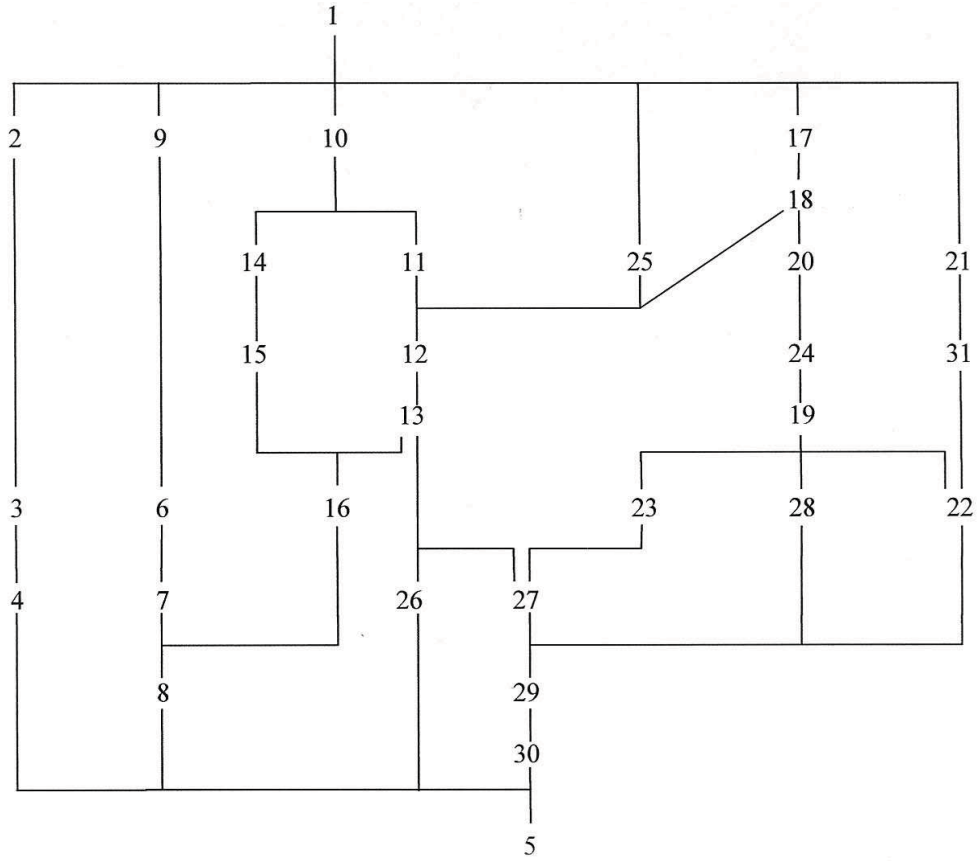
Several other brick walls and bases were recorded, potentially contemporary with the above and varying in width from about 0.35m to 0.9m. The area between the wheel housing [47] and the wall [51] to the north may well have held the pit wheel and other machinery to translate the horizontal rotation of the water wheel to a vertical drive shaft.

A number of the brick walls appeared to be founded directly on earlier post-medieval dumped or waterlain deposits (eg. [41] & [51]). Wall [58] to the west – apparently revetting one side of the tailrace – had the deepest foundation, which was composed of a single course of large chalk blocks *c* 0.4m high and founded some 2.9m below present floor level.

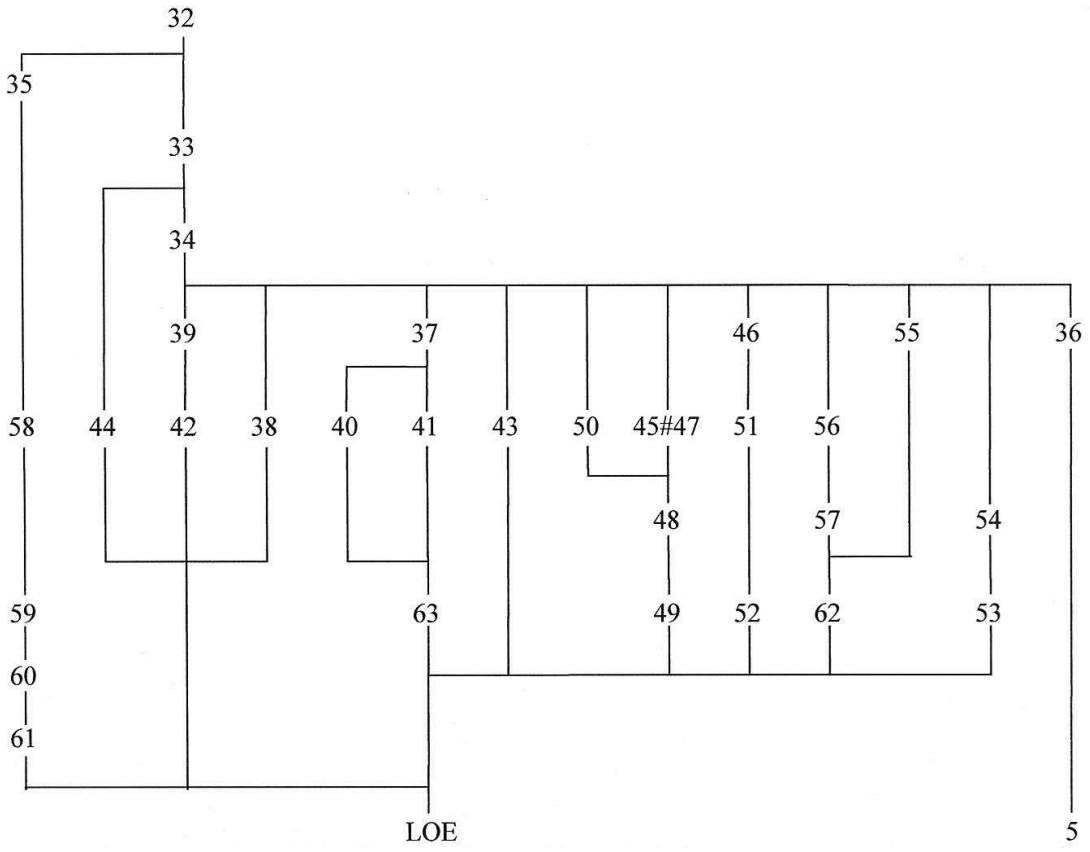
The dating of these various elements is complicated by the probable reuse of some earlier brick (as in the probable drain between walls [42] and [44] and in walls [50] and [51]; see Appendix II). Moreover, other brick dates cover a wide span of time from late 18th century forward. However, it seems likely that most of these features relate to the documented mill of 1789, or at least are additions to it.

10. Matrices showing the stratigraphic relationship of contexts

10.1 Evaluation trenches 1-3



10.2 Watching brief within Grove Mill



11. List of deposits and features by context

11.1 Evaluation trenches 1-3

Context no.	Trench	Description	Interpretation	Approx. date/ comment
1	All	Several layers of very mixed sandy clay silt & building rubble. Some gravel plus occasional coal, charcoal & chalk inclusions	A series of made ground deposits over ground to east of Crown Mill; also upper infill within the adjacent N-S channel	Probably all 20th century, and up to 1960s
2	1	Firm mottled yellow-brown silt-clay with frequent brick rubble & occasional gravel	Made ground layer, possibly immediately preceding [1]	"
3	"	Dark brownish grey sandy silt with frequent gravel & occasional CBM, slate & chalk flecks/frags.	Reworked deposit, probably a mixture of natural alluvium and made ground. Apparently the same as [6] in Trench 2	19th century, probably post-1830
4	"	Dark greyish brown silty sand with high humic/organic content. Some gravel and lighter buff-grey lensing	Fairly shallow and generally sterile alluvial deposit	–
5	"	Mixed mid grey-brown to yellowish brown sandy gravel	Top of natural River Terrace Deposit	–
6	2	Dark grey sandy clay-silt with frequent gravel and occasional CBM + mortar frags.	Reworked deposit, probably a continuation of [3] in Trench 2	19th century, post-1830
7	"	Light grey to orange sandy clay-silt with frequent gravel	Layer of sterile alluvium, disappearing to west	–
8	"	Dark brown clayey silty sand with some organic staining/traces and occasional gravel	Sterile alluvial deposit	–
9	"	Concrete slab overlying compacted clinker base	Levelling and surface to east of channel	20th century
10	"	Concrete slab overlying layers of rubble and mixed brown silty soil	Levelling and surface to west of channel	"
11	"	Mixed brown silty sand with pebbles & occasional CBM frags.	Construction backfill on inside line of wall [12]	c. 1870
12	2 & 3	Substantial north-south brick wall base	East wall of Crown Mill, final rebuild	"
13	"	Cut containing deposit [11]	Backfilled construction cut for [12]	"

Context no.	Trench	Description	Interpretation	Approx. date/ Comment
14	2	Mid to dark brown sandy silt with frequent lumps of brown clay & brick frags. plus some gravel	Fill within cut [15]	19th century
15	"	Near vertical-sided cut feature up to 0.85m wide, recorded in section	Cut feature. Extent/overall shape unknown; did not extend into the trench	"
16	"	Light brown sand with some gravel and clay lenses, OVER mixed darker silty sand with mortar & CBM frags.	Small area of stratigraphy, ?mainly made ground. Roughly equivalent to [6] to east of channel	Earlier 19th century, pre-1870
17	3	Dark & fairly homogeneous sandy silt with some pebbles/ gravel and occasional building rubble	Infill at northern end of channel on the east side of Crown Mill	1960s
18	"	Concrete forming a secondary wall attached to external face of [12] and lining the base of the adjoining channel	Probably associated with widening of the northern end of the channel (as shown on contemporary OS maps)	Earlier 20th century
19	"	Two-course brick 'floor' covering the base of the channel between walls [22] and [23]. Upper course laid on edge; along southern boundary thickens to five courses built on a timber plate (c. 180 x 140mm cross-section)	Lining to prevent erosion at base of channel – according to contemporary maps this area was just below & to the south of a weir & sluice from the millpond	19th century
20	"	Brick 'floor' covering the base of the channel to south of [19], between walls [24] and [23]. Separate & ?later construction; single course laid flat over concrete base	See above	"
21	"	Brickwork added to eastern side of channel wall [22]. Frogged brick, with deeper foundation to south	Brick base – possibly for a footbridge which is shown here after c. 1895	Later 19th century
22	"	Brick wall base: up to 6 courses extant, built over reused timber plate of c. 160 x 170mm cross-section	Wall retaining the eastern side of the channel which flowed down the east side of Crown Mill	19th century
23	"	Fragmentary brick wall footing, three to four courses extant. No sign of underlying timber plate but brickwork is slumped and partly collapsed so this may have been removed	Wall retaining the western side of the channel that flowed down the east side of Crown Mill. Subsequently removed & channel extended to the line of the Mill itself	19th century

Context no.	Trench	Description	Interpretation	Approx. date/ Comment
24	3	Brick wall base. Up to 6 courses in section above level of adjacent surface [20]. Not excavated but no sign of timber base plate at north end	Wall retaining the eastern side of the channel to the east of Crown Mill. Along with [20] probably an addition to [19] & [22]	?Later 19th century
25	"	Stone paved floor and underlying sandy levelling/base	Floor surface within Crown Mill	c. 1870
26	"	Very mixed, mid brown to dark grey clayey to sandy silt with frequent gravel, some CBM/chalk frags. & occasional loose timber. Shallows slightly to west	Made ground deposit directly below c. 1870 Crown Mill construction. Apparently fill within a large cut or channel, but no cartographic evidence	?1870, closely preceding Mill rebuild
27	"	Mixed dark grey-brown gravely sandy silt with frequent large flints & building rubble	Probable eastward continuation of [26]	"
28	"	Mid brownish sand with predominantly fine gravel	Probably levelling/base for brick 'floor' [19]	19th century
29	"	Mid to darker brown-grey silty sand with CBM flecks (≤3mm) & occasional clayey lenses	?Disturbed waterlain deposit	"
30	"	Mid brownish grey homogeneous sandy silt	Waterlain deposit	–
31	"	Dark grey-green silty sand with gravel	Made ground, probably against wall [22]	19th century

11.2 Watching brief within Grove Mill

Context no.	Description	Interpretation
32	Brick walls retaining tailrace below western (1907/8) part of Grove Mill	Addition to the 1860s Mill, but probably predating 1907-8 extension
33	Brick walls retaining tailrace below eastern part of Grove Mill	Part of the 1860s Mill construction
34	Mixed building rubble, silty sand, clay, etc.	Demolition deposits and/or levelling for 1860s Mill construction
35	Small section of yellow stock brick wall on concrete base	Shortlived arrangement on northern side of the later 19th century tailrace, linking the 1860s wall line with previous wall [58]. Superseded by [32]
36	Mixed fairly dark brown sandy silt with post-med. CBM	Probable made ground deposit, directly overlying natural sand & gravel [5]
37	Dark greyish silt, becoming more gritty to south	Probably fill inc. redeposited alluvium, against adjacent structure [40]/[41]
38	Length of east-west brick wall, turning to north at western end	?Part of Grove Mill rebuild of 1789
39	Area of brick floor. Abuts wall [42] to south and projects over line of east-west channel to north	As above; appears to form part of a bridge over ?southern millstream
40	Area of partly truncated brickwork adjacent to wall [41]. Appears to have a central 'trough' linking up with smaller enclosed drain to northwest	?Part of Grove Mill rebuild of 1789
41	Length of north-south brick wall, apparently linking more substantial east-west bases [38] & [42]	" "
42	Length of east-west brick wall, with apparent turn or junction to the south at its western end. Adjoining the eastern end & north side of the wall is a probable drain, up to 510mm wide x 380mm high	As above. Drain not fully excavated, but is assumed to link 'trough' in [40] with open channel to the north
43	Length of east-west brick wall	?Part of 1789 rebuild; southern retaining wall of open channel
44	Area of partly truncated brickwork. Includes length of wall continuing approx. alignment of [43], and adjoining this to the northeast a mass of masonry with rough west-facing slope	?From Grove Mill rebuild of 1789. Appears to be part of the housing for a mill wheel, comparable with the much better-preserved structure [47] to north

Context no.	Description	Interpretation
45	Length of east-west brick wall, southern part overlying a timber base & probably part of same build as [47] to east	?Part of 1789 rebuild; northern retaining wall of tailrace channel below mill wheel
46	Mixed clayey/sandy silt with some CBM frags. and pebbles	Deposit between the two walls [47] and [51], possibly infilling a sluice channel
47	Solid brickwork with three elements: a length of east-west wall to the north, a recessed area with curved E-W profile to the southwest and a upstanding block of masonry to the east	The northern side of a waterwheel housing and millrace immediately upstream, probably part of the 1789 rebuild. A possibly corresponding feature is represented by [44], to the south of the later 19th century channel
48	Timber (oak) planking laid at right angles on north-south beams	Solid timberwork forming a raft for construction of [47]
49	Firm grey clayey silt with occasional chalk frags.	Waterlain deposit underlying [47/48] (& presumably truncated by this construction)
50	Brick wall stub, 12 courses in height. Southern part of base overlies timber [?48]	Small area of brickwork – including reused material, and presence of timber at base suggests that this in fact postdates [47]
51	Length of east-west brick wall, with turns to north at eastern end and south at western end	?Part of the rebuild of 1789. Possibly the northern side of a chamber to accommodate the pit wheel and other machinery the north of the wheel housing [47]
52	Mixed dark greyish silty deposit	Material at the base of & underlying [51], probably disturbed waterlain layer. NB. slight indication of brick floor over, joining [51]
53	Compact, fairly dark grey sandy silt with gravel with some mid brown patches & post-med. CBM	Reworked deposit, not bottomed
54	East-west mortared chalk wall footing	On approx. line of the north wall of Grove Mill pre-1860s, but date unknown. See also [57] for a possible contemporary feature
55	Brick floor, largely if not entirely constructed from broken (?reused) material	1789 construction or later?
56	Short length of brick wall, apparently aligned east-west	Probable addition to chalk base [57]. No sign of continuation in excavation to east

Context no.	Description	Interpretation
57	East-west mortared chalk wall footing, tuning to north at eastern end	Unknown date, but see also [54]
58	Length of east-west brick wall over chalk block base. Overall extant height c. 2.2m	?Part of rebuild of 1789: northern retaining wall of tailrace, downstream of waterwheel, etc. [47]
59	Layer of mid/dark greyish clayey silt	Waterlain deposit at base of and apparently underlying [58]
60	Series of roughly worked timber planks, laid flat on north-south alignment over vertically-set posts	Timber floor or construction raft. However, appears to be separate from & much wider than overlying wall [58], so may be part of an earlier and entirely separate mill structure
61	Firm grey silty clay	Waterlain deposit into which posts of [60] were driven, and directly below associated planking
62	Mixed, fairly dark brown silty sand & gravel	Deposit immediately to north of and underlying floor [55]
63	Mid-dark grey clayey silt, occasional pebbles	Probable waterlain deposit underlying [40/41], etc. (& possibly truncated by these). May be part of same general layer as [49] to north

12. Conclusion and assessment of the results

The standing building record and archaeological investigation have provided an opportunity to address site-specific objectives that were defined within the Written Scheme of Investigation (4.2 above). The responses to these are outlined below:

12.1 Archaeological research questions

- *Is there any evidence for prehistoric activity, and what is the date range? How does this relate to other finds made in the Wandle valley?*

There was no evidence for any prehistoric activity on the site, nor any residual finds in later deposits.

- *Is there any evidence for Roman or Saxon/ early medieval activity, and can the nature of this be defined? In particular, does it include any evidence for early watermilling?*

There was no evidence for any Roman, Saxon or early medieval activity, nor any indication of watermilling. The alluvial horizons exposed in the evaluation were quite sterile, and indicate an area of unoccupied wet or marginal land.

- *What evidence is there for late medieval and post-medieval activity? Does this include any remains of the earlier watermills that are documented from the 16th century, and in later 18th and 19th century maps?*

Although there was no evidence for substantial activity the watching brief did reveal chalk footings and a timber structure that may date to the 17th or early 18th centuries, as well as earlier waterlain deposits that indicate a much wider channel or millpond below the present Grove Mill.

Investigations within Grove Mill also exposed significant brick remains of a previous mill, almost certainly parts of that constructed in 1789 and replaced by the present building in the 1860s. Of particular note were the remains of a waterwheel housing, which would have contained a wheel some 5m in diameter.

Within the eastern part of the site the evaluation produced evidence for 19th century activity which can be related to contemporary maps, although there were no significant finds or remains.

Brick construction at the northern end of the channel which flowed to the east of Crown Mill reflected the proximity of a former weir/sluice. Further to the east there were a number of finds that showed that the land had been utilised from the 1830s, although no sign of the building(s) which are shown on plans of 1828 and 1847.

There was no evidence in the evaluation or watching brief that could be related to documented activity, for example copper or later corn milling at Grove Mill or snuff/ felt production within Crown Mill.

12.2 The standing building record

On-site recording and research has provided further evidence on the construction and development of Grove Mill, the principal building on the site. The 19th century mill employed a number of architectural details – stone mouldings, blind windows, *etc.* – but was rebuilt in a more basic style after 1907. The waterwheel housing probably dates to the 1940s, and must represent one of the last applications of traditional milling technology. A brief additional record was made of two small 19th century buildings, plus an outline plan of the demolished Crown Mill.

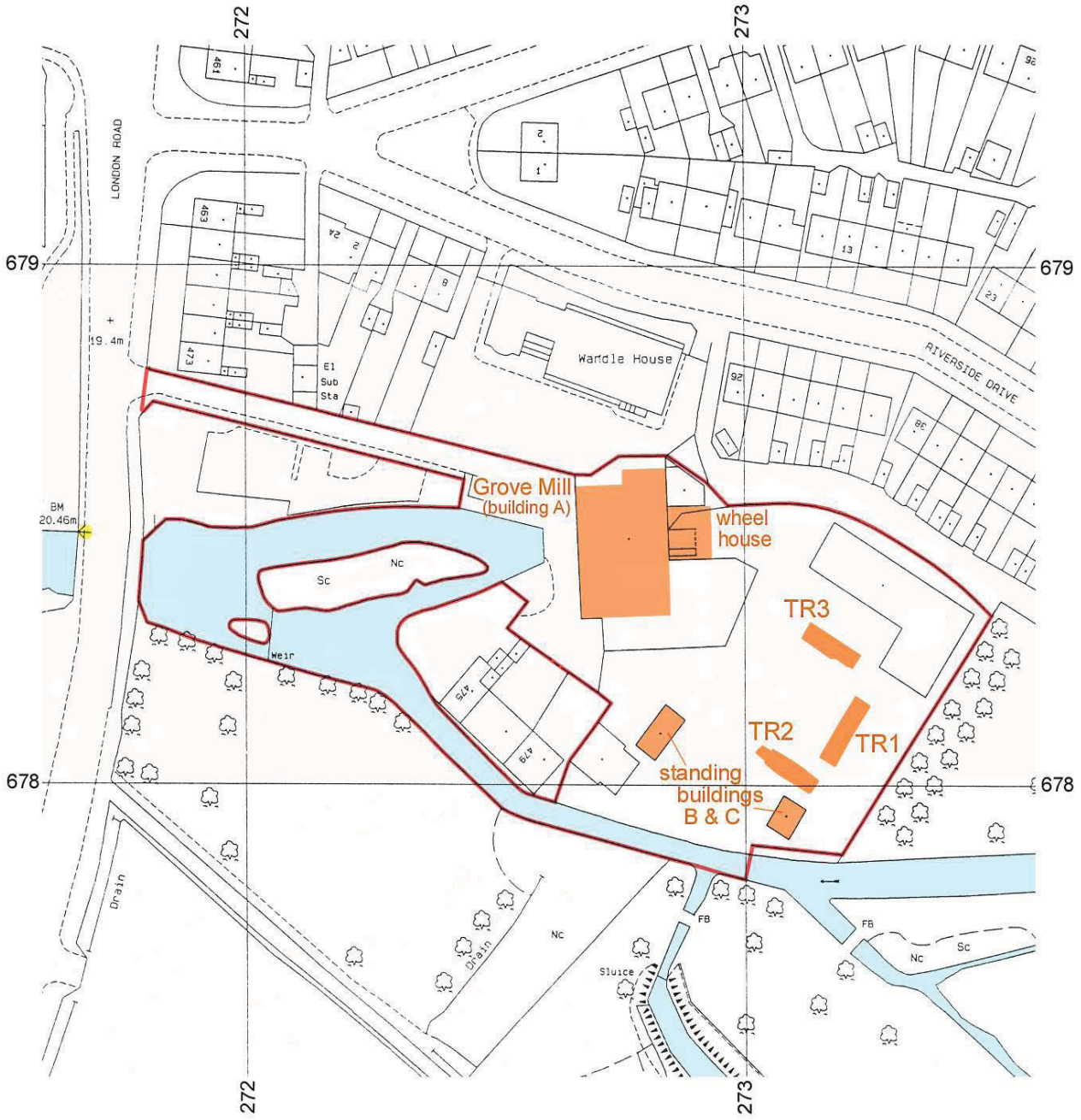


Fig 1 Site outline in relation to the 1:1250 Ordnance Survey map of 2002, also showing the locations of the recorded standing buildings and the evaluation trenches. The watching brief findings were confined to the main part of Grove Mill

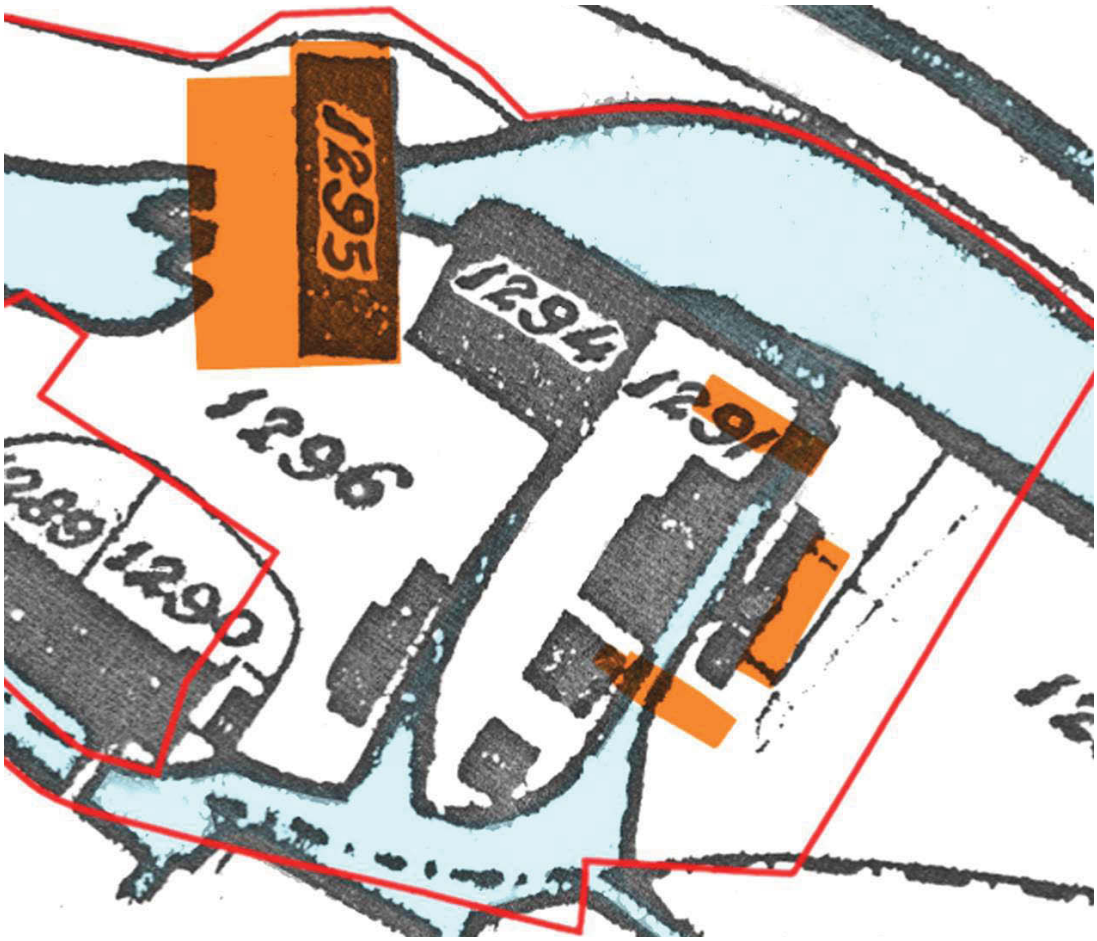


Fig 2 The principal areas of investigation in relation to the Mitcham Tithe Map of 1847, *Sheet 8*

Fig 3 Redevelopment site plan *(based on Philip Design Associates Dwg no. 03 50 02. rev C)*

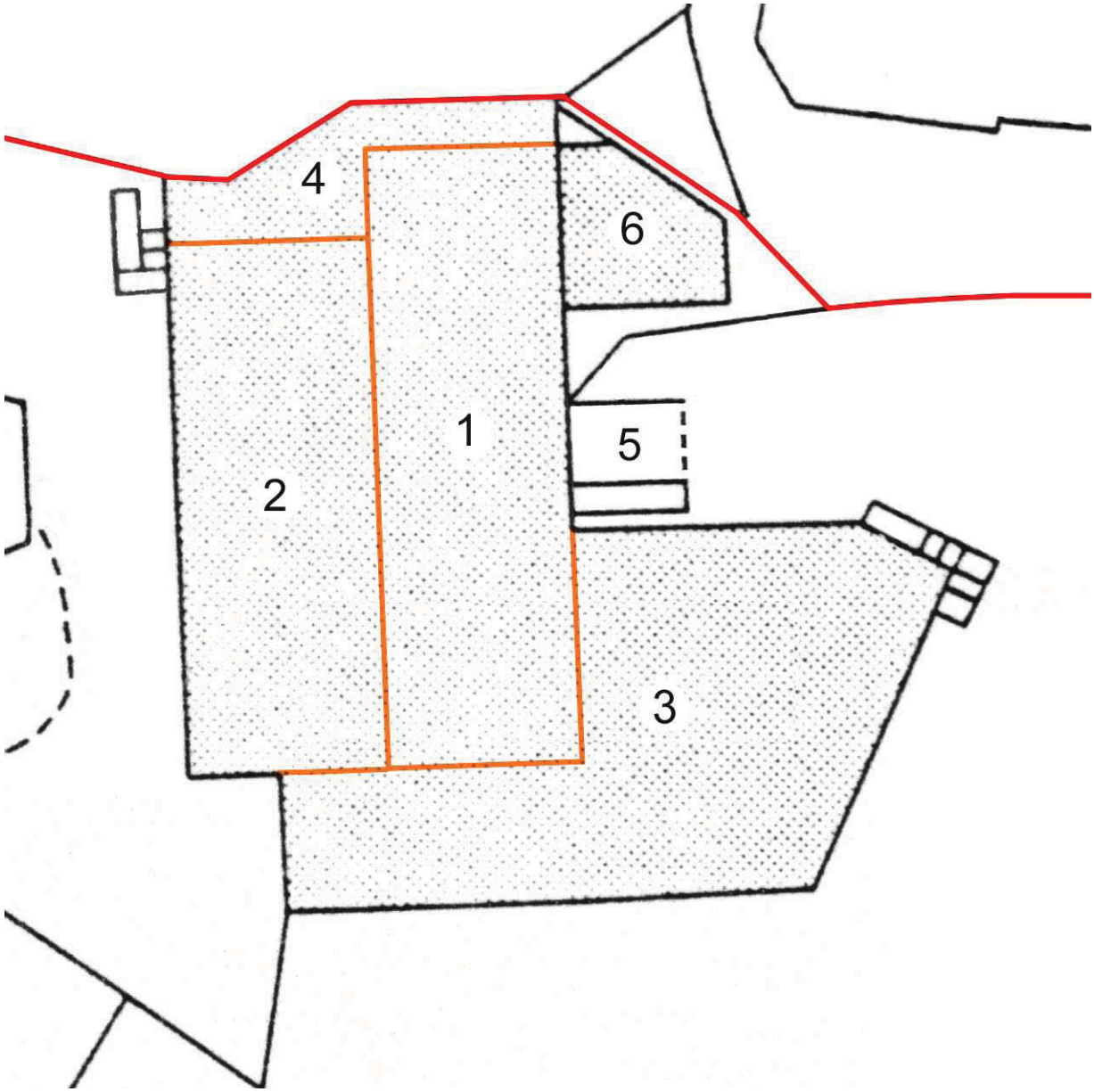


Fig 4 Plan showing the separate building elements (1-6) within the pre-development Grove Mill

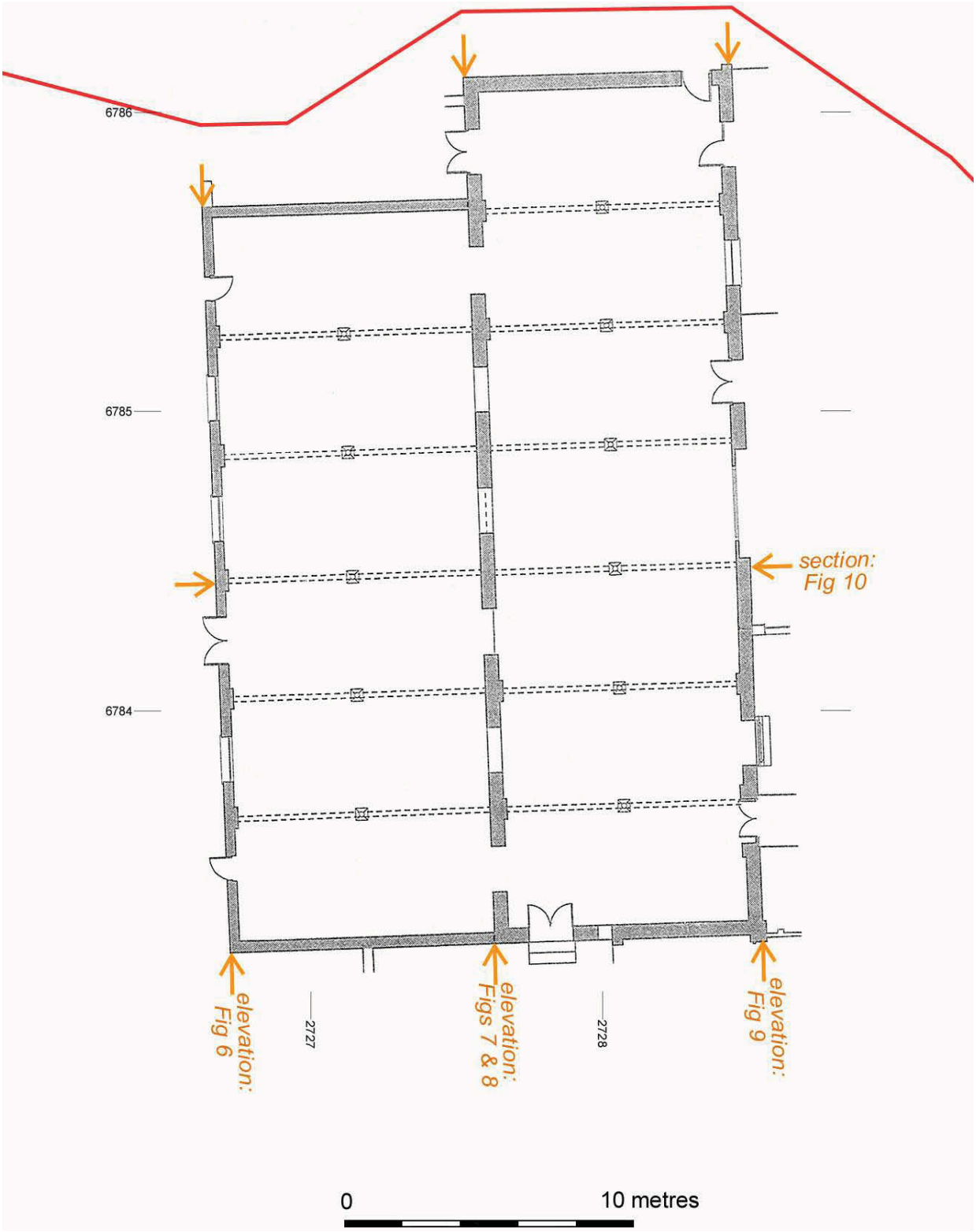


Fig 5 Ground plan of the main 1860s and 1907/8 parts of Grove Mill *(Fig 4, elements 1 & 2)*, showing the location of illustrated elevations and cross-section

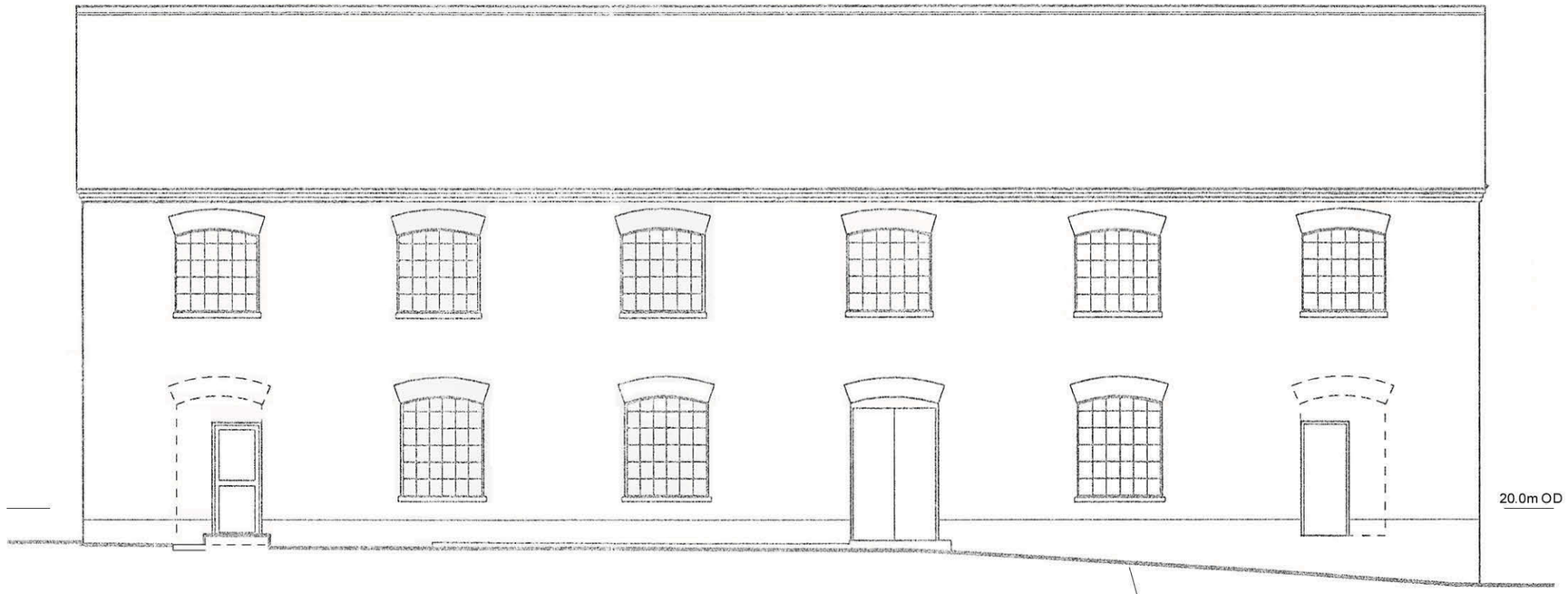


Fig 6 Elevation and views of the west face of the pre-development Grove Mill, constructed c. 1907

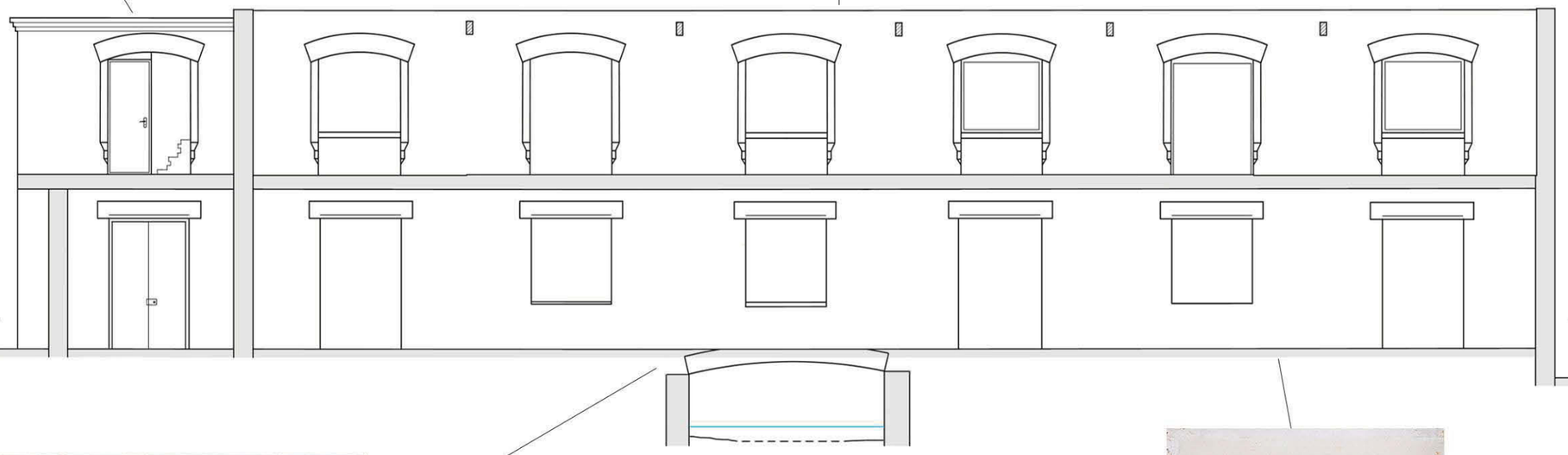
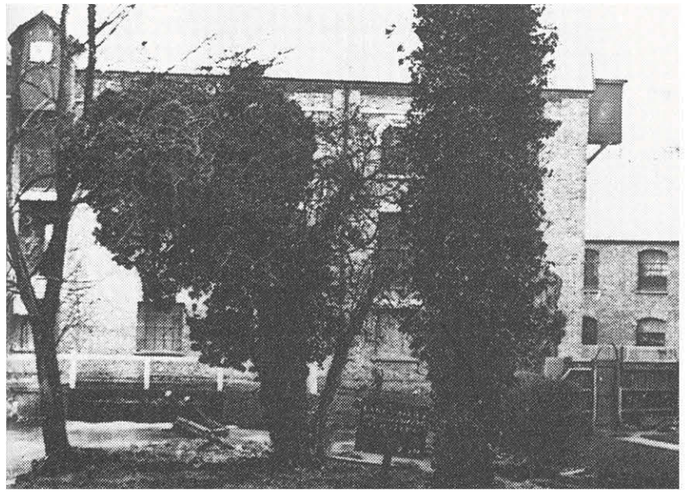
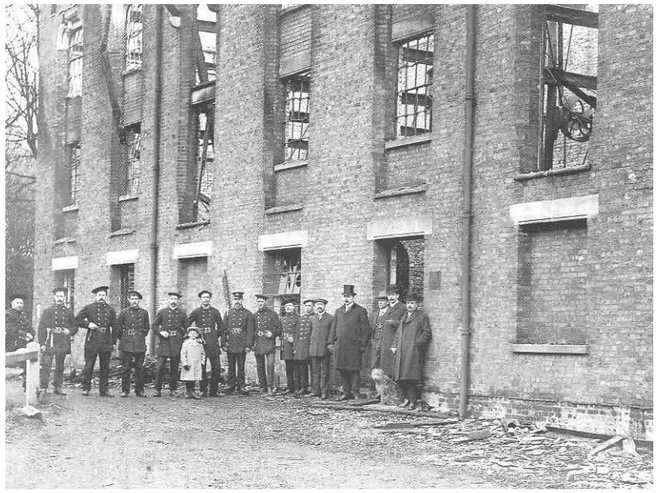


Fig 7 Elevation and views of the west face of the 1860s Grove Mill, now forming the central wall within the extended building. The photo at lower left shows the exposed millrace after removal of the floor slab



(a)

(b)



(c)

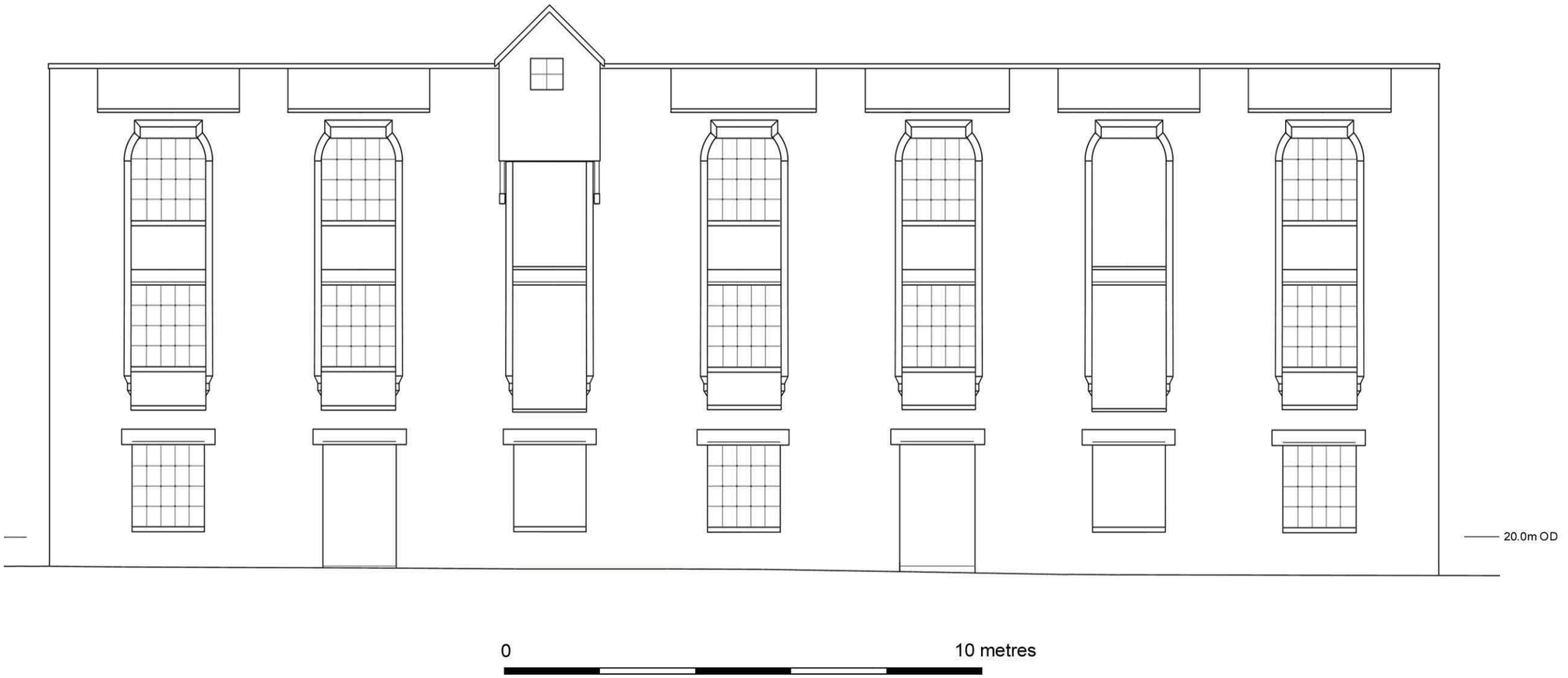
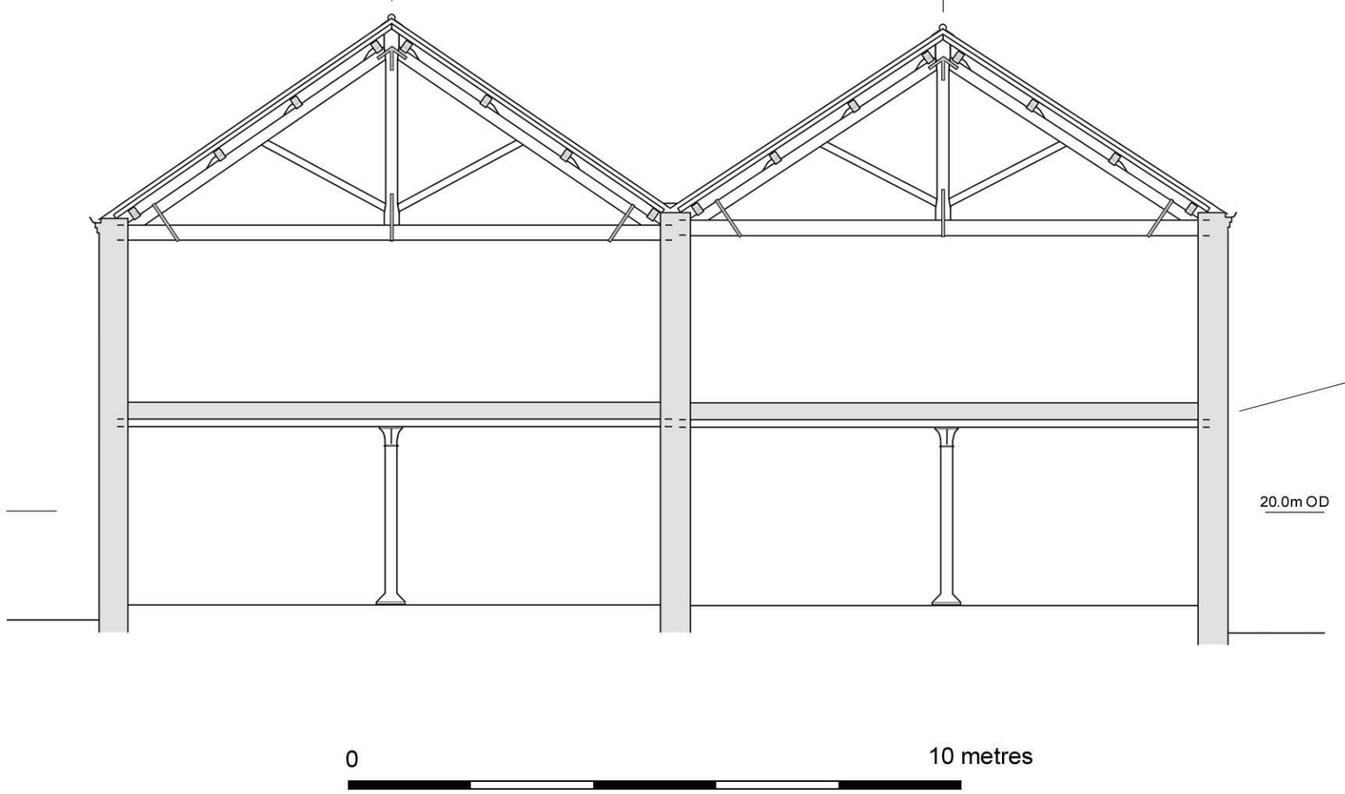


Fig 8 Reconstructed elevation of the west face of the 1860s Grove Mill, showing the demolished third floor and original form of the second floor windows. The illustrations above include two later 19th century views and one view (C) taken immediately after the building was gutted in the fire of 1907

Fig 9 Elevation of the east face of the 1860s Grove Mill, including partial reconstruction of the original layout (omitting the third floor & showing later wheelhouse alterations). The general view at lower left was taken during the current redevelopment after removal of the later additions: the picture to the right shows internal detail of a probable original ground floor window *(0.2m scale)*



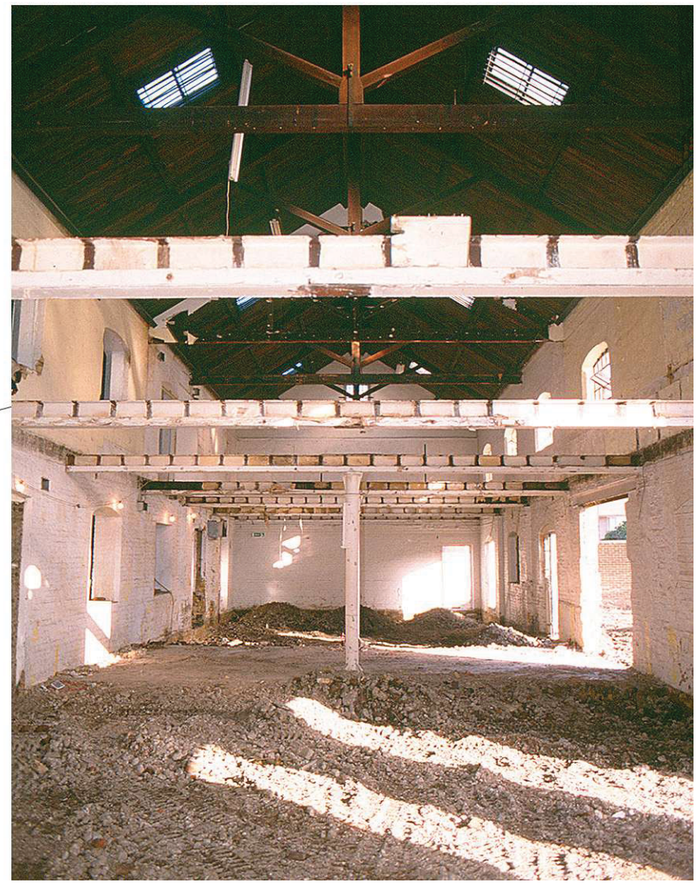


Fig 10 Section across the 19th and early 20th century parts of Grove Mill (*elements 1 & 2, Fig 4; located on Fig 5*) and views during redevelopment works. The lower right hand view shows the main body of the 1860s Mill after removal of the ground slab and first floor. Both sections of roof are contemporary (*c* 1907/8), using the form of king-post construction known as renaissance truss

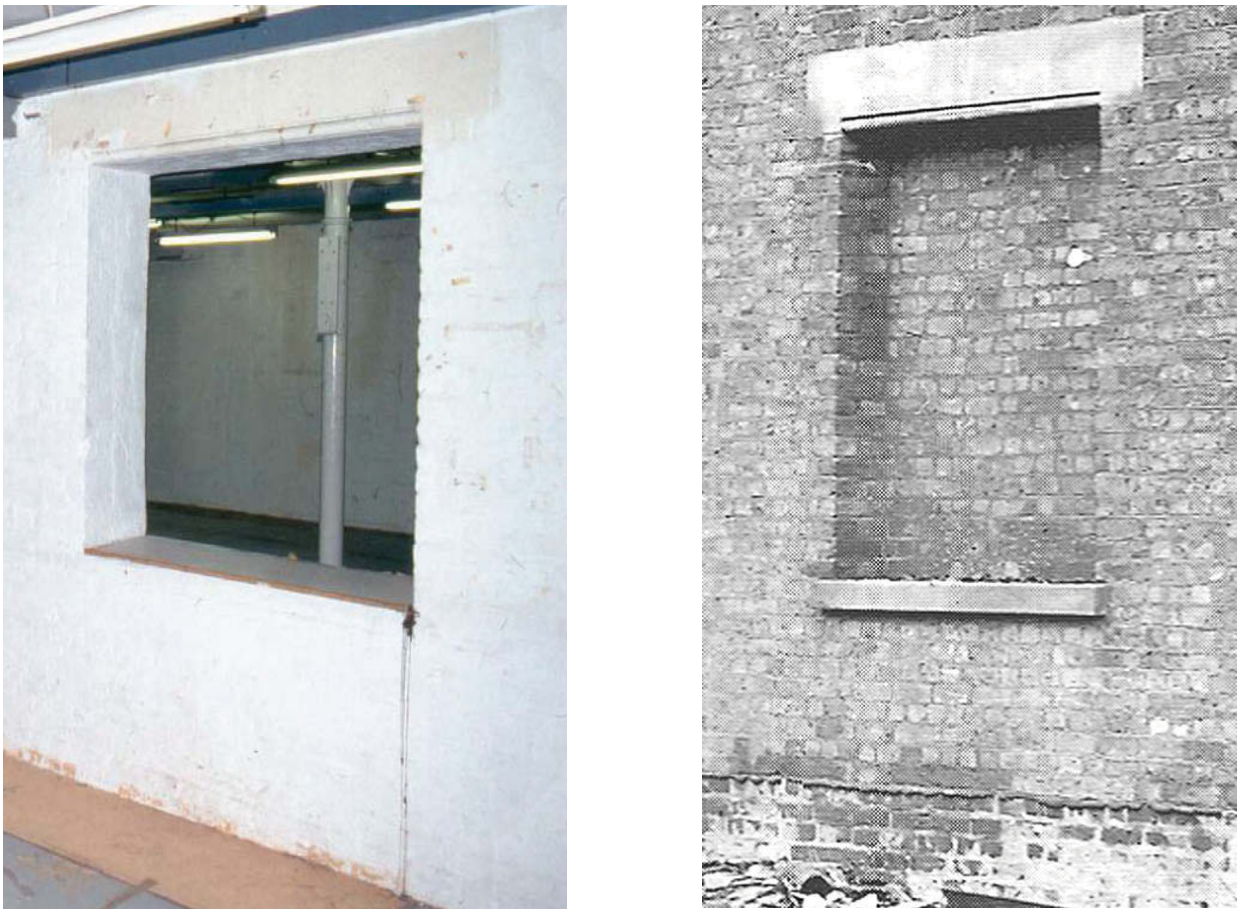


Fig 11 Ground floor opening within the west face of the 1860s Grove Mill, prior to redevelopment (left) and as a blind window immediately after the 1907 fire *(see also Figs 7 & 8)*

Fig 12 The internal face of the 1860s west front of Grove Mill (the same area as in Fig 7 but viewed from the inside). Note the variation in window/door head design (l-r) from shallow to fuller arch to flat, reflecting the original layout as door, window and blind window

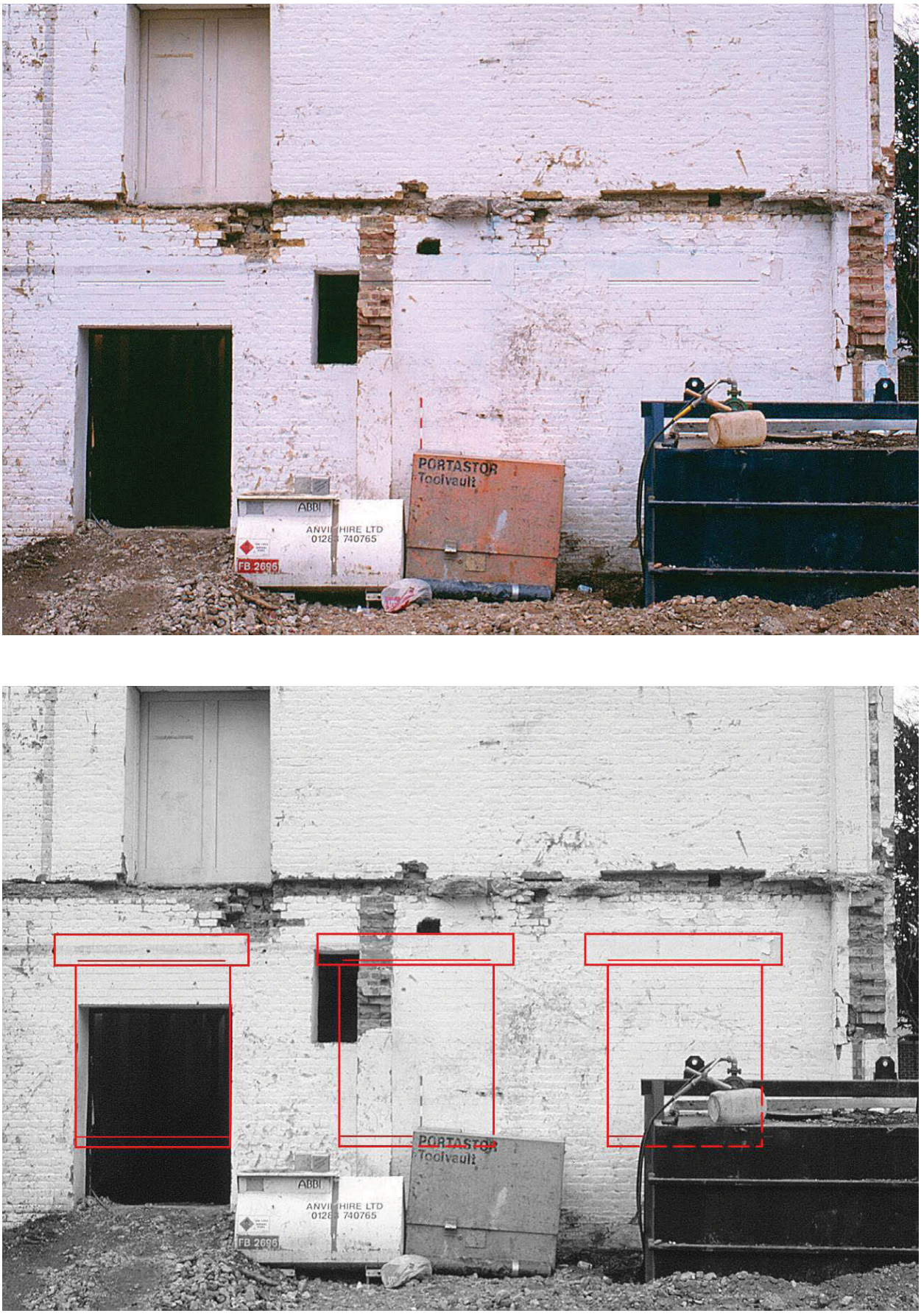


Fig 13 The southern end of the 1860s Grove Mill after removal of the later additions, showing the stone lintels and probable lines of three original ground floor widows

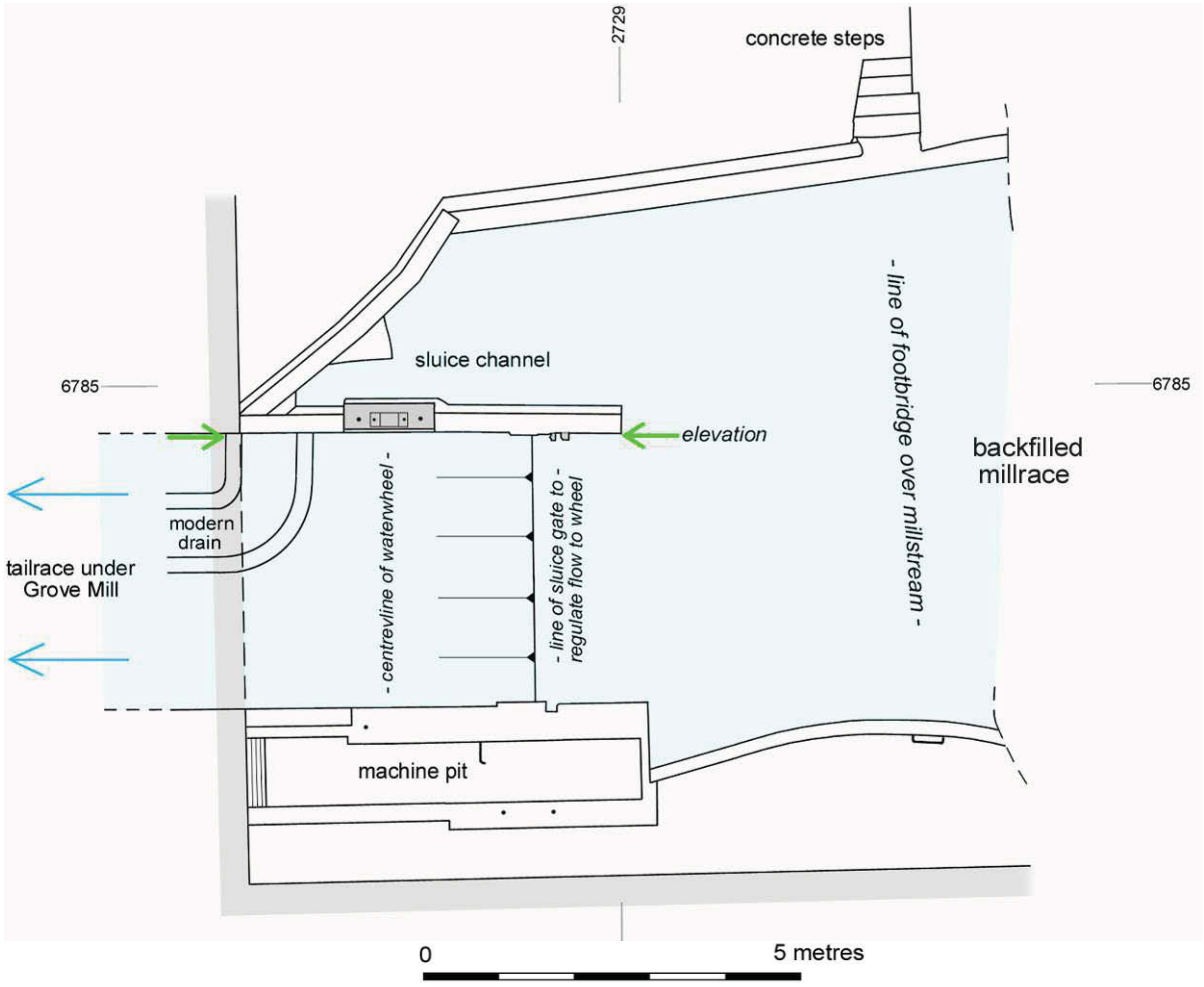


Fig 14 Plan of the 20th century wheelhouse and sluice channel on the eastern side of Grove Mill

Fig 15 Overhead view of the wheelhouse remains before full excavation. The 2m scale lies on the line of the sluice gate

Fig 16 The remains of the wheelhouse and machine pit, looking west towards the earlier part of Grove Mill *(2m scale)*. The central red brick blocking wall and window are also of 20th century date

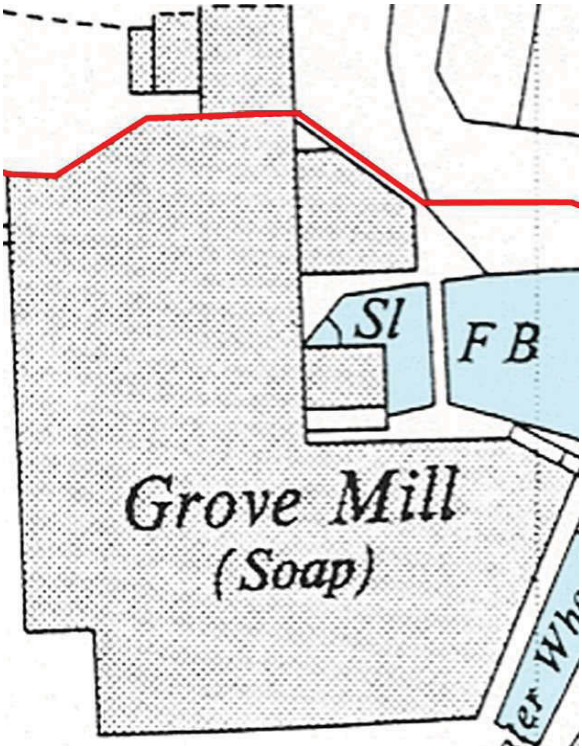


Fig 17 Ordnance Survey 1:1250 map of 1954 showing the wheelhouse, sluice and footbridge before backfilling

Fig 18 Concrete steps to the former footbridge on the northern side of the millrace

Fig 19 The northern side of the wheelhouse, partially infilled in the 1960s *(0.5m scale)*

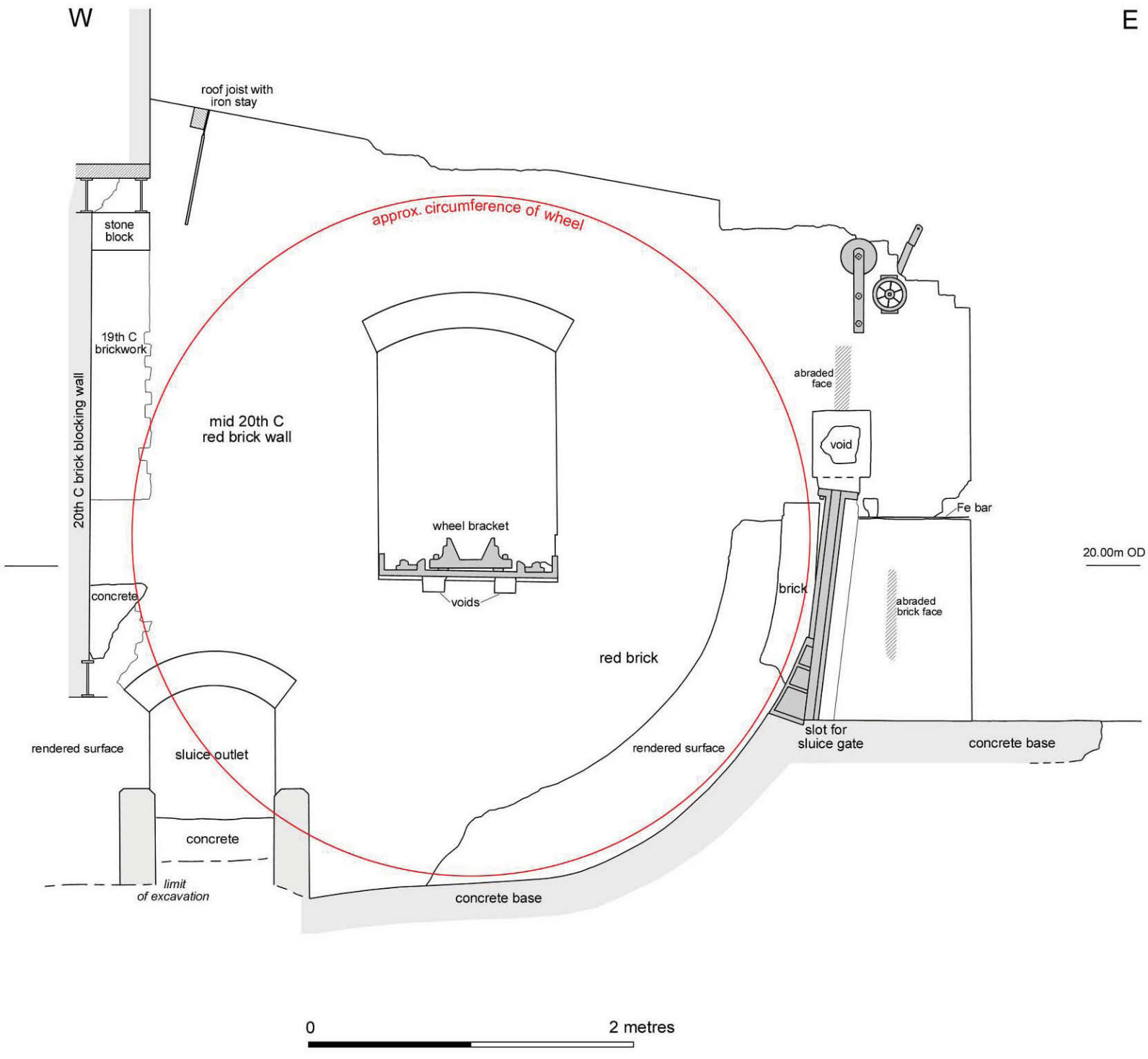


Fig 20 Elevation of the northern side of the wheelhouse after excavation *(see Fig 14 for location)*. The projected diameter of the waterwheel is 4.2m (13 feet 9 ins.) and width was *c* 3.7m (12 feet)

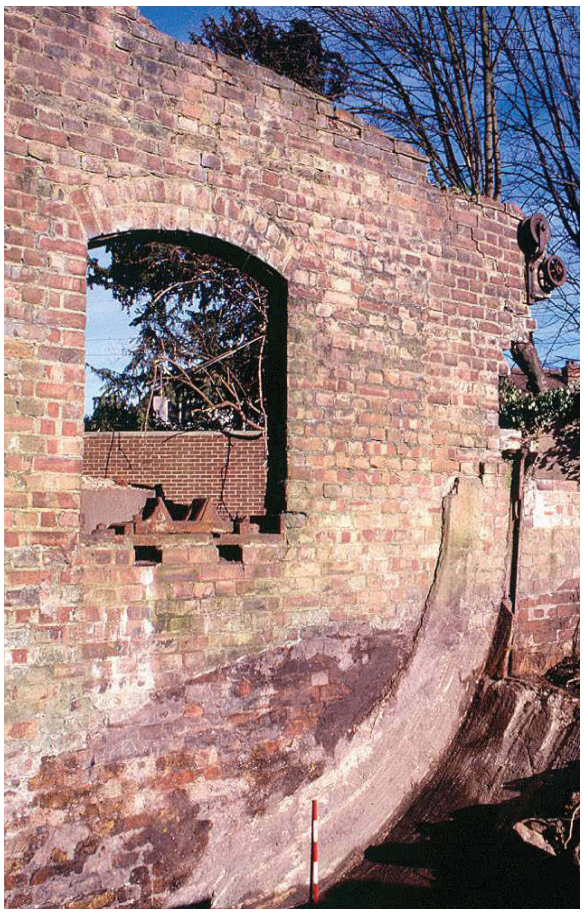


Fig 21 The northern side of wheelhouse after excavation *(0.5m scale)*

Fig 22 Remains of the sluice, including a cast iron channel for the gate

Fig 23 Cast iron bracket or plummer-block for the northern end of the waterwheel axle. A levelling bar for fine adjustment projects just to the right of the 0.2m scale

Fig 24 Machine pit on the southern side of the waterwheel *(0.5m scale; see Figs 14 & 17)*. The 19th century mill wall in the background has a blocked window to the left and smaller areas of blocking above the pit that would have taken the drive shaft from waterwheel

Fig 25 Northern and western faces of the single room later 19th century Building B *(0.5m scale)*

Fig 26 Interior of Building B, looking towards the west face and showing the minimal structure of the replacement roof

Fig 27 The western side of the 19th century Building C *(0.5m scale)*. The two door openings are original but the central window has been widened and those at either end are later insertions. The frame over the left-hand door previously held the sign *Mitcham Hair & Fibre Mills*

Fig 28 The eastern side of Building C, again showing later window insertions with concrete lintels and a blocked arched opening immediately to the right of the 0.5m scale. This wall previously fronted onto an open north-south channel

Fig 29 The roof construction of Building C, looking north. White paintwork is visible on several of the timbers, with a later lathe-and–plaster ceiling in the foreground

Fig 30 The northern gable end of Building C during demolition. This internal view shows the original full-height limewashed brick face, subsequently obscured by plasterwork and ceilings

Fig 31 Cast iron boundary marker 'Mitcham Parish' from just south of Building B *(0.5m scale)*

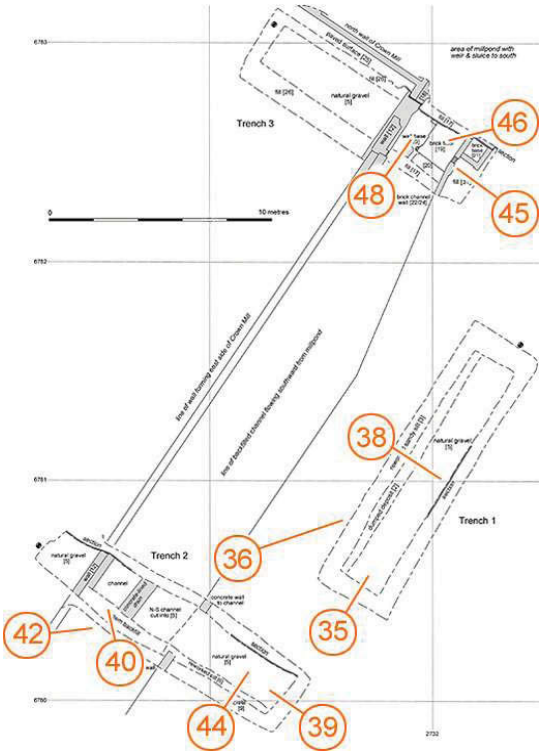


Fig 32 Location of evaluation Figs 35 to 48, related to the plan overleaf

Fig 33 Plan of evaluation trenches 1-3, showing principal features and section locations plus the projected line of Crown Mill and the adjacent backfilled channel

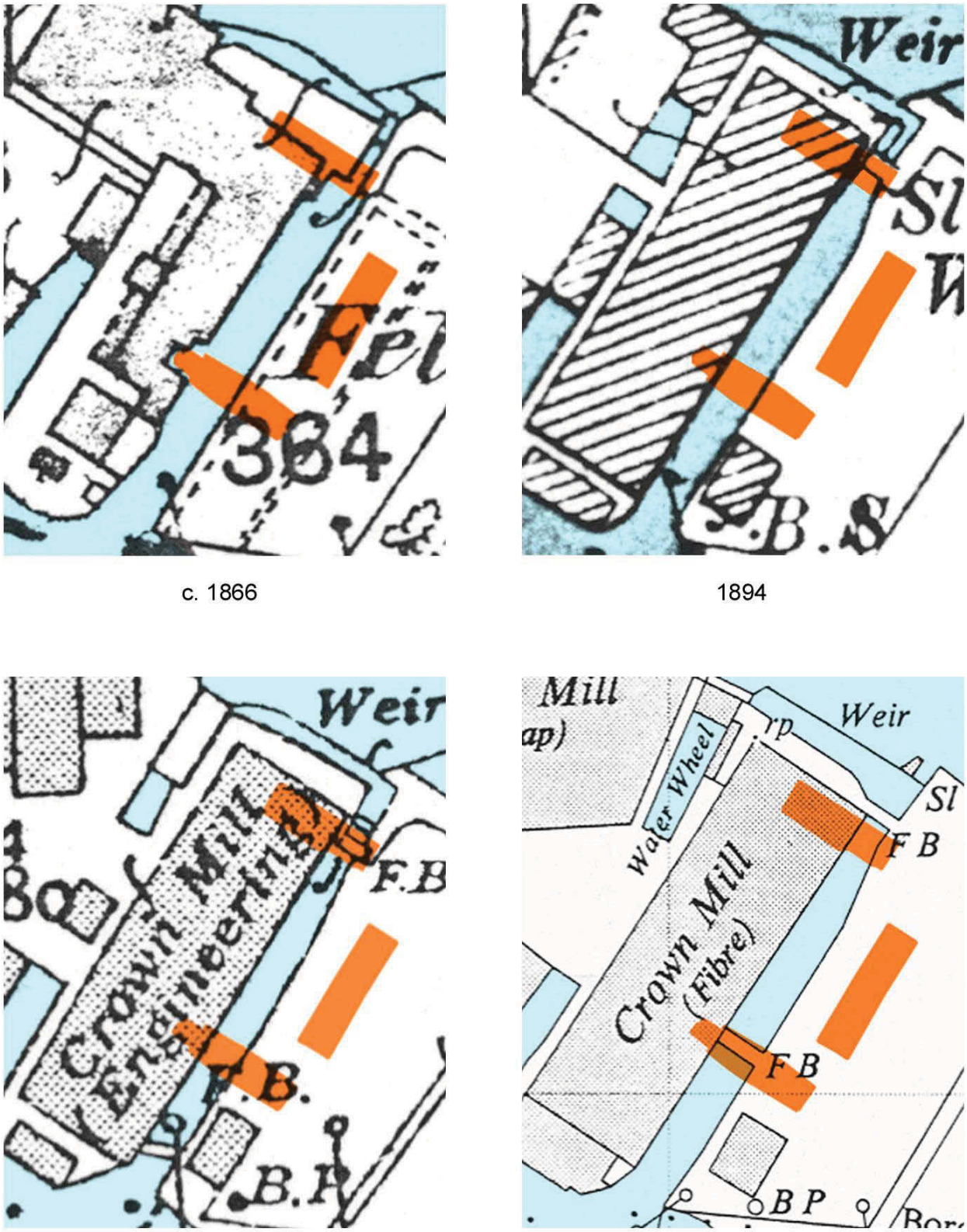


Fig 34 The evaluation trenches superimposed on Ordnance Survey maps surveyed *c.*1866 to 1953, showing their relationship to the water channel and associated features that lay to the east of Crown Mill

Fig 35 Trench 1 looking north. The central area has been excavated to natural gravel, with the dark grey surface of [3] visible in the step to left of the 0.5m scale (*see Fig 32 for location)*

Fig 36 Trench 1, looking towards the northeast corner of the site

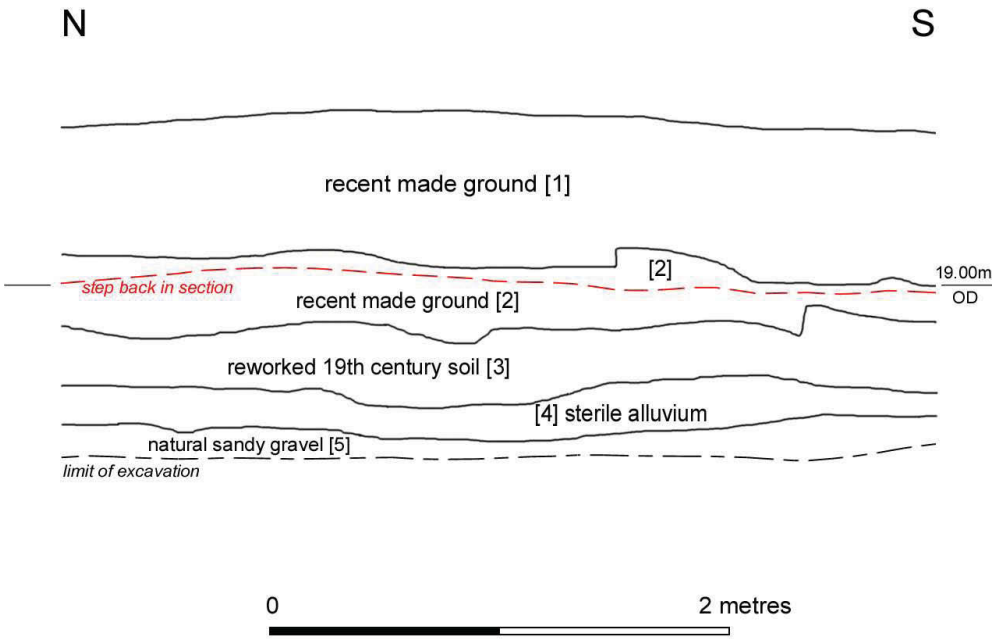


Fig 37 Section on the eastern side of Trench 1 *(see Fig 33 for location)*

Fig 38 View of the deposits shown in Figure 37. The surface of context [3] is approximately level with the top of the 0.5m scale, with recent made ground over

Fig 39 Trench 2 looking west. The foreground centre has been excavated to natural gravel, with the surface of [6] visible in the step to left of the 0.5m scale (*see Fig 32 for location)*

Fig 40 Trench 2, view across the backfilled channel to the east wall of Crown Mill *(0.5m scale)*

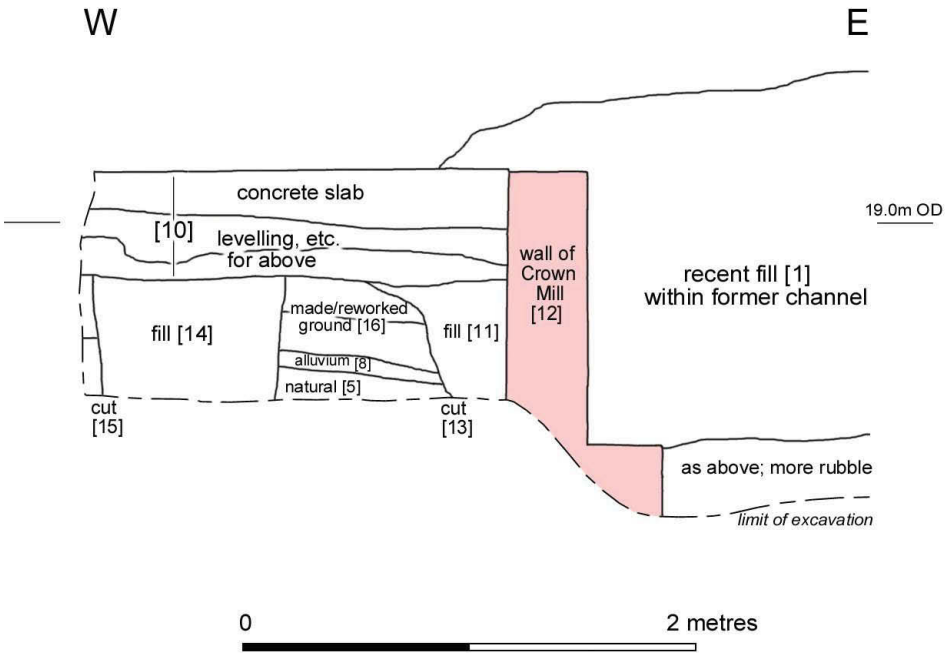


Fig 41 Section on the north side of Trench 2, western end *(see Fig 33 for location)*

Fig 42 Trench 2 looking northeast, with the deposits in Figure 41 visible in on the left hand side of the frame *(0.5m scale)*

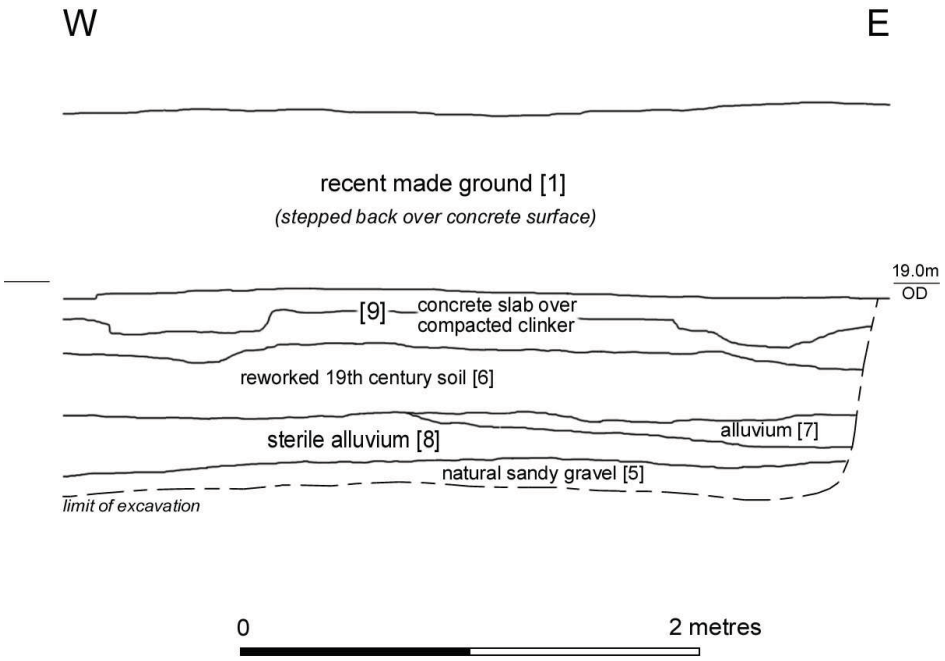


Fig 43 Section on the north side of Trench 2, eastern end *(see Fig 33 for location)*

Fig 44 View of the deposits shown in Figure 43. The surface of context [6] is just above the top of the 0.5m scale, with recent made ground and slab over

Fig 45 Trench 3 looking west across the brick channel floor [19], with the 0.5m scale resting on the foundation for the eastern wall of Crown Mill (*see Fig 32 for location)*

Fig 46 Trench 3 looking southwest. The frogged brick base in the foreground probably supported a footbridge, indicated on the map of 1894 and marked *FB* on those of 1910 & 1932 *(Fig 32)*

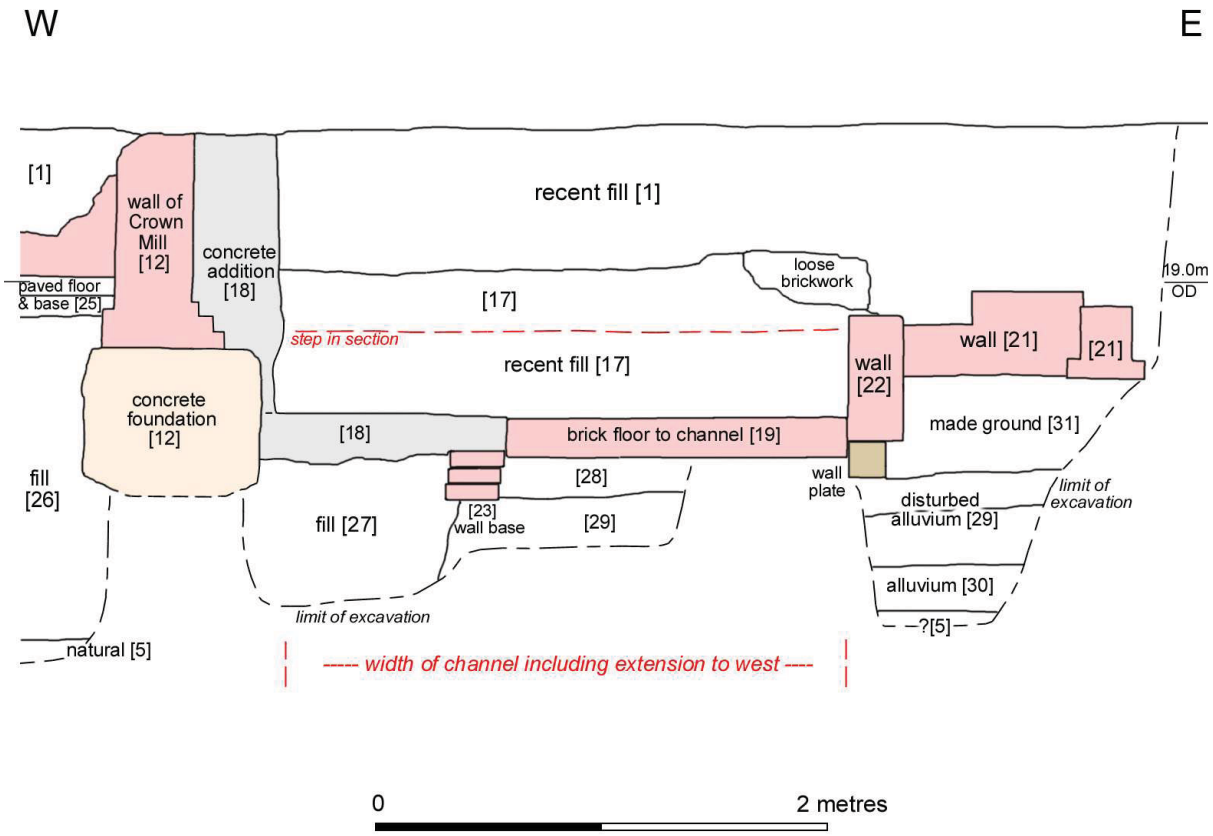


Fig 47 Section on the north side of Trench 3, eastern end *(see Fig 33 for location)*

Fig 48 View of the deposits shown in Figure 47, with the backfilled channel in the centre right of the frame and Crown Mill to the left *(0.5m scale)*

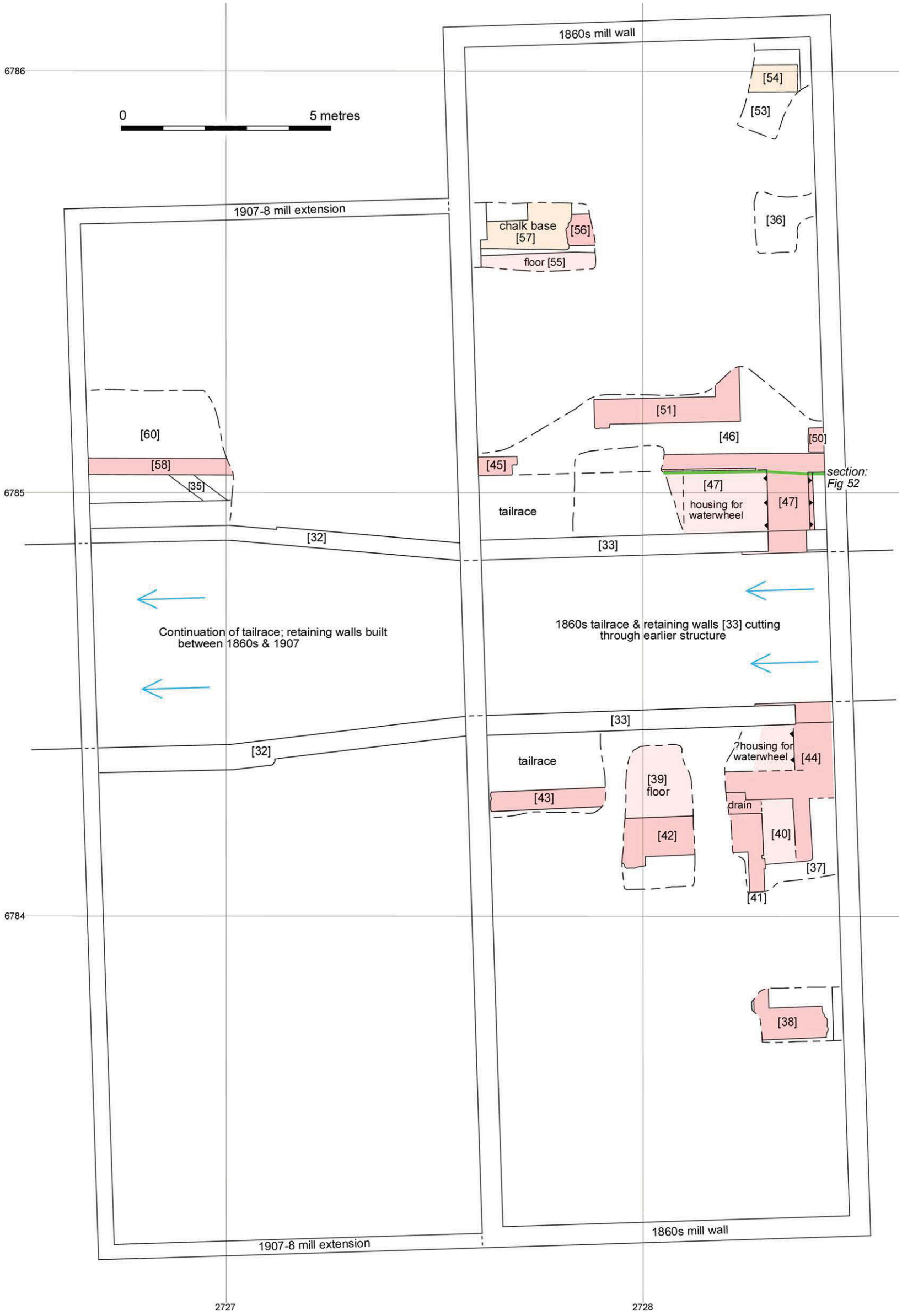


Fig 49 Plan of the principal watching brief findings within the standing structure of Grove Mill, and also showing the post-1860s tailrace downstream of the later external waterwheel (Fig 14, *etc.*)

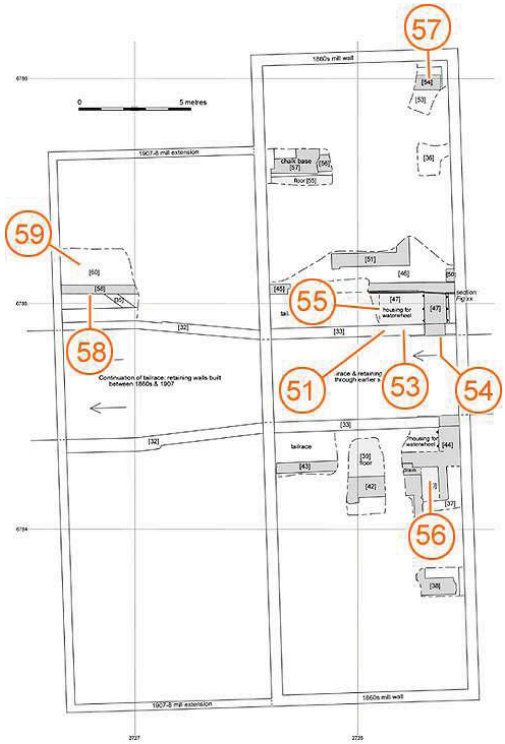


Fig 50 Location of watching brief figures 51 to 59, related to the previous plan

Fig 51 Northern side of the waterwheel housing [47], looking northeast *(0.5m scale)*

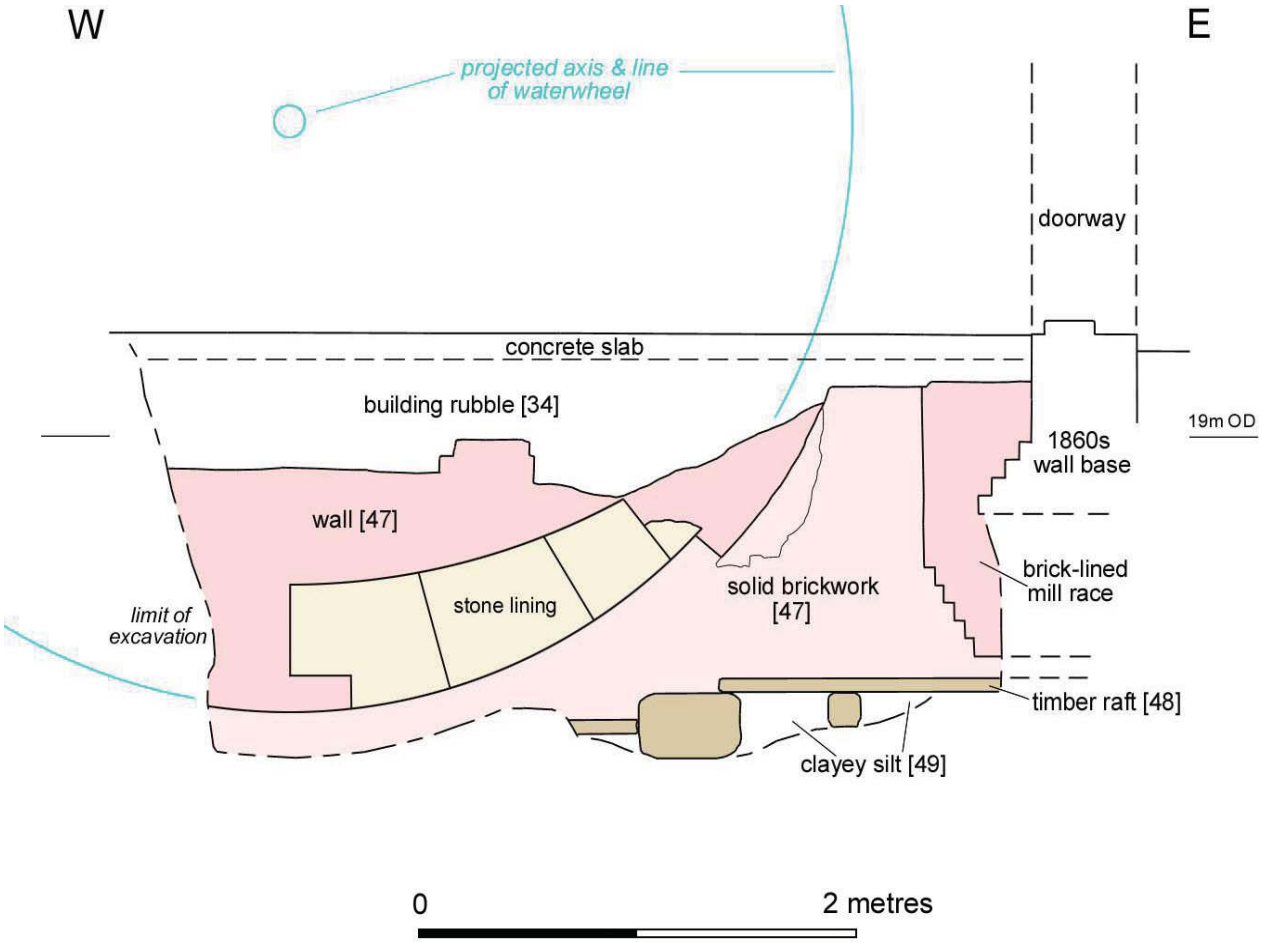


Fig 52 Elevation and section along the northern side of the waterwheel housing [47] *(see Figure 49 for location).* Projected diameter of the waterwheel is approximately 5m (16 feet 6 ins.)

Fig 53 Detailed view of the structure shown in Figure 52 *(0.5m scale)*

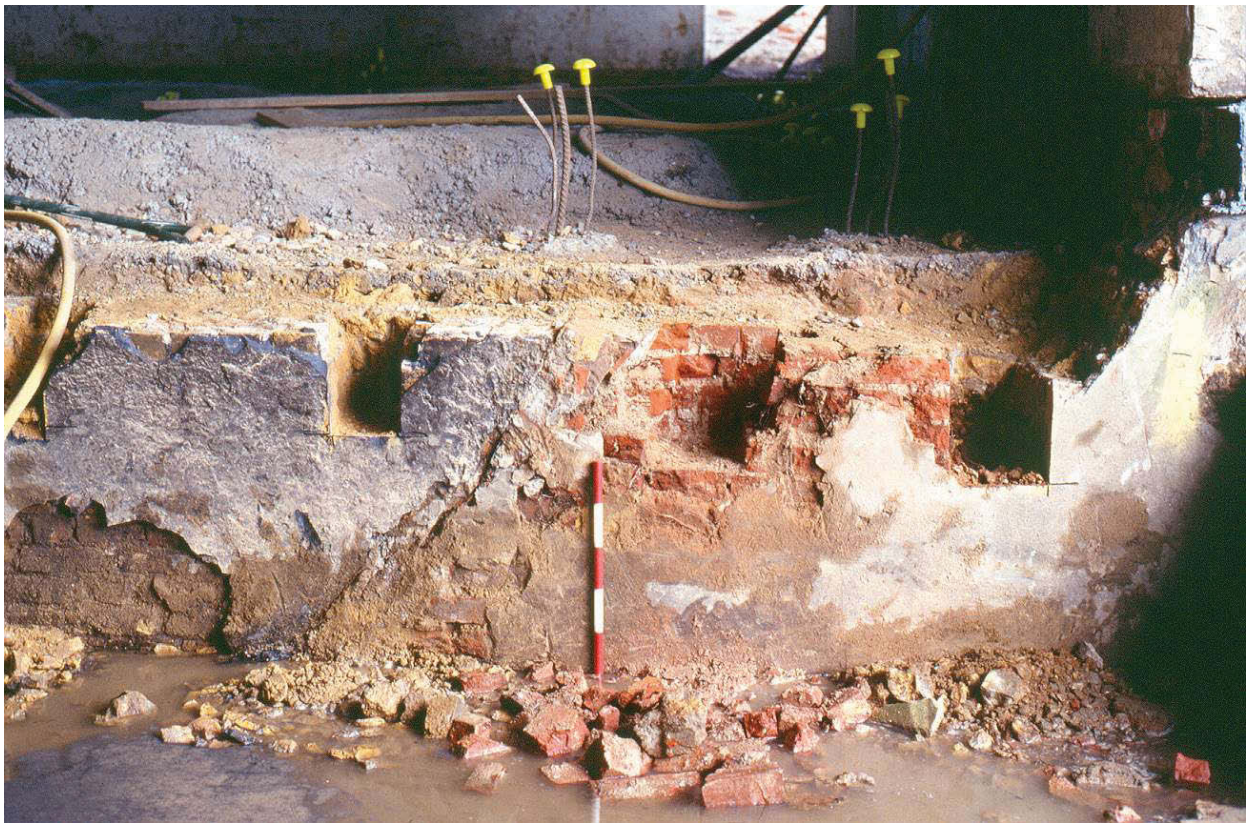


Fig 54 The truncated southern side of the red brick structure [47], incorporated into the 1860s yellow stock wall [33]. The line of the earlier waterwheel is visible just to the left of the 0.5m scale

Fig 55 Exposed oak plank foundation [48] below the eastern end of the wheel housing [47]. Immediately behind the 0.5m scale and below the present Mill wall is the infilled millrace

Fig 56 Brick foundation [40], overhead view from the north with wall [41] on the right of the frame *(0.5m scale)*

Fig 57 East-west chalk wall footing [54] *(0.2m scale)*. This probably represents the northern extent of the 18th century mill. The s brick footing of the present Mill is on the left of the frame

Fig 58 East-west brick wall [58] over chalk block footing, forming the northern side of the tailrace. This section appears to have remained in use for some time after the construction of the 1860s Mill, the base of the oblique wall [35] being just visible on the right-hand edge of the frame *(0.5m scale)*

Fig 59 Oak post forming part of the foundation for the planked surface [60], below the ?later tailrace wall [58] *(0.2m scale)*

Appendix I. Report on the post-medieval pottery

Lucy Whittingham (MoLSS)

1. Methodology

The assemblage contains 22 sherds (2.37 kg), almost all of 18th and 19th century date. All sherds have been identified with reference to the fabric type series established by the Museum of London Specialist Services (MoLSS). Quantification for this assessment has recorded sherd count, weight (gm) and Estimated Number of Vessels (ENV). Each of the six contexts contains small assemblages of less than seven sherds. The majority of vessels are not well preserved though it is still possible to identify most of the forms present in this assemblage.

The quantified data has been recorded on an Excel spreadsheet and is attached to this report for inclusion in the site archive (Table 1 below).

2. General characteristics of the assemblage

The post-medieval assemblage ranges in date from mid 17th to early 20th century date. There was no medieval or earlier material.

The earliest piece is a fragment of London-area post-medieval slipped redware with green glaze (PMSRG), from context [53]. This is from an open vessel form, such as a dish or bowl, with white slip and copper glaze on the internal surface.

The majority of the assemblage is later in date, ranging from the mid 18th to the late 19th century. Mid 18th century material is represented by a dish/plate fragment of Staffordshire white salt-glazed stoneware (SWSG) dated 1720 to 1780. Refined industrial earthenwares of the mid 18th century onwards are represented by Creamware (CREA) and Refined white earthenware (REFW). All of these fragments are of tablewares; plates with flanged rim, dishes and the rim of either a Creamware cup or jug. An English porcelain (ENPO) plate fragment is of late 18th or 19th century date. Local London products of a similar 18th and 19th century date are represented by London Stoneware and by red earthenware vessels, although the stoneware fragments are undiagnostic. The red earthenwares are represented in a range of domestic wares, flanged dishes with lid seated rim, chamber pot and flower pots.

The assemblage is typical of a domestic household containing a range of tablewares and hygiene vessels in red earthenwares, tablewares in refined white wares such as Creamware, white salt-glazed stoneware and refined white earthenwares and possible drinking or serving vessels in London stoneware.

Products of late 18th and 19th century date include the following: Transfer-printed Pearlware (PEAR TR2) bowls and plates, slip-decorated Pearlware (PEAR), an English Stoneware pot lid and blacking bottle, developed Creamware (CREA DEV) bowls, Transfer-printed Ware plates, cups and bowls in blue and coloured transfers (TPW2, TPW4) and Yellow ware bowls (YELL). These are all typical domestic vessel forms used as tableware and in kitchen/food preparation.

The one example of earlier post-medieval material is associated with context [53], where it is in rather disturbed deposit just to the south of the chalk wall base [54]. The five other contexts in this assemblage are contemporary with the 18th and 19th century features in which they are found, and with one exception were recovered from the evaluation area in the eastern part of the site. The post medieval redware dish in context [52] is of a form which could be of late 18th or 19th century date, associated with the post-1789 rebuild of Grove Mill. The assemblages in context [28] and [29] are of a late 18th or early 19th century date, and could be slightly earlier than the 19th century assemblage in contexts [3] and [6].

3. Potential and recommendation for further work

There is little potential for further research on this assemblage.

No further work is therefore recommended, other than integration with the site report as a record of the ceramic artefacts from the site.

Context	Size	Fabric	Form	rim form	diam (mm)	eve	Decoration	Sh	ENV	Wt.	Comments	Date range	Spot date
3	S	PMFR	CHP1	evt folded	220	10		2	1	22	ld glaze int	1580-1900	
3	S	PMFR	FLP	rolled	130	15		2	1	9	rolled rim	1580-1900	
3	S	PMFR	FLP	thickened	120	10		1	1	5		1580-1900	
3	S	LONS						2	2	13		1670-1926	
3	S	CREA	CUP/JUG	rolled	60	6		1	1	1		1740-1830	
3	S	REFW						2	2	3		1805-1900	1805-1900
3	S	REFW	PLATE				spng/linear	1	1	1		1805-1900	
3	S	ENPO	PLATE					1	1	7		1745-1900	
6	S	REFW	PLATE	flange				1	1	7		1805-1900	
6	S	TPW FLOW	SAUC	plain	180	3		1	1	1		1830-1900	1830-1900
6	S	TPW2						1	1	1		1807-1900	
28	S	SWSG	DISH/PLATE					1	1	9		1720-1780	
28	S	CREA	PLATE					1	1	7		1740-1830	1740-1830
28	S	CREA	DISH					1	1	5		1740-1830	
28	S	PMFR						1	1	22	ld glaze int	1580-1900	
29	S	CREA	DISH					1	1	9		1740-1830	1740-1830
52	S	PMR	DISHFLNG	lid seated	420	8		1	1	100		1580-1900	1580-1900
53	S	PMSRG						1	1	15		1480-1650	1480-1650
Totals								**22**	**20**	**237**			

Table 1: Detail and quantification of pottery finds (Sh = sherd count; ENV = estimated number of vessels)

Appendix II. Building materials assessment

Terence Paul Smith (MoLSS)

1. Introduction

The building materials were recorded using standard Museum of London (MoL) recording sheets and MoL fabric numbers. Fabrics were examined microscopically (×10). The non-specific fabric number 3498 has been used for bricks not represented in the Museum of London fabric collection; these have also been given the site-specific fabric numbers 1 and 2. The data have been entered into an Excel database: *gcm04\bm01.xls*.

2. The materials

The materials present are shown in summary form in Table 1:

Material	No.
Stone moulding	1
Brick samples	26
Pantile fragment	1

Table 1

3. Bricks

Bricks were sampled from a number of contexts, as shown in Table 2:

Context	Sample(s)
[19]	1
[22]	2
[23]	3
[41]	5
Junction: [42]/[44]	6
[47]	9, 10
[50]	15
[51]	11, 12
[55]	7
[58]	13, 14

Table 2

3.1 Fabrics

Brick fabrics are shown in Table 3:

Fabric no.	Description
3032	Red/plum, hard with some calcium carbonate and with black burned organic inclusions and voids
3033	Orange or red, fairly sandy and soft
3046	Sandier version of 3033
3498: *Fabric 1*	Red, fairly sandy with some calcium carbonate and a little mica
3498: *Fabric 2*	Orange-red, moderately sandy with silty inclusions and bands

Table 3

3.2 Features and dating

Suggested dates for the brick samples are given in the Excel database *(Table 4 below)*. They must be regarded as tentative, but are based on the following criteria: fabric, brick thickness, general appearance including sharpness of arrises, forms of pressure marks (accidental effects of stacking for drying), and presence in some cases of kick-formed frogs in a lower bedface.

The oldest bricks are those in fabrics 3033 or 3046. Two of the four from wall [51] may be of Tudor date, although one has a pressure mark: these are rare on such bricks and a 17th century date is therefore more likely. If this wall is part of the 1789 rebuild, then older bricks were presumably reused in its construction. The same holds for the drain at the junction of walls [42] and [44] and for wall stub [50], since one sample from each is also probably of 17th century date. That from context [50] has a quite deep diagonal pressure mark.

The other sample from the drain at the junction of walls [42] and [44], in fabric 2 and with quite sharp arrises, is probably of 18th century date, as is one from the lower part of wall [58]. The latter has a diagonal pressure mark.

All other brick samples – from contexts [19], [22], [23], [41], [47], [50], [51], [55], and [58] – are of late 18th century date at the earliest and in some cases much more probably of 19th century date. Those from contexts [19-23] may be later than the remainder of the group, which all predate the 1860s reconstruction of Grove Mill. Some are in fabric 3032, which was in use within the London area from *c* 1670 down to recent times; others are in fabric 1 or fabric 2.

These bricks show sharp arrises, and some have lateral pressure marks – a later form than the diagonal pressure marks mentioned above. Those from contexts [19], [23], and [58] have kick-formed frogs in their lower bedfaces – that is, frogs formed by a negative affixed to the stockboard on the moulder's bench. One sample from context 41] has a burned header face. All the bricks assigned this late date are quite thick. In length they range from 215mm to 231mm (median 224mm), in breadth from 100mm to 112mm (median 104mm), and in thickness from 63mm to 70mm (median 66mm); such thicknesses, equivalent to imperial 2½–2¾ inches, are typical of 19th century products.

4. Pantile

A fragment of pantile in fabric 2279 comes from the probable mid 19th century deposit [26]. Pantiles were very occasionally used in England in the late 16th century, became much more common in the 17th century, and persisted down to the early 20th century. Their status in the London area was not high and they were frequently used on industrial buildings.

5. Stone moulding

A stone moulding from the waterwheel housing (context [47]) is in oolitic limestone. It is dressed with coarse boasting and has a rabbet cut down one face. This purpose of this latter (as briefly observed on site) was evidently to secure the stone in position, the cut-out portion being towards the exposed face at the base and overlain by brickwork. Intrinsically the stone is impossible to date but appears to be part of the 1789 rebuild.

6. Potential and Significance of the Material

Most of the bricks are of late date – late 18th century at earliest and more probably of 19th century date – and are thus broadly consistent with the known history of the site. Some, however, are of earlier date and were presumably reused. In its turn this fact points to earlier brick building activity within the vicinity of the site, if not actually upon it.

The pantile fragment is a meagre piece and of little potential or significance, although it is certainly consistent with the utilitarian nature of the site.

The stone moulding illustrates the use of good quality stone even in an industrial site, and brought from some distance on the Limestone Belt.

7. Further Work

No further work is required on the building materials themselves. For publication, data from this assessment may be incorporated within the text by the principal author(s).