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**A Standing Building Survey of Two
Buildings at Warnham Brickworks,
(Site Ha)
Horsham, West Sussex**

Project No. CBAS 0382

TQ 1715 3450

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1.0 Introduction

- 1.1 Chris Butler Archaeological Services Ltd (CBAS) was commissioned by Sunninghill Construction Co. Ltd (The Client) to carry out a basic photographic and written description of two buildings on Site Ha, Brookhurst Wood, at the former Warnham Brickworks, Horsham, West Sussex, prior to their demolition.
- 1.2 Warnham Brickworks is situated to the north-west of Horsham, off Langhurstwood Road, and is centred on TQ 172 345 (Fig. 1). The brickworks cover a large area to the east of the railway line, north of Warnham Station, and comprises a series of industrial buildings and redundant brick kilns, with extensive clay pits to the north and north east.
- 1.3 As a result of planning consultations, the West Sussex County Archaeologist requested that a standing building survey should be carried out on the two buildings in Site Ha. He stated that “Depending upon the condition of the buildings themselves, and to the degree to which they have kept original machinery, fixtures and fittings, either a short and simple indexed photographic record, or a photographic record with descriptive record and narrative may be suitable, the point in either case being for the survey of the buildings not only to record technically distinctive features, if still present and accessible, but also to make clear to the lay reader the places in the brickmaking process occupied by the buildings to be demolished”.
- 1.4 It was agreed with the County Archaeologist that an initial visit would be carried out by CBAS Ltd to undertake a survey comprising a photographic record with descriptive record and narrative (Phase 1). If this survey established that machinery and/or evidence for the brickmaking process was present in the buildings and could not be easily understood and recorded, then a second survey visit (Phase 2) accompanied by an experience Industrial Archaeologist would be arranged to complete the survey.
- 1.5 The Phase 1 survey was carried out by the author with the assistance of David Atkins on the 29th April 2013, and this report covers the results of that survey. The project was managed for CBAS by Chris Butler MifA.
- 1.6 This report is for the use and benefit of West Sussex County Council together with any person or persons appointed by West Sussex County Council in relation to the development of the site, (known as Site Ha), in respect of which the report was carried out. No responsibility is accepted to any third party for all or part of this report in connection with this or any other development.

2.0 Historical and Archaeological Background

- 2.1 The 1st Edition OS map of 1875 (Fig. 2) shows the site of the later brickworks to open fields to the east of the London Brighton and South Coast railway line. Warnham Brickworks was first established c.1888 by Robert Peters on a site to the west of the railway line as can be seen on the 1898-9 2nd Edition OS map (Fig. 3), but by 1909 the main operations had moved to the east side of the railway line¹.
- 2.2 In 1899 Warnham Brickworks was sold to William Belcher who established the Sussex Brick Co. Ltd, which then in 1903 became the Sussex Brick and Estates Co. Ltd. The 3rd Edition OS map of 1912 (Fig. 4) shows the brickworks with three Hoffmann type coal-fired continuous kilns, which were built in the first decade of the 20th century. Behind the kilns was a line of presses, fed with clay from a parallel line of grinding mills. In 1912 a steam excavator was introduced into the claypit, as part of a programme to achieve an output of 100,000 bricks per day².
- 2.3 An aerial photograph dated 1928 (Fig. 5) shows the same arrangement of kilns/buildings, with the location of the buildings that are the subject of this survey seemingly covered with piles of spoil. In 1935 a merger resulted in the formation of the Sussex and Dorking United Brick Companies which in turn merged with the Redland group in 1958/9³. No OS mapping of the site is available for this period.
- 2.4 The next available OS map of 1961-2 (Fig. 6) shows the larger of the two buildings present, and by the 1976 OS map (Fig. 7), both buildings are shown. Later OS maps show no change relating to these two buildings, although other buildings are added or removed during this time. It has been suggested that many of the 'modern' structures were erected around 1963 when new automatic moulding machinery was installed to make Wealden kiln stocks⁴. Brickmaking ceased in the 1990's.

¹ Beswick, M. 2001 *Brickmaking in Sussex*, Middleton Press

² *Ibid.*

³ *Ibid.*

⁴ Martin, R. G. 2003 *A report on the structures at the former Wealden Brickworks, North Horsham, West Sussex.*

3.0 Archaeological Methodology

3.1 The two buildings were located in Site Ha, which is situated to the north-east of the building housing the Hoffman-type kilns. For the purposes of this survey, the larger western building was designated Building A, and the smaller building to the east was designated Building B (Fig. 8).

3.2 The survey of the buildings consisted of a visual inspection of each building externally and internally, with a record comprising a written description and digital photographs being created for each building.



Aerial photograph of Site Ha, showing the two buildings in the centre of the marked area.

4.0 Results of Survey: Building A

4.1 Building A is on a north to south alignment, and is rectangular in plan with a small projection located at the western end of the southern elevation. The building is built into a rise in the ground level which allows the northern end of the building to have a shallow basement level. In front of the north end of the building there is an area of hard standing with a metal cylindrical (fuel?) tank on the western side (Plate 1). The tank is supported on a large concrete plinth which in turn is supported by a brick built base.



Plate 1: Building A Cylindrical Tank

4.2 The northern elevation (Plate 2) consists of the gabled end of the main body of the building with a basement level. This elevation is of red brick construction with the lower part of the wall being laid in English bond (Alternating course of stretchers and headers), with the upper part of the wall laid in stretcher bond. The wall of the basement level slightly steps out to the north from the wall at ground level. The openings in the basement level consist of a large double door of vertical wooden plank construction, which is the only entrance to the basement level. There is a single window to the east of the double doors and two windows to the west of the doors. The main body of the building is lit by a row of five windows. All the windows on the northern elevation are of the same type, having metal frames with two columns of three lights. The windows on this elevation all having a slightly arched soldier course at their head and concrete sills.



Plate 2: Building A Northern Elevation

- 4.3 The western elevation (Plate 3) of Building A is constructed of bricks which are laid in stretcher bond. This elevation has two windows to the north of a metal roller shutter door, with a further six windows to the south of the door. All the windows were blocked over with corrugated metal sheets at the time of the survey, but the construction of the surviving frames was apparent on the inspection of the interior of the building, and these were of the same type as seen in the northern elevation. All the windows on this elevation have a decorative slightly arched soldier course at their heads and a slightly projecting brick built sill at their base.



Plate 3: Building A Western Elevation

- 4.4 The elevation at the southern end (Plate 4) of the building has a projection from the building on its western end. The recess at the south eastern corner of the building is created by the western projection; this is under the main body of the roof. This part of the roof is supported by a vertical steel post which is 'H' shaped in section. The base of the steel post is set in concrete filled blue plastic barrel. Near the top of the vertical steel post there is a second horizontal steel girder running back into the building. The projecting part of the building on the western end of this elevation is of brick construction; the bricks have been laid in stretcher bond, whereas the southern wall of the main body of the building the bricks are laid in English bond. This projection is not shown on the 1961-2 OS map, so may be a later addition as it is shown on the 1976 OS map.

- 4.5 The only openings in the projecting part of the building are in the southern wall, and are a window at the western end of the wall. The window has been covered over with a sheet of corrugated metal, but the flat soldier course of bricks is visible above the metal sheeting, as is the concrete sill below. There is a plain modern door to the east of the window on this wall. In the recess area of the southern wall there is a metal roller shutter door with a second door of vertical plank construction to the east, with a slightly arched soldier course. There is also a square repair apparent in the upper part of the southern wall of the main body of the building close to its junction with the eastern wall of the projecting part of the building. The gabled end

of this elevation is of corrugated asbestos sheeting, which is also apparent at the top of the recessed southern wall.



Plate 4: Building A Southern Elevation



Plate 5: Building A Repair in Recessed Southern Wall

- 4.6** The eastern elevation is of bricks laid in stretcher bond. There are four windows which have been blocked with corrugated metal sheets at the southern end of this elevation, with a blocked door to the north of these. The four windows to the south have a flat soldier course at their heads with a projecting brick built sill at their base. To the north of these windows are two doorways; the southern one has been blocked with a corrugated metal sheet. The northern of the two doors is of vertical plank construction, and is the current access point to the interior of the building. Between the doors there is a smaller window that has been blocked with a corrugated metal sheet. To the north of the doorways there are two more windows, with metal frames of three columns of three lights. The windows at the southern end of this elevation are of the same type, but only visible from the interior of the building. Just to the north of the window at the southern end of this elevation there is a concrete corbel projecting from the wall. The concrete corbel is supported below by three courses of staggered bricks. Above the corbel there is a scar in the brickwork of the eastern wall. To the south of the corbel there is a ventilator with a metal plate surround. At the northern end of this elevation are two metal (fuel/oil) tanks supported on a brick built plinth at each end, and surrounded by a low brick wall forming an enclosure around the tanks (Plate 8).



Plate 6: Building A Eastern Elevation



Plate 7: Building A Corbel and Ventilator



Plate 8: Building A Tanks Adjacent North
End of Eastern Elevation

4.7 The roof is gabled at both ends and is covered with corrugated asbestos sheets. There are a row of skylights in both the eastern and western pitches of the roof. The roof is supported on the interior by a framework of steel girders.

4.8 The interior of Building A is divided by brick built walls into three sections, with the southernmost section being further sub-divided by a central wall. The northern section has a concrete floor except for the far northern part which is above the basement; this is covered with thick wooden planks on a north to south alignment. In the south-western corner there is a small brick built office, with the entrance door at the southern end of the eastern wall. The entrance is fitted with a door constructed of vertical planks of wood. The north-western corner of this part of the building has a large structure of steel girders (Plate 9) which was possibly a second floor in this part of the building. Close to the top of the western and eastern walls there is a horizontal steel girder which is supported by a brick built piers on these walls. This appears to be the two outside tracks that the hoist in the centre section of the building runs on. In the centre of the southern wall of the northern section is the entrance to the central section, these doors are constructed of vertical planks of wood which are braced on the northern face. To the west of this doorway there is a second entrance which is also of full height but divided into two, similar to a stable door (Plate 10).



Plate 9: Building A Structure in
North-eastern Corner of Northern Section



Plate 10: Building A Entrances to Central
Section

4.9 In the central section of Building A the floor is of concrete. There is a brick built office adjacent to the western wall to the south of the metal roller shutter door in this wall (see external description). There is a hoist which runs on four steel girder tracks, located in the centre are a pair of tracks with a single track adjacent to the eastern and western walls (Plate 11). The outside tracks are supported by brick built piers and the twin tracks in the centre are supported by vertical steels. These tracks run the whole length of the building, although the hoist could only be operated in the centre section due to the brick built partition walls between the various sections. The bogies of the hoist have two in-line wheels with the northern wheel having a cog or gear on the outside face (Plate 12). Also apparent on the southern side of the dividing wall between the northern and centre section of the building, was a hinged metal grille that sealed the double height door (Plate 13). In the southern wall of the central section are the doors to the eastern and western sides of the southern section.



Plate 11: Building A Hoist



Plate 12: Building A Detail of Boogie



Plate 13: Building A Metal grille

- 4.10** The western side of the southern section is entered via an opening in its northern wall with no door fitted. This entrance appears to have been reduced in height by the blocking of the top part with wooden panels, which are resting on a small concrete beam. There is a small brick built office in the north-eastern corner of this section, with a vertical plank door at the south end of the eastern wall. There is a modern panelled door to the projection of the building (this was locked at the time of the survey so could not be inspected). It was also noted during the survey that the twin tracks of the central part of the hoist, although apparent in both this and the eastern side of the southern section, were split by the north-south dividing wall. The floor was of concrete.
- 4.11** The eastern side of the southern section was entered via a modern door at the eastern end of the northern wall. To the west of this entrance there was a full height entrance similar to that seen in the western side of this section of the building, but here it had been completely sealed with wooden panels. Adjacent to the eastern wall under the window was a bench. This consisted of two brick built piers with a work surface formed from planks of wood covered with metal sheeting. The floor was of concrete.
- 4.12** The basement was located under the northern end of the northern section of the main body of the building. This part of the building was entered via the double doors at the base of the northern elevation. The basement had a concrete floor, with a ceiling lined with wooden sheets divided into squares by wooden battening. The only fixtures in the basement were metal shelving adjacent to the southern wall and benches against the northern, western and eastern walls.

5.0 Results of Survey Building B

- 5.1** Building **B** was located to the east of Building **A** and was also rectangular in plan on a north south alignment, although smaller. The northern elevation has a projection on the eastern end of it (Plate 14). Attached to this is a single storey building, with a flat roof. This part of the building is constructed of brick laid in stretcher bond, and has a flat roof. There are three metal framed windows in the eastern wall with a single small metal framed window in the northern wall. The entrance to this part of the building is located at western end of the north wall, and is currently blocked with a corrugated metal sheet. This was a WC serving Building **B**. There is a second single storey part of the building located within the recess formed by the northern wall, and the western wall of the northern projection of the main body of the building. This is of brick construction but on this part of the building they are laid in English bond. The northern staggered gabled end wall of the main body of the building is of brick construction laid in English bond. The staggered gable is covered in the same corrugated asbestos sheeting as the roof. There is a single metal framed window in the eastern projection of the southern wall, with a square wooden slatted louver to the west of it.



Plate 14: Building B Northern Elevation

- 5.2** The western elevation (Plate 15) of Building B consists of three metal roller shutter doors with two doorways between the northern and centre roller shutter doors. The doorway to the north is fitted with a modern panelled door, while the southern door has been sealed over with a sheet of corrugated metal sheeting. The western wall is of brick construction laid in stretcher bond, with the upper part of the wall is covered in corrugated asbestos sheeting.



Plate 15: Building B Western Elevation

- 5.3** The southern elevation (Plate 16) is of brick construction laid in English bond with the gabled end covered with corrugated asbestos sheeting. There is a doorway at the eastern end of this wall, fitted with a door of vertical wooden plank construction. The doorway has a concrete lintel above. Above and to the west of the doorway a roughly circular hole has been knocked through the wall.



Plate 16: Building B Southern Elevation

- 5.4** The eastern elevation of Building B is of brick construction and these are laid in English bond (Plate 17). During the survey the inspection of this elevation was hampered by the vegetation. There are six large metal framed windows with the glazing bars of the window forming eight lights. Between the windows are the down pipes from the guttering running adjacent to the eaves. The top of the wall is finished with a concrete band, with the windows each having a concrete lintel.



Plate 17: Building B Eastern Elevation

- 5.5** The roof is gabled at the southern end and also gabled at the northern end, but on this end the gable is staggered due to the projecting eastern side of the building. The roof covering is of corrugated asbestos sheeting with a row of skylights on both slopes of the roof.

- 5.6** The interior of the main body of the building is of one large open space (Plates 18 & 19), and is largely devoid of features. The main body of the interior is accessed via a doorway at the eastern end of a corridor located within the single storey part of the building. The interior walls are painted bricks except for the western wall with the roller shutter doors, which is lined with breeze blocks. The framework of the roof is of steel girders which are supported by vertical steel posts adjacent to the eastern and western walls of the building. The southern end 'A' frame appears to be supported by a brick built plinth. High on the eastern wall there is the ventilation trunking running the entire length of the building.



Plate 18: Building B Interior North End

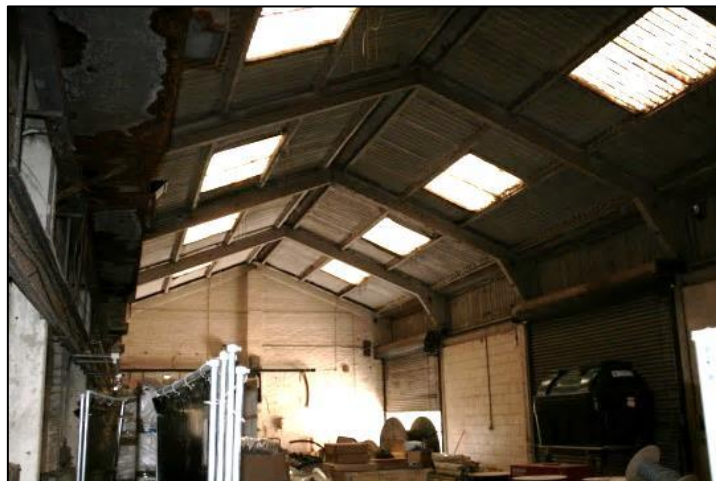


Plate 19: Building B Interior South End

6.0 Discussion

- 6.1** The two buildings surveyed appear to have been used mainly for storage. Building **A** would appear to be the older of the two buildings built between 1928 and 1962 from the evidence from the OS maps and aerial photographs. The smaller building to the east is the more modern and from the mapping evidence was constructed between 1966 and 1976.
- 6.2** The most interesting feature in Building **A** is the hoist in the central section of the building. The hoist has four sets of bogies, each having two in-line wheels. The bogies run on four steel girders which act as rails, and extend for the whole length of the building. The hoist could only have operated in the centre section of this building as the rails are blocked by the internal dividing walls of the northern and southern sections, unless these partitions are a later addition. It was also noted that the north-south dividing wall of the southern section of the building separated the centre twin rails. No maker's name or model information could be seen during the survey.
- 6.3** Building **A** gave no indication of being used for any industrial process and appeared to have been used as a workshop initially, perhaps for servicing vehicles and plant, and then more recently for storage. The space for storage appeared to have been increased by the structure built of steel girders in the north-eastern corner of the northern section, which appeared to give an extra storage area. In each of the sections there was a small office adjacent to the western wall.
- 6.4** Building **B** was devoid of any features connected with any industrial processes, and may have originally been used as a garage or for storage; the building is still being used for storage today.
- 6.5** During the Second World War much of the brickworks was shut down, and the stock-brick yard and railway sidings were taken over by the Canadian army as a centre for the assembly and repair of Churchill tanks⁵. It is possible that Building **A** may have been built at this time, although it would be more in character with a post WW2 date.
- 6.6** As a result of this survey, it can be confirmed that these buildings were not utilised for part of the brickmaking process, but operated as ancillary buildings; possibly as workshops and for storage. Therefore it is recommended that the survey undertaken as Phase 1, together with the associated archive, provides an adequate record of the buildings, and no further recording is necessary.

⁵ Beswick, M. 2001 *Brickmaking in Sussex*, Middleton Press



Fig. 1 Warnham Brickworks: Site Location Map
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Fig. 2 Warnham Brickworks: 1st Edition OS map 1875

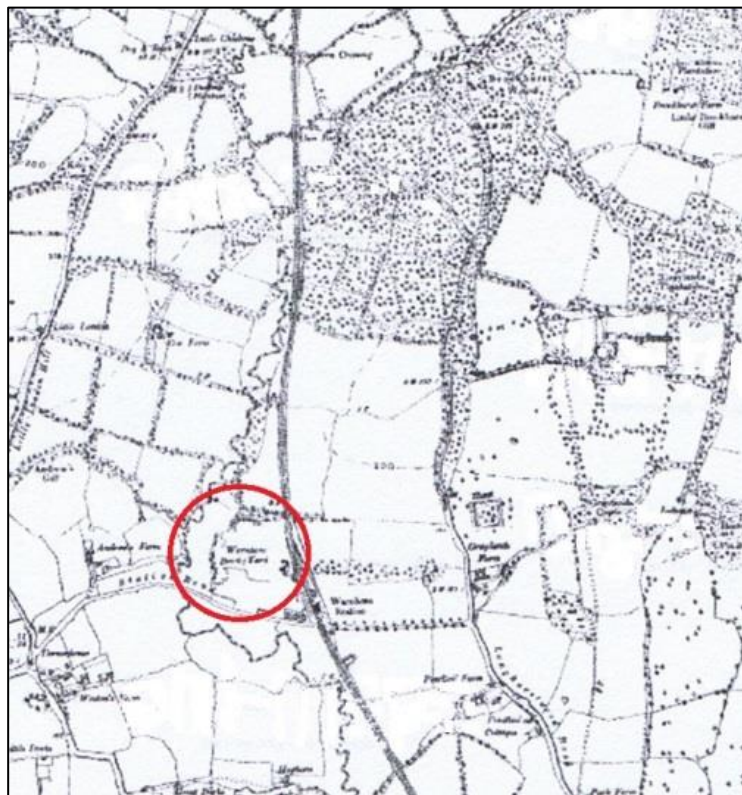


Fig. 3 Warnham Brickworks: 2nd Edition OS map 1898-9
Showing location of early brickworks to west of railway line

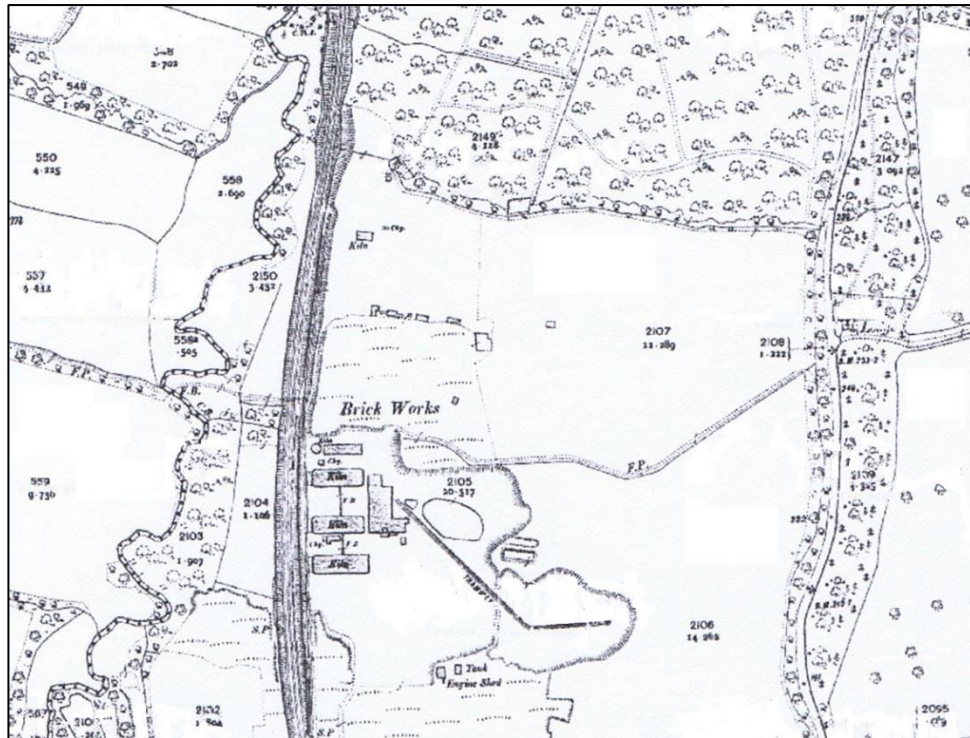


Fig. 4 Warnham Brickworks: 3rd Edition OS map 1912

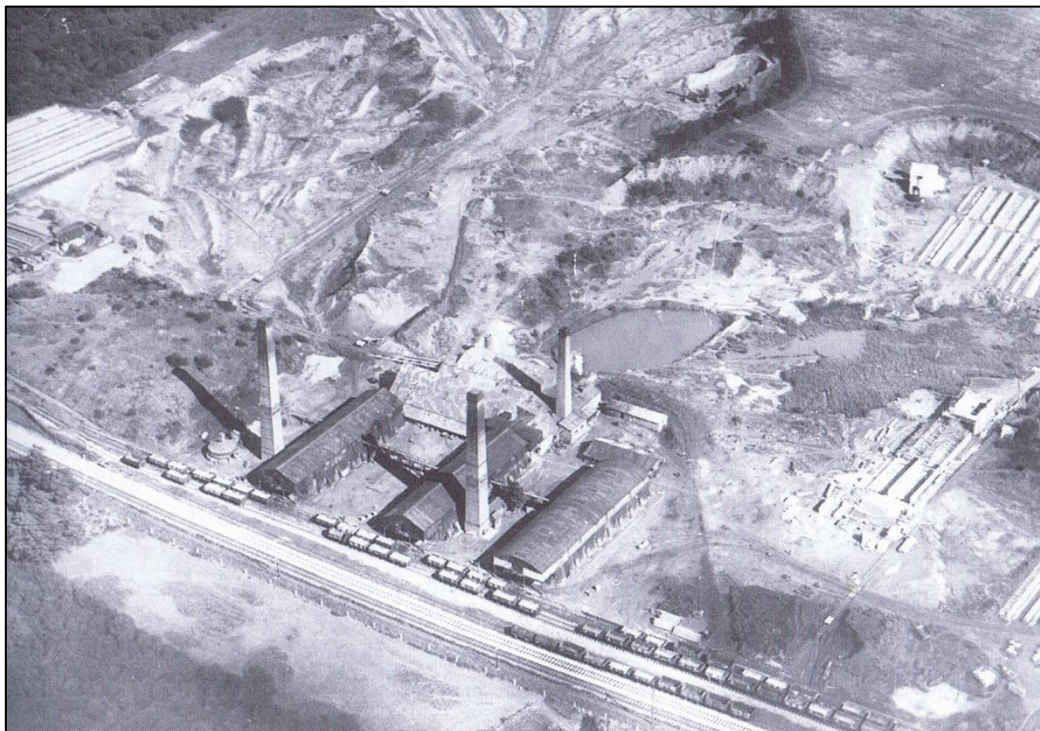


Fig. 5 Warnham Brickworks: 1928 Aerial photograph
(From Beswick, 2001)

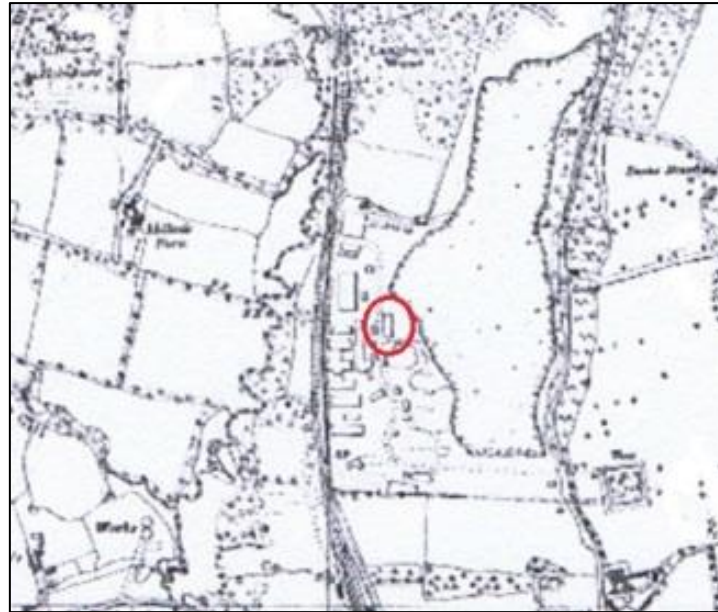


Fig. 6 Warnham Brickworks: 1961-2 OS map
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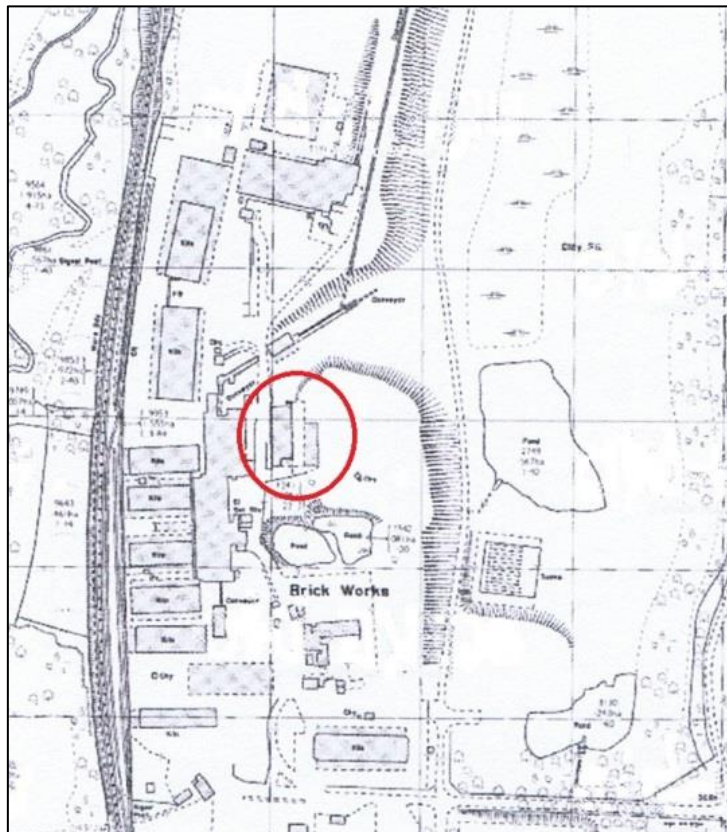


Fig. 7 Warnham Brickworks: 1976 OS map
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Fig. 8 Warnham Brickworks: Site Ha Plan
(Adapted from architects drawing)

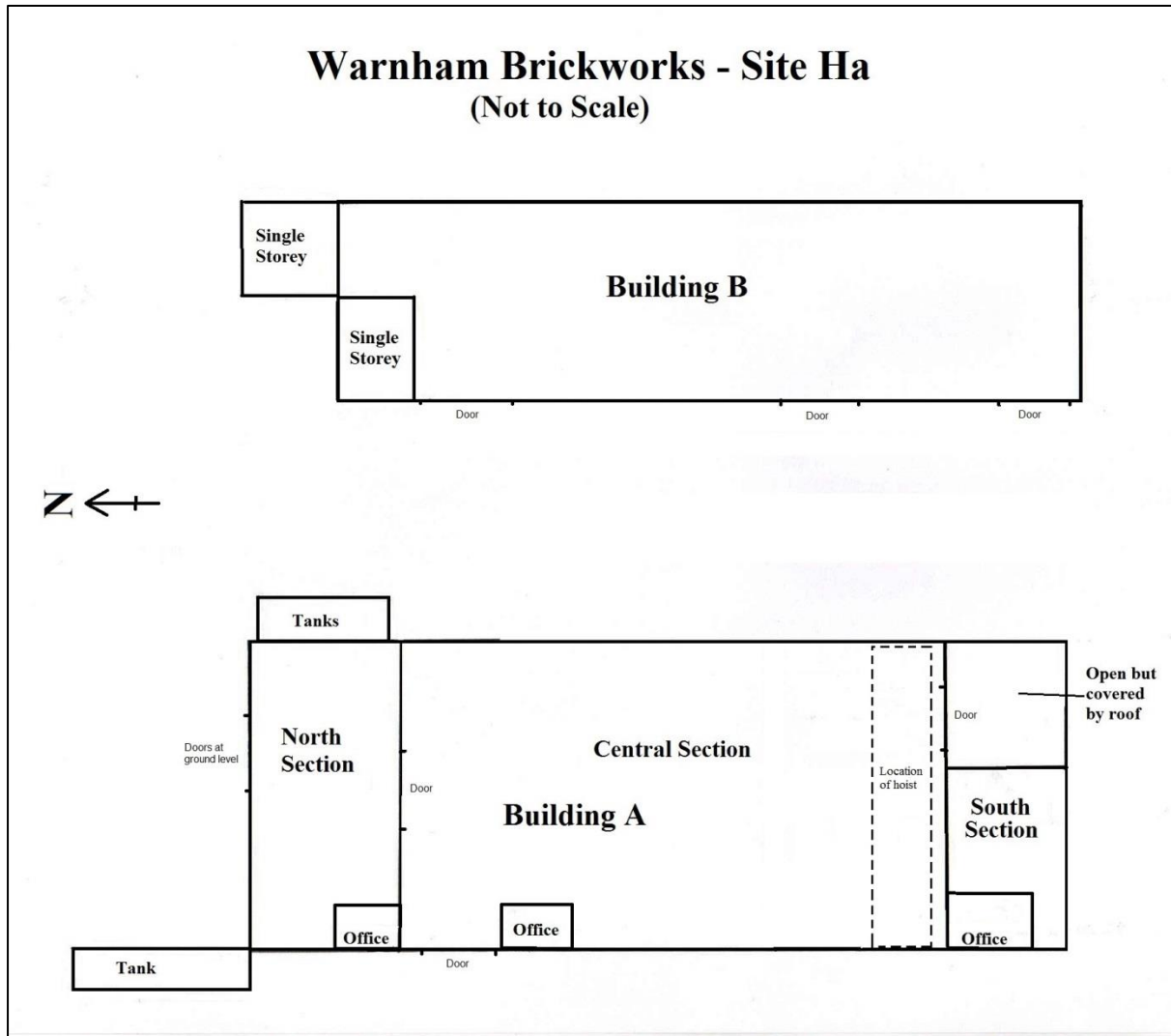


Fig. 9 Warnham Brickworks: Sketch Plan of Buildings
(Not to scale)