

## Chilworth Gunpowder Mills - Middle Works

# Assessment of Building Sequence

## West Lodge

Blacksmith Lane, Chilworth, Surrey  
(Building No 46 English Heritage Survey 2003)  
NGR TQ 02485 46477



West Lodge and Entrance Gates as approached from Blacksmith Lane

10th August 2016 © Andrew Norris

Andrew Norris  
September 2016



Chilworth Gunpowder Mills Group

## West Lodge - Assessment of Building Sequence

(Building No 46 English Heritage Survey 2003)

### Introduction

The West Lodge building(s) is to the east side of Blacksmith Lane at the west (main) entrance to the Chilworth Gunpowder Mills Middle Works site originally serving as an entry control point.

Following closer inspection in August 2016 it became apparent that the building had not been extended, but rather later connected to an independent closely adjacent building of two rooms by the insertion of a link structure.

It is argued below that the supposition that West Lodge was extended after 1920 is incorrect, and that the structures that make it up were all in use as part of the entry control function until the works closed in 1920.

This paper has been peer reviewed by Wayne Cocroft of Historic England (formerly English Heritage) and Glenys and Professor Alan Crocker, who have agreed the conclusion that all of the structures making up West Lodge were built for, and in use by the Gunpowder Mills some years before the site was closed in 1920.

### Background

The Chilworth Gunpowder works site is of historically of three areas, comprising from west to east (along the river Tillingbourne) the Lower, Middle and Upper Works. The earliest C17th mills (starting 1626) were to the Lower and Upper Works, expanding in the mid C17th century to form the Middle Works to the east side of Blacksmith Lane. At various times the Middle Works were subsequently extended eastward beyond Lockner Lane along the Tillingbourne towards Postford. Over the years many older structures were modernised/upgraded as the technology improved, and a number of new structures built around the site, one such being West Lodge.

The Middle Works are Scheduled (Schedule Monument No 31397), with Guildford Borough Council owning the section between Blacksmith Lane and Lockner Lane. However, whilst being an integral part of the historic Middle Works, West Lodge (structures and garden land) is not included in the scheduled area, but is Listed at Grade II (List Entry No 1377757, first listed 21 May 1988, NGR ref TQ 02486 47476).

The Listing entry reads:

TQ 04 NW  
431/4/88

ST MARTHA

BLACKSMITH LANE  
CHILWORTH  
WEST LODGE

Lodge to gunpowder works; now house. LateC19. Flemish bond brick, brick ridge stacks and gabled tiled roof

PLAN: Single-depth 2-room house with single-room gatehouse attached.

EXTERIOR: Single-storey, 1-window gatehouse and 1-window house behind. Lower gatehouse has a gable end with left corner canted and two 3/1-pane sashes, blocked doorway in left return, and a chimney at rear right. The house has gable ends with rough-cast and exposed trusses and single casements, a later porch in the re-entrant with the gatehouse, a gabled bay window to the left, and blind rear.

INTERIOR: Not inspected.

HISTORY: Chilworth gunpowder mills operated from the early C17 until it closed in 1920, and is one of the most important sites for the history of the industry in this country. From 1885 it started producing smokeless powder under the control of a German company, Burbach\*, who invested in new plant and buildings.

The gatehouse is from this period, and overlooked the entrance to the E part of the works. (Crocker, G, Gunpowder Mills, Surrey Industrial History Group, 1984)

13/12/01 signed by Paul Johnson, Department of Culture, Media & Sport

(\* This reference is incorrect as Burbach was a German steelwork manufacturer. The company was the Chilworth Gunpowder Company, a subsidiary of a German Company).

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Whilst the above indicates that the whole of West Lodge is from the period 1885-1920, this is varied in the Professional Papers of the 2003 English Heritage Survey which states "*Probably during the 1920s, and certainly by 1934, it was enlarged and converted into a cottage by the addition of two room extension butted onto its eastern end*". Subsequently Oxford Archaeology's Conservation Management Plan 2011 for Guildford Borough Council re-expressed this as "*Probably during the 1920s, and certainly by 1934, it was enlarged and converted into a cottage by the addition of two room extension butted onto its eastern end*".

It is known that a number of the buildings of the Middle Works were adapted into homes from sometime in the 1920s (at a time of nationally desperate housing shortage), including the erection of a few bungalows, and that the last of these were demolished in circa 1963 as people were re-homed in more suitable accommodation. West Lodge is a sole survivor, remaining in use until very recent years. I believe this led to an incorrect supposition that the building was enlarged after 1920.

### Map Information

Another factor in a supposition that the building was enlarged after 1920 arises from possible misplaced reliance on the accuracy of the 1922 Sale Plan. This plan can be readily seen to be a graphic or illustration of the site indicating the location of various structures, not consistent with the Ordnance Survey Maps in scaling, boundary positions, building sizes and orientation. In particular, the shape of building 46 (West Lodge) is shown as a rough rectangular shape, more resembling the "enlargement", and longer than the original lodge building.

As the 1916 Ordnance Survey map shows the whole of the Gunpowder Works blanked out (for security), the sale map was likely to be based on earlier (pre WW1) mapping rather than re-survey. This raises the probability that the "enlargement" of West Lodge (after the 1896 Ordnance Survey map) was simply overlooked in preparing the illustrative layout plan. This is further suggested by the boundary being shown to the north side of West Lodge, rather than to the south of it as shown consistently on the 1916 and 1934 Ordnance Survey maps.

The 1870 Ordnance Survey map appears to show a small structure adjacent to the entrance way albeit at a slightly different orientation. A line across the entrance to the east of this seems to correspond with the position of the present iron entrance gates. This suggests to me that any structure that existed at that time already served to control access.

The original Entrance Lodge part of West Lodge appears to have been built by the time of the 1885-8 Estate map and is shown on all subsequent maps, with the "enlargement" not being shown until the 1934 Ordnance Survey Map.

However, on the 1916 Ordnance Survey map the boundary by West Lodge is shown re-aligned for a short distance corresponding with the position of the "enlargement", this re-aligned position being maintained on the 1934 Ordnance Survey map. This points to the "enlargement" of West Lodge having already been made by the time of the 1916 Ordnance Survey map, but for security omitted from the map together with all other structures and detail within the Gunpowder works.

### The Building/s

The original Entrance Lodge (Phase 1) is contemporaneous with the Factory Office and Laboratories (building 47 of the Lower Works site), both consistent with the late Victorian period (1880s). The external walls appear to be of typical solid approx 230mm thickness, utilising approx 230x110x75mm bricks laid in Flemish bond, and with window sub-cills being flush with the wall faces. (Another contemporary feature to both buildings is the provision of curved steel tubular protective guard-rails a short distance from wall faces).

The later 2-Room "enlargement" section (Phase 2) appears to have been built initially as an independent structure with a gap of approx 500mm between it and the original Lodge, and with the respective tiled pitched roofs not being connected. The external walls of this building differ from those of the Lodge, having solid approx 230mm thick external walls utilising approx 230x115x67mm bricks laid in Flemish Garden Wall bond except for the brickwork apron to the square bay window structure to the north side of the east room which is of only single skin (approx 115mm) thickness.

The architectural style of this later part is typically Edwardian (pre WW1) probably reflecting an organisation able to afford a good standard (of its time) of construction, much less likely to have been applied in the hard economic climate of the 1920s. The internal roof framing of this part comprises rafters (laid flat) with slender purlins and raking struts whereas mock (decorative) king post roof framing has been used to the gable elevations as noted in the English Heritage Survey professional papers of 2003.

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## Chilworth Gunpowder Mills - Middle Works

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With expansion of the works from 1885 including the introduction of production of the then new "smokeless powder", and unrest in Europe from the middle of the first decade of the C20th increasing the importance of security, it is considered very probable that offices perhaps with overnight staff accommodation was needed to support the Entrance Lodge function, and thus the building of this additional structure (inside the entrance gates).

Probably due to the inconvenience of having to leave one building to go to the other, it appears that the link (Phase 3) structure was inserted between the buildings only a short time after. This has only approx 115mm thick brick walls laid in stretcher bond, the bricks appearing to be from the same source (same colour, texture and size) of the 2-Room section. Where this link meets the 2-Room section it can be seen that the original brickwork has been cut into at alternate courses to facilitate full toothing and bonding in of the new brickwork.

However, where the link meets the Lodge building it was not possible to achieve such neat bonding as the bricks to each structure differ in size, the courses not coinciding. Consequently, the new brickwork was bonded to the old by block bonding.

The floor level of the "enlargement" section (Phase 2) is higher than to the original lodge part (phase 1), with the lobby floor being at an intermediate level between them. This further points to the "enlargement" section (Phase 2) having been built as a separate structure, the subsequent link (phase 3) having steps at the doorways to accommodate the changes in level.

The roof of the link is of very shallow mono pitch, falling to the north. By comparison with the other structures it is crudely formed reflecting compromise to suit the situation, which is unlikely to have arisen had it been part of an original design.

It is thought that the external door opening to the north side of the link part was formed (cut in) when the use changed after the sale of the site (Phase 4 after 1922) as it is considered unlikely that such a narrow (580mm) wide opening would have been used at the time of building of the link.

The bricking up of the doorway to the north side of the Lodge part is most likely to have been during adaptation of the property for residential use (Phase 4) post sale. (This bricking up may have necessitated the later insertion of the external door to the link, as above).

Given the foregoing, it is hard to see why anyone wishing to create a new dwelling after closure of the site would have chosen to extend the Lodge building to create the now existing plan form in preference to simply building a new detached bungalow behind (to the east of) the Lodge. However, to later convert/adapt that which already existed by that time would be logical and more plausible.

#### The Entrance Gates

The first indication of entry control and perhaps gates is a line shown across the entrance next to a possible small building (as mentioned above) on the 1870 Ordnance Survey Map. The construction of the iron gates was closely reviewed during their conservation and repair in 2009 revealing tenon, hammer welding and riveted joints. Their design is very much the same as used in railway infrastructure, either re-used from railway use or purpose made for the site, and possibly of the 3rd quarter of the C19th.

It was noted that the gate-posts (stanchions) were not the originals but of steel (marked Dorman Long), the originals probably having become very corroded where set in the ground and needing replacement many years ago and possibly when the Entrance Lodge (phase 1) was built. The composition of a pair of vehicle gates and a separate pass gate (all lockable) suggest the gates being bespoke for this entrance.

To the east edges of the stiles of the gates, small holes suggest that the rear (internal face) of the gates were at some time clad with sheet metal, used to improve security by making climbing more difficult, and/or to limit sight into the works. It is considered likely that this work was carried out at about the same time as the building of the "enlargement" section (phase2).

The positioning of the pass gate to the rear (NE) corner of the Lodge building emphasises the close relationship between the gates and the building. Indeed, it is my view that the gates ought to be included in the Scheduled area, if not already. Further, this relationship has implications for the Listed status of West Lodge, the two together being a historic composition to be maintained.

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### Summary

Comparison of the Ordnance Survey and estate Maps show the original Lodge Building having existed at least by 1885 and remaining unchanged in 1896. A change in the boundary alignment to the south of the original Lodge building as shown on the 1916 and 1934 Ordnance Survey Maps point to the "enlargement" of the Entrance Lodge having been carried out by 1916, although the additional structure was not shown until the 1934 edition.

As only a graphic or illustration of the site indicating the location of various structures, the 1922 Sale Plan is inadequate for use in dating the building sequence of West Lodge.

Examination of the respective elements of the West Lodge structures present a clear and logical building sequence of the original Lodge existing before 1885 (phase 1), being followed probably in the first decade of the C20th by a separate rectangular structure (Phase 2), in turn soon followed by a link between the two (Phase 3). The building(s) were then adapted for residential use after sale of the site (1922).

Therefore, I submit that all of West Lodge together with the entrance gates was part of the Gunpowder Mills works prior to the site closing in 1920, and of particular security relevance in the last decades of its operation. Consequently it would be inappropriate to regard later parts of it, or the entrance gates, as of lesser significance or importance.

Andrew Norris DipBS FRICS(retired)

September 2016

### Peer Review

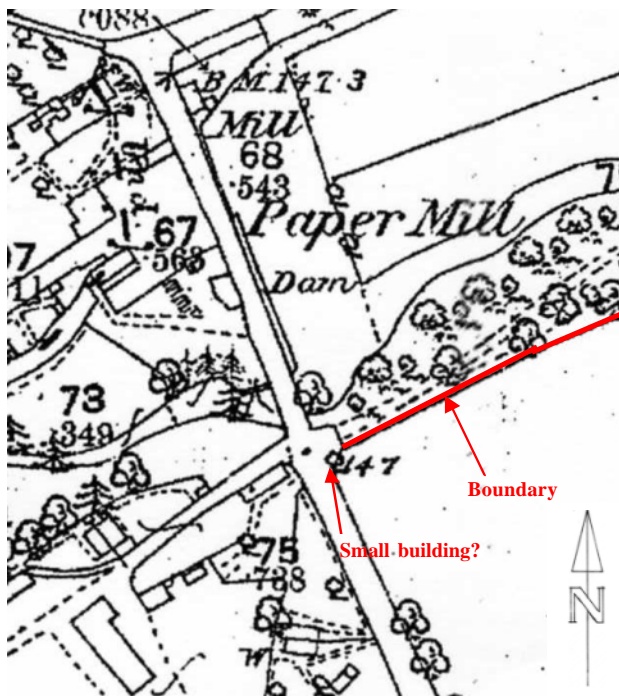
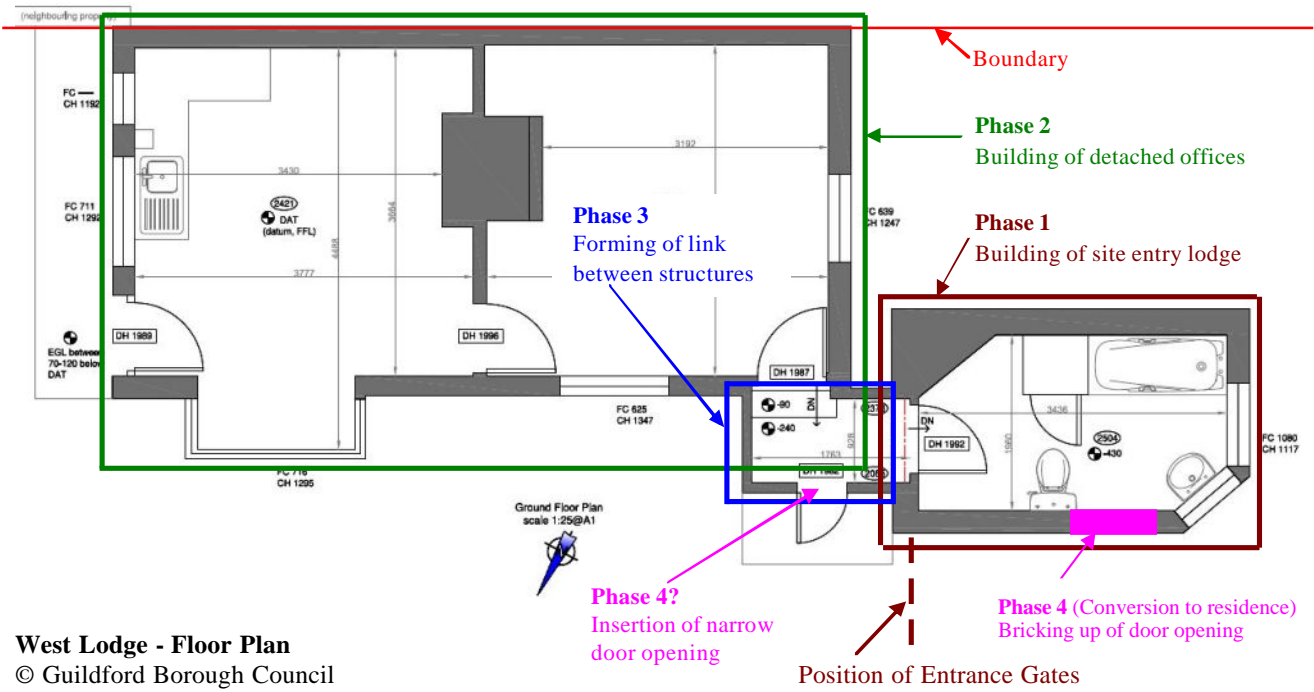
*Wayne Cocroft, Historic England*

*Glenys & Prof Alan Crocker*

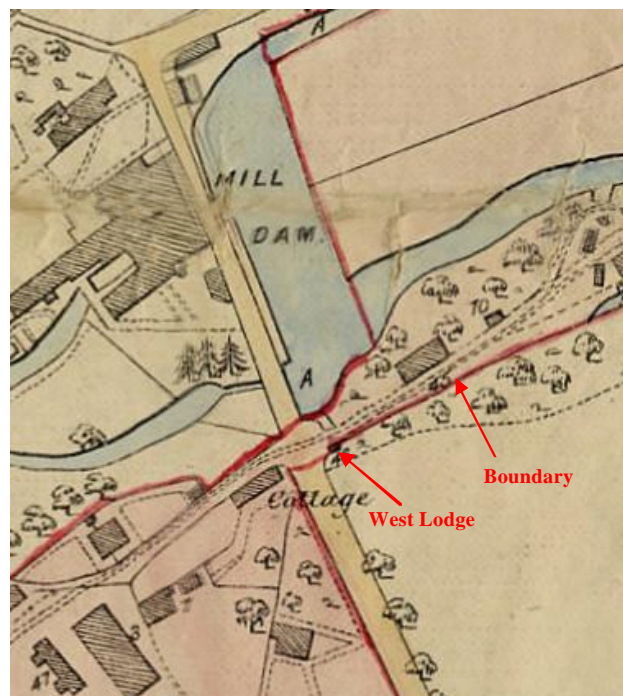
### Sources

- *Chilworth Gunpowder Mills, Wayne Cocroft, English Heritage Survey 2003*
- *Damnable Inventions, Glenys & Alan Crocker, 2000*
- *Chilworth Gunpowder Mills, Conservation Management Plan, Vol 3: Gazetteer, Oxford Archaeology 2011*
- *The Edwardian House, Helen Long, 1993*
- *Ordnance Survey maps of 1870, 1896, 1916 and 1934*
- *Sale Plan 1922*
- *1885-8 Estate Map, Warner Collection, Surrey Archaeological Society*
- *Drawing No EX1A of West Lodge, prepared by Philips Chartered Surveyors for Guildford Borough Council 2012*

**West Lodge - Assessment of Building Sequence**  
 (Building No 46 English Heritage Survey 2003)



1870  
 Ordnance Survey

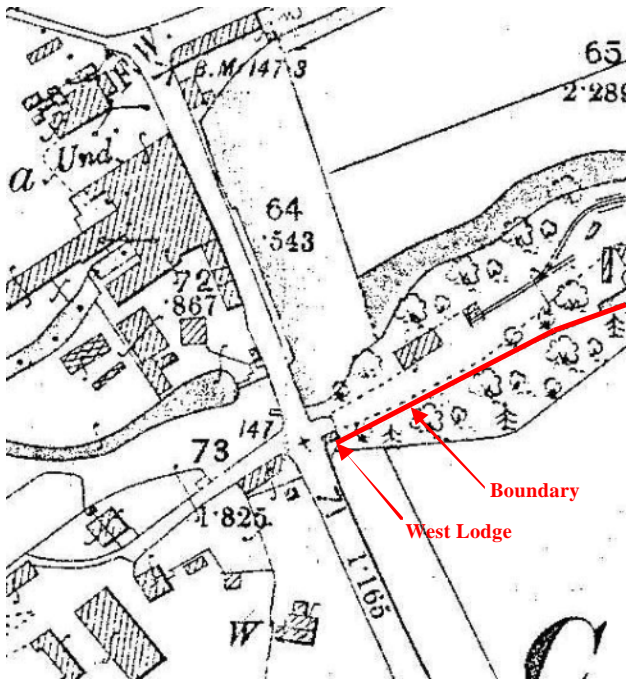


1885-8  
 Estate Map, Warner Collection

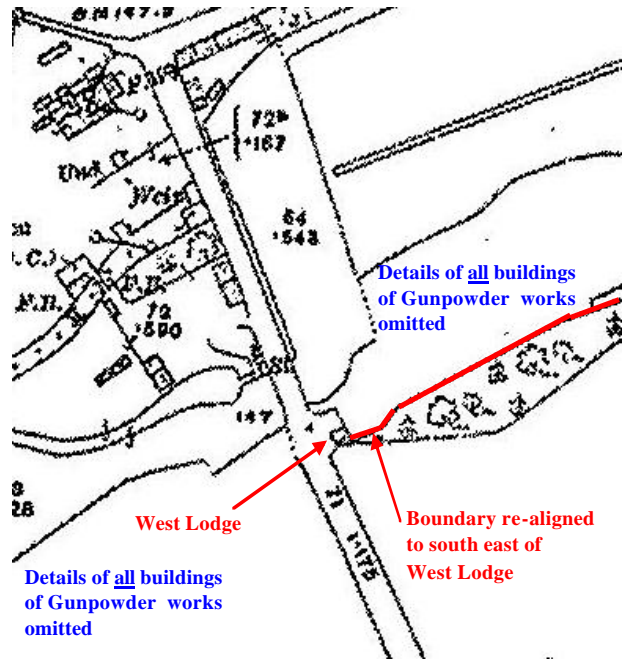
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**West Lodge - Assessment of Building Sequence**  
(Building No 46 per English Heritage Survey 2003)

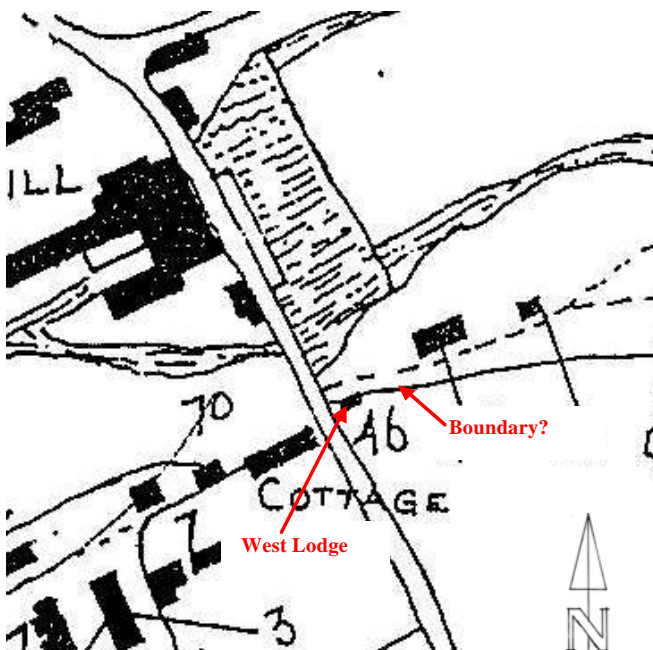
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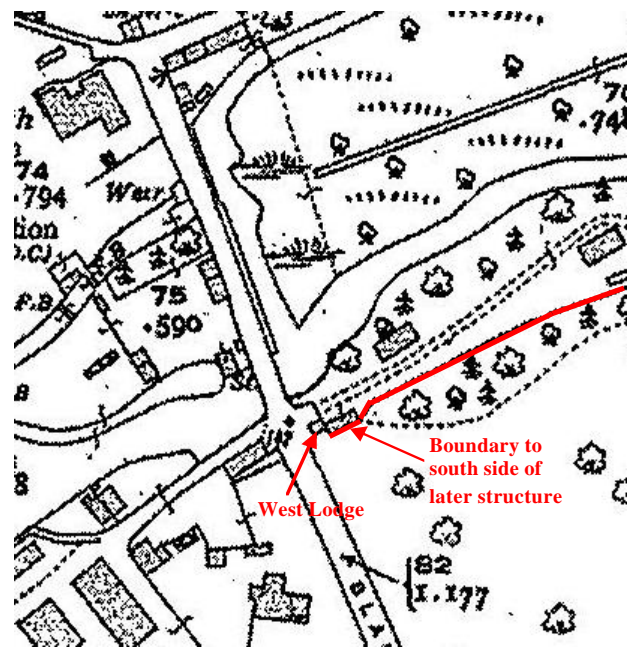
1896  
Ordnance Survey



1916  
Ordnance Survey



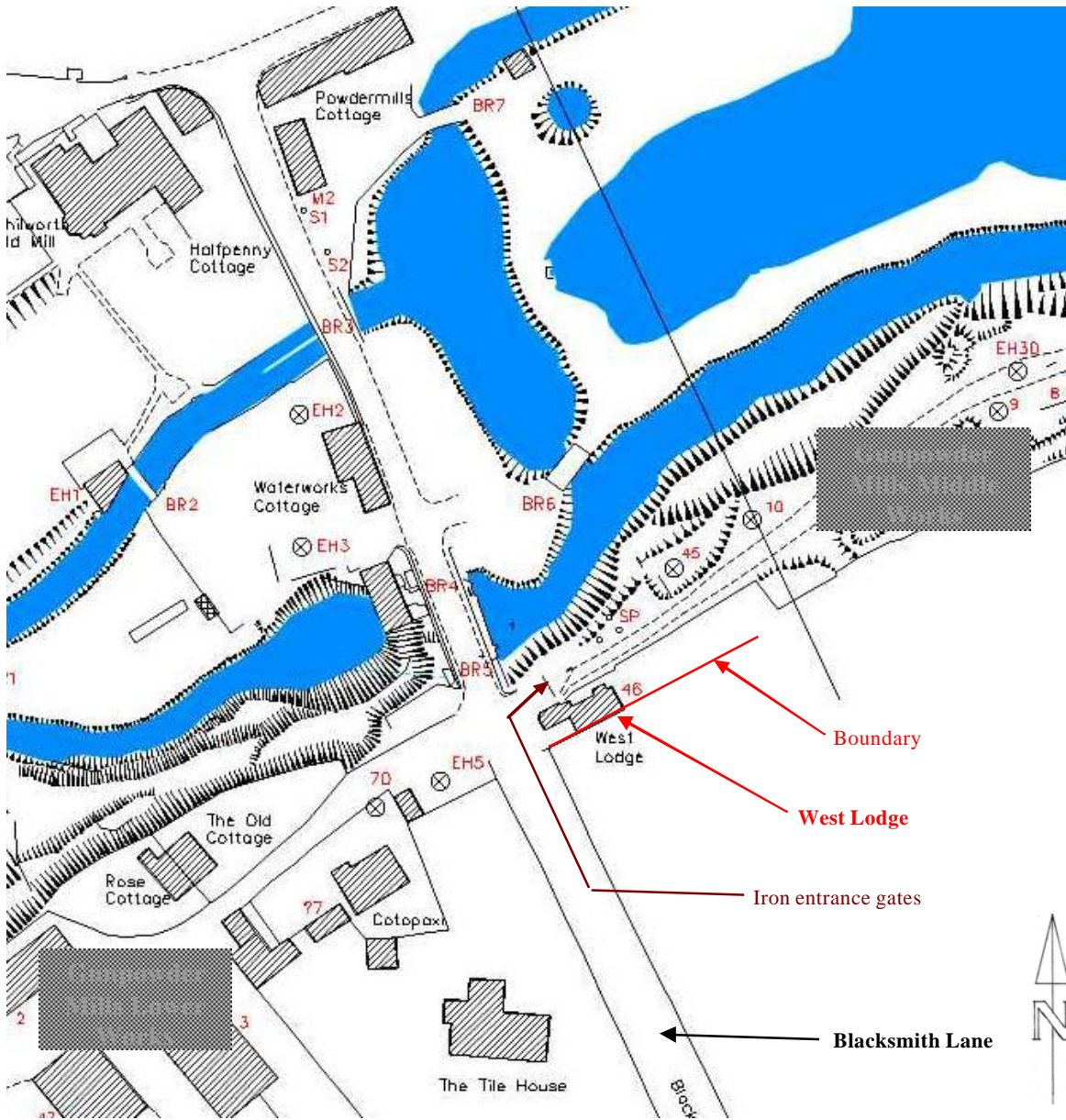
1922 Sale Plan  
(Extract)



1934  
Ordnance Survey

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**West Lodge - Assessment of Building Sequence**  
(Building No 46 per English Heritage Survey 2003)



Site Survey (Extract)  
© English Heritage 2003



**West Lodge - Assessment of Building Sequence**

(Building No 46 English Heritage Survey 2003)

**Front (West)  
Elevation**

Open space behind  
structures

Later 2-Room  
structure at rear  
(Phase 2)

Entrance gates  
(aligned with rear  
north east corner of  
Lodge)

Bricked up  
doorway  
(Phase 4)



10th August 2016

Original  
Entrance  
Lodge  
building  
(Phase 1)

Protective  
guard rail

**South Flank  
Elevation**

Original Entrance  
Lodge building  
(Phase 1)

Gap between  
independent  
structures  
(Later closed on  
north side by Phase  
3 link structure)



2nd February 2006

Later 2-Room  
structure at  
rear  
(Phase 2)

Front garden  
of  
neighbouring  
house

**View from North  
East**

Later 2-Room  
structure at rear  
(Phase 2)



10th August 2016

Original  
Entrance  
Lodge  
building  
(Phase 1)

Entrance  
gates  
(aligned with  
rear north east  
corner of  
Lodge)

Subsequent  
Link structure  
(Phase 3)

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West Lodge - Assessment of Building Sequence

(Building No 46 English Heritage Survey 2003)

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Gap between original Lodge building and later 2-room structure



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**West Lodge - Assessment of Building Sequence**

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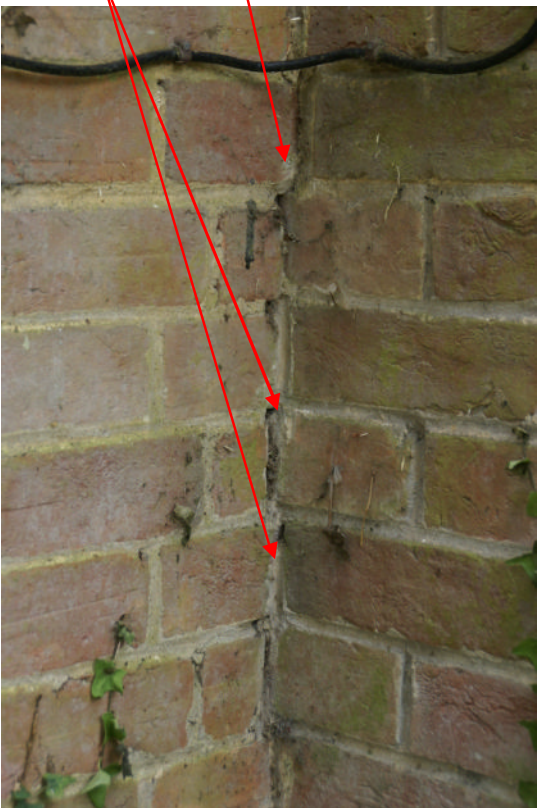
**Link Structure between Original Lodge and Later 2-Room Structure (Phase 3)**

- Later 2-Room structure (Phase 2)
- Subsequent Link structure (Phase 3)
- Later inserted door opening (Phase 4?)
- Alternate course by course bonding in of brickwork (same sized bricks)
- Note cutting into earlier brickwork



- Original Entrance Lodge building (Phase 1)
- Entrance gates (aligned with rear north east corner of Lodge)
- Block bonding in of brickwork due to mismatch in coursing of differing sized bricks

10th August 2016



10th August 2016



10th August 2016