Marches Archaeology

World War II Pillbox at Jarvis Bridge Wolverhampton Road Langley West Midlands

A report on archaeological building recording

April 2005

Marches Archaeology Series 378

This report is produced by

Marches Archaeology

Marches House 6 High Street Clun Shropshire SY7 8JB

Tel:- 01588 640976 Fax:- 01588 640796 e-mail:- archaeology@marches.plus.com

For:Severn Trent Engineering
Alpha House
Warwick Technology Park
Gallows Hill
Warwick
CV34 6DA

Marches Archaeology is the trading name of Marches Archaeology Limited (Registered in England and Wales: 4095678). The directors are Nic Appleton-Fox and Richard Stone, who have worked in close association since 1991. All principal members of staff are members of the Institute of Field Archaeologists and abide by its code of practice and other regulations. Marches Archaeology provides a full range of archaeological services to a client base of architects, local authorities, national bodies and private individuals. Our standard services include; excavation, watching briefs, building survey, building analysis, planning advice, landscape survey, photographic recording and historical research. Specialist consultants are available to provide environmental, geophysical and finds advice and analysis.

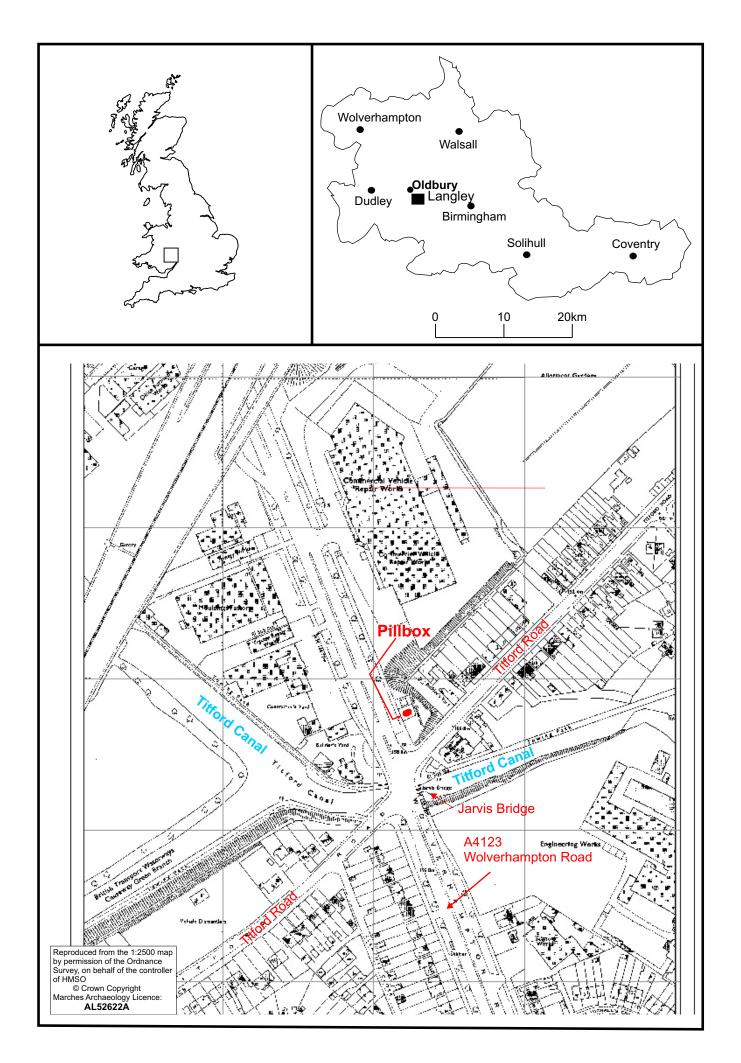


Fig. 1 Location of the site

Word War II Pillbox at Jarvis Bridge Wolverhampton Road Langley West Midlands

A report on archaeological building recording

NGR: SO 98822 87877

SMR PRN 10553

Report by

Nick Tavener

Contents

List	of illustrations	ii
List	of plates	ii
	Summary	
1	Introduction	
2	Aims and objectives	
3	Methodology	
4	Site description	
5	Archaeological and historical background	
6	Analytical description	
7	Discussion	
-		
8	Acknowledgements	
9	References	
10	Archive	9

Appendix 1 Photographs of other Type 24 pillboxes

April 2005

Marches Archaeology Series 378

List of illustrations

- Fig. 1 Location of the site (with 1971 map information)
- Fig. 2 The site in 1885 (part of 1st Edition Ordnance Survey 1:2500)
- Fig. 3 The site in 1904 (part of 2nd Edition Ordnance Survey 1:2500)
- Fig. 4 The site in 1919 (part of 3rd Edition Ordnance Survey 1:2500)
- Fig. 5 The site in 1937 (part of 4th Edition Ordnance Survey 1:2500)
- Fig. 6 Street map of the area to the west of Langley showing the location of Churchbridge
- Fig. 7 The Langley Home Guard c. 1940
- Fig. 8 Plan of the pillbox showing features discussed in text

List of plates

- Plate 1 the pillbox from the south-west
- Plate 2 view across Jarvis Bridge from the pillbox
- Plate 3 view from Jarvis Bridge to the pillbox
- Plate 4 the Jarvis Bridge east side
- Plate 5 the canal to the immediate west of Jarvis Bridge
- Plate 6 view of steep grass slope to immediate east of pillbox (pillbox position marked)
- Plate 7 the slope up the man-made causeway for the canal bridge
- Plate 8 north-west elevation
- Plate 9 internal north-west elevation
- Plate 10 south-west elevation
- Plate 11 internal south-west elevation
- Plate 12 south elevation (west end)
- Plate 13 south elevation (east end)
- Plate 14 internal south elevation
- Plate 15 south-east elevation
- Plate 16 internal south-east elevation
- Plate 17 entrance to pillbox looking north
- Plate 18 detail of red brick quoins at south-east corner
- Plate 19 entrance / north-east elevation
- Plate 20 detail of unfinished brickwork at north-east corner
- Plate 21 north elevation of pillbox looking south-east
- Plate 22 internal north elevation (east end)
- Plate 23 north elevation (west end)
- Plate 24 internal north elevation (west end)
- Plate 25 detail of north-east corner
- Plate 26 date painted on south elevation
- Plate 27 shuttering / plank marks on underside of roof slab
- Plate 28 mark made by accrowed support plank for shuttering

World War II pillbox at Jarvis Bridge Wolverhampton Road Langley West Midlands

NGR: SO 698822 87877

SMR PRN 10553

A report on archaeological building recording

Summary

Marches Archaeology were commissioned to carry out a Level 2 record of the last known pillbox in Sandwell Borough. No records relating to the structure could be found in local archives, but it almost certainly dates to the period of mass construction of anti-invasion defences during the spring / summer of 1940. The pillbox conforms to the general specification for a Type 24. It sits on a man-made prominence on the east side of the Wolverhampton Road and utilised the Titford Canal as a defensive ditch, having excellent fields of fire along much of the canal to the west and also the Wolverhampton Road to north and south. This was a very straight and wide road in 1940 and the pillbox was almost certainly intended to prevent gliders or other planes from landing on the road and also guard the Jarvis Bridge which spans the canal.

The pillbox was later modified. Most of the firing loops were carefully blocked with bricks identical to those used in the original construction. The doorway was probably widened and a gas supply was laid in. It is was not established when this occurred. It could have been modified later in WWII (when the invasion threat had subsided) perhaps into an Air Raid shelter or, more likely, a Home Guard guard post or checkpoint on the Wolverhampton Road. It is equally possible that it was altered after the war to form a strong shed with a single window guarded by a metal grille.

1 Introduction

A planning application was submitted by Severn Trent Water to demolish the structure. The Sandwell Borough Archaeologist requested that the structure be recorded to the standards of RCHM(E) (1996) Level 2. Marches Archaeology were commissioned by Severn Trent Water to carry out the programme of building recording on the structure.

The Borough Archaeologist produced an 'Archaeological recording brief for World War II pillbox' and Marches Archaeology submitted a project proposal forming a written scheme of investigation (4th April 2005).

Severn Trent Water needed the report urgently. Marches Archaeology were commissioned on the basis that the report would be ready by 17th April. The fieldwork was carried out on 7th and 8th April 2005. The urgent nature of the report has meant that some documentary sources could not be seen. It is unlikely that this would affect the overall findings of this study.

2 Aims and objectives

The Institute of Field Archaeology (IFA) defines Building Investigation and Recording as "a programme of work intended to establish the character, history, dating, form and archaeological development of a specified building, or structure, or complex and its setting, including buried components on land, inter-tidal zone or underwater".

The purpose of Building Investigation and Recording is defined by the IFA as "to examine a specified building, structure, or complex, and its setting, in order to inform [either] the formulation of a strategy for the conservation, alteration, demolition, repair or management of a building, or structure, or complex and its setting [or] to seek a better understanding, compile a lasting record, analyse the findings/record, and then disseminate the results".

The aims the programme of archaeological recording were
The consultation of primary and secondary documentary sources relating to the area
The preparation of a Level 2 record, as defined in the RCHM(E) publication *Recording Historic Buildings – A Descriptive Specification*, 3rd edn. 1998.

3 Methodology

Documentary research

Documentary research was undertaken, which looked at accessible sources including historic maps, photographs and written documents. The research examined all relevant material held at the Sandwell Library Services Local Records and Archives as well as the Sandwell Borough Council Sites and Monuments Record and also the National Monuments Record.

Fieldwork

The fieldwork was carried out in accordance with a RCHME level 2 record. This consisted of written, drawn and photographic elements. A comprehensive photographic survey using 35mm colour slides and black and white negatives was carried out of all internal and external elevations and fittings. Digital photographs at resolution 2.1 megapixel were also taken for use in the report as it would not be possible to get photographs developed in time for this.

Office work

On completion of the fieldwork a site archive was prepared, with the written, drawn and photographic data catalogued and cross-referenced and a summary produced. A two-dimensional plan and key elevations showing the construction and phasing of the building were produced.

4 Site description

The pillbox (Plate 1) is located within the parish of St. Michael and All Angels, Langley. It is situated c. 10m to the east of the A4123 Wolverhampton Road (a wide dual carriageway) and some 40m to the north of a well known local landmark, the canal bridge known as the Jarvis Bridge (Plates 2, 3, 4 and 5). The pillbox sits on a slight promontory with a very steep slope along its eastern side (Plates 6 and 7) and is virtually level with the chimneypots of houses immediately to the east.

5 Archaeological and historical background

The pillbox dates to the Second World War. The siting of the structure at that date will have been decided entirely by local topographical considerations. It was agreed with Charlotte Lewis (Sandwell MBC Assistant Archaeologist) that the older cartographic sources were thus not likely to be relevant. These were not sought.

Bates' map of Langley of 1857 (not reproduced) and the Ordnance Survey maps dated 1885, 1904 and 1919 (Figs 2-5) show a semi-rural landscape dotted with coalmines and ancillary industries. The Titford Canal passes roughly east-west some 40m to the south of the pillbox. The canal was built in the 1840s to open up the Titford Valley for coal mining (Ken Durham in *Combeswood Canal Trust, c. 1993*). The settlement of Langley (c. 1km to the east) largely grew up around the Albright and Wilson Oldbury Works. These manufactured phosphorous for munitions and other purposes (*Drew and Callow, 1997*).

The most important thing that the early maps show is that the Wolverhampton Road (A4123) did not exist before 1919. The opportunity was taken in the 1920s to create a new straight and very wide road (rather in the manner of a German Autobahn - Nigel Haynes, *pers comm*) between Birmingham and Woverhampton while most of the route was still semi-rural (Nigel Haynes, *pers comm*.). The New Wolverhampton Road was officially opened on 2nd November 1927 by the Prince of Wales' (*Drew and Callow*. 1927 quoting the 'Weekly News'). In order to cross the Titford Canal at the site of the old Jarvis Bridge, an embankment was raised on both sides of the bridge, i.e. the new road was raised up by 3-4m (plate 7). The old Navigation Inn was pulled down and replaced by the New Navigation Inn, a 1930s roadhouse.

A perusal of the Pillbox Study Group website (www.pillboxesuk.co.uk) and Defence of Britain website (www.britarch.ac.uk/projects/dob/) indicates that some pillboxes were built in 1939 including several before the outbreak of war. Most of these early pillboxes were probably sited at critical coastal defence positions. In the late spring of 1940, following the rapid fall of France, it became obvious that Hitler intended to invade England (Operation Sealion). Defences were thrown up hastily all over Britain in the spring and summer of 1940. A line of defences was constructed from London to Edinburgh (the so called 'GHQ stopline') and other local 'stoplines' were built all over Britain. The 'stop-lines' utilised existing local features with defensive potential such as roads and canals (Pillbox Study Group, 2001).

Unfortunately, the relatively new and very broad Wolverhampton Road posed a very real security threat as a potential landing ground for gliders (Nigel Haynes, *pers comm*.) and there was also a widespread fear of German paratroopers. The pillbox at Jarvis Bridge was patently obviously sited to guard the bridge and road whilst relying heavily on the old Titford Canal and Titford Pool as a defensive ditch for a 'stop-line' to any advance of more heavily equipped enemy troops. The pillbox enjoyed an elevated field of fire down the canal to the west (now partly obscured by more modern buildings) but the canal to the east of the bridge will have been almost entirely obscured by the New Navigation Inn and the houses to the east.

The pillbox was built on a man-made spur or promontory projecting off the east edge of the 1927 road embankment. The exact location has been superimposed on the 1937 map and it is obvious that the platform that the pillbox sits on was created sometime just after the map

survey (see Fig. 5 and Fig. 1). In all likelihood, the small plot of waste ground on which the pillbox sits has also been used for tipping since World War II creating a raised level platform with the very steep slope on the south and east sides (plate 6). If not, the loops in the south and south-east elevations of the pillbox would have had a dangerous blind zone less than 20m from the pillbox in the direction of the New Navigation Inn.

Pillboxes were usually built in groups and were rarely single. The closest pillbox recorded on the National Monuments Record Defence of Britain Project is a Type 24 at Birmingham (Elmdon) Airport, Solihull (ID PRN 1395067). More usefully, a local man, George A Webb, reminiscing about the 'Blue Billy' (see the 'Blue Billy Bridge' to the east of the pillbox site on Figs 2, 3 and 4) provides a valuable reference to other pillboxes having existed less than 1km to the north-east:-

"It was a mound or 'bonk' to us locals, and it was opposite the Good Shepherd School in Churchbridge (see location on Fig. 6). Its purpose was to provide a dumping ground for the waste products from the chemical production at the Chance and Hunt Works in Park Lane, Oldbury.

"As a boy, I used to go up there often, it was ideal for tobogganing in the snow. During the Second World War there were pillboxes up there, and a huge map of England traced in the sand — all for the use of the Home Guard in the event of an invasion, a real threat. At the bottom, on what was known as Sawyer's Field, trenches were dug, and near them, on the pavement, were placed drums of waste oil or paraffin every so many yards in order to create a thick, black smoke-screen when air-raids were on.

"An industrial site now occupies the spot because the whole mound was moved in the late 50s and early 60s." (Drew and Callow, 1997, pp 184-5.)

The stop-lines were intended to hold up enemy infantry or paratroopers until 'regular' forces could arrive. During the invasion period, there were probably regular forces standing by in the area, but for much of the war the pillbox was probably manned by the local 'Home Guard'. The local Home Guard were photographed c. 1940 (Fig. 7). Most of these men would have known the Jarvis Bridge pillbox intimately.

The Sites and Monuments Record for the pillbox (PRN 10553) holds very little information but notes that the pillbox is a 'Type 24'. The Pillbox Study Group notes that the official designation was as a 'type Fw3/24', also called the 'Type 360' or 'Type 22 modified'. They were hexagonal but had five faces of c. 8 feet (2.4m) long externally and a longer rear face of 10-13 feet (3.96m). The rear wall usually had a rifle loop on either side of the entrance / doorway which was usually 2 feet (0.61m) wide. The type 24 was usually longer than (the more purely hexagonal) Type 22. Type 24 walls could be up to 3 feet thick. Confusion can arise between a type Fw3/29 and a type Fw3/Type 24, but the type 29 was a much heavier duty structure with walls between 35 and 50 inches thick (0.91-1.27m).

Type 24 pillboxes with thinner walls (up to 15 inches) had rifle embrasures built in; the thicker walled version (up to 24 inches) usually had pre-formed embrasures designed to accommodate light machine guns (LMG). There could be considerable variations in plan to suit local conditions and loophole detail varied according to the intended type of weapon

(Pillbox Study Group website). The previous description would suggest that the Jarvis Bridge pillbox was largely intended to be manned by lightly armed infantry, not artillery.

6 Analytical description

Phase I (c. 1940)

The pill box was a squat, hexagonal structure (Fig. 8) semi-buried in the ground and surmounted by a thick concrete slab flat roof (Plate 1). The outer and inner elevations of the pillbox were photographed starting at the north-west elevation and moving anti-clockwise round the structure (Plates 8-28).

All sidewalls were of brick construction formed in English Bond and were 0.35m or 1 foot thick (Plates 8-26). The roof was poured *in situ* (Plates 27 and 28) and was thicker on the outer edges of the walls (0.48m) than on the inner edges (0.35m or 1ft), i.e. the slab was 0.35m thick across the interior of the pillbox, getting thicker as it lapped over the side walls. Pieces of very rusty steel rod projecting from the slab on the north-east elevation indicate that there was a layer of steel reinforcing within the slab c. 0.13m below the top surface. The floor inside the pillbox was a concrete slab and the ceiling height was 1.95m. There appear to have been no internal partition walls to stop ricochets, but these may have been removed. No internal fittings or 'gun furniture' survive.

All six walls are built from purple 'engineering' bricks measuring 225 by 110 by 74mm thick. All corners of the structure were picked out with 'quoins' in red brick. These were hand cut to finish the awkward shape of the corners dictated by the irregular hexagon.

At first glance, the most notable aspect of the pillbox is that it had only one embrasure or loophole (in the north-west elevation). Closer inspection of the exterior (and with the vegetation removed) showed that the others had been filled in. The blocking had been done with some care and craftsmanship, with headers and stretchers courses in the blocking following through from courses in the original structure (see e.g. Plates 10 and 12). The main indications were the vertical brick joints. These were all three bricks (or 0.26m / 9 inches) high and all started two courses below the roof slab (4 courses on the internal elevations inside the pillbox). This means that the original height of the loophole openings was 0.26m. The second telltale was the existence of brick closers to either side of the vertical joints.

Although the interior has been whitewashed and painted, the vertical construction breaks could also just be discerned on the internal elevations and their positions planned, thus allowing an accurate recreation of the shape and dimensions of the original loopholes (Fig. 8).

The south-west, south and south-east walls each featured a single loophole and these ranged from 1.7m to just over two metres in width. Some of the jambs were splayed, but most were not (Fig. 8). The north-west wall featured a single opening measuring 0.74m wide by 0.44m high (but see below). The loophole to the south of the doorway was probably fairly narrow. The north wall featured two loopholes 0.84m wide flanking a central loophole 1.06m wide.

It seems that the pillbox was approached (in more recent times at least) along the north side. Here, a largely destroyed concrete path led to a flight of four steps (each riser 0.3m high) leading down to a sunken entranceway or 'lobby' 1.55m wide along the north-east side of the pillbox and set down 1.2m below ground. The door is in this north-east elevation. The brickwork revetting the sunken lobby was entirely red and all courses were stretchers except for a top course of half brick 'soldiers'. Some suspicion must remain that this wide sunken lobby, a rather easy target for hand-grenades, was not an original feature. This hypothesis

would also be supported by the fact that where the steps pass by the north-east corner down into the sunken lobby or entranceway of the pillbox, there were no red brick quoins below ground level. Indeed, the whole arrangement was rather crude for the corner bricks had not even been cut to finish the corner tidily (see plate 25).

The north-west elevation features the only extant window opening. This would appear to be an original feature but may represent enlarging (i.e. heightening) of an originally smaller loophole. If so, it was the narrowest loophole in the structure. This would have been odd, because this side of the pillbox covered the Titford Canal to the west.

The short north-west and north-east sides conform to the official standard for a type 24, being 2.38 or 2.39m in length. The south-west, south and south-east walls are 2.61, 2.58 and 2.71m long respectively and these discrepancies give the pillbox its slightly out of true appearance in plan. The long north wall is 4.23m long. The original entrance was almost certainly in the north-east facing elevation, the side with a steep slope less than 10m to the east. It was also the side least likely to be attacked and there were also other pillboxes c. 900m to the north-east which could have covered this side (see section 5 above).

With the exception of the opening in the north-west wall, the top of all loopholes was two brick courses below the base of the concrete roof slab on the outside, but 4 courses on the inside and all loopholes were 3 brick courses high (0.26/9 inches). There was a loophole on the south side of the doorway but probably not on the north unless the door was widened on that side (see below).

Phase 2 (unknown date after 1940)

Moving round the building anti-clockwise from the north-west:-

A strap of iron 0.04m wide and 0.003m thick was bolted into the external north-west elevation just below the existing opening (Plate 8). This strap was held in place by three strong bolts (which survive) and still features the remnants of a close gridmesh grille. This opening would presumably not have been covered with a strong grille like this in 1940. A hole 0.33m (1 foot) square was knocked through this elevation below ground level (c. 0.4m below the left jamb of the window on Plate 9). This had been done very crudely by knocking out bricks. No attempt had been made to tidy up the edges of the hole.

Several holes c. 0.01m in diameter were drilled into the internal south-west elevation. Several of these have wooden rawlplugs of either 1950s or 1960s date. It would seem that shelves or equipment have been mounted on this wall. There are no drilled holes in any of the other walls internally.

The date 19th July 1959 was painted onto part of the brick blocking on the loophole on the exterior of the south wall (Plate 26). This was more tidily executed than simple graffiti and may have been the sort of marker that a public service or utility such as the Gas Board would leave.

A small cupboard 1.2m high and 0.75m wide was built into the south-west corner of the sunken entranceway (Fig. 8). The roof of the cupboard was a concrete slab 0.05m thick occurring at the level of the surrounding ground surface. A galvanised steel pipe 1 inch thick was passed through the north-east elevation of the pillbox. This was later sawn off on both

sides of the wall. The most obvious interpretation is that this was a gas supply and the cupboard housed the meter. The vertical joint for a loophole can be seen to the south of the doorway (left on Plate 19) but the other (northern) side of this loop cannot be seen or detected to the north of the doorway. The official description for a Type 24 notes the provision of a rifle loophole to each side of the doorway. The doorway of this pillbox is wider (0.96m) than the official figure (2 feet / 0.61m). It seems likely that the doorway to this pillbox has been widened at the same time that the loopholes were blocked and done so well that the repair cannot be detected. The sunken lobby may have been added at the same time along with the brick cupboard.

A small hole one brick wide was knocked through the north wall below ground level towards near the west end. A second and larger hole was knocked through the wall below the airbricks and centred on those bricks. The concrete pathway running alongside the north wall and leading to steps down the sunken entranceway was dug up and not replaced. In all likelihood, these three events were linked and associated with running services into the building.

7 Discussion

The pillbox is a simple variant of the Type Fw3/24. It is no longer possible to see entirely the same 'fields of fire' that the soldiers would have seen in 1940. The original loopholes seem to have been very broad, much broader than the norm for a Type 24 pillbox (see comparative photographs on Appendix 1). The reason for this is not understood, but may have been dictated either by the local topography or the need to get a meaningful number of soldiers on each loop, given that there was no telling which direction enemy paratroopers might approach from.

The pillbox was once part of a local 'stop-line' system. Almost certainly built in the first half of the year 1940, it was intended to stop the very broad, straight and level Wolverhampton Road, then c. 12 years old, from being used to land gliders or air assault troops as well as to prevent other enemy infantry from crossing the Jarvis Bridge. Its prime position meant that it would almost certainly have continued to serve as a useful Home Guard checkpoint on the A4123 for the remainder of the war (but this has not been proved). Once its defensive role had been made redundant by the general lack of a threatened invasion after c. 1941, the loopholes would have been unnecessary and the structure may have been remodeled as an air raid shelter or guardpost, perhaps both. The existence of broad loopholes would have made for a very draughty and cold structure for a 'guardhouse' and would have been highly undesirable in an air raid shelter.

Alternatively, it may have been remodeled after the war. The presence, some 5m to the north, of a small and windowless utility building belonging to Transco Gas may provide a clue. Both buildings lie close to the A4123. Most of the mains services for the area probably run somewhere between the pillbox and the carriageway. The date of 19th July 1959 painted onto the blocking in the south-east loop looks to be more 'official' than just plain graffiti. It was also about the date that the Titford Canal officially closed. The (now near windowless) pillbox may have been used by one of the public utilities as a very strong storeroom, perhaps to house service equipment or meters. This might also explain the three holes smashed through the walls below ground level. The close mesh grille across the larger north-west

window would appear to be a post-war feature. The drilled holes with wooden rawlplugs in the internal south-eastern elevation testify to heavy equipment or shelves being mounted on that wall (opposite the doorway). It is possible that the Transco building just to the north was purpose built to replace the pillbox structure.

8 Acknowledgements

Marches Archaeology was commissioned by John O'Leary of Severn Trent Water. Fay de Souza of Sandwell Borough Council assisted with the provision of more recent maps.

9 References

Maps

Bates, 1857, detailed plan of Langley and Langley Green

1st Edition Ordnance Survey Map sheet LXXII.1, 1885

2nd Edition Ordnance Survey Map sheet 72.1, 1904

3rd Edition Ordnance Survey Map sheet 72.1, 1919

4th Edition Ordnance Survey Map sheet 72.1, 1937

Published references

Pillbox Study Group Website (www.pillboxesuk.co.uk)

Claire Walker / Coombeswood Canal Trust, c. 1993 The Titford Project. Birmingham

Defense of Britain Project website (www.britarch.ac.uk/projects/dob/

Wills, Henry, 1987, Pillboxes. London

Suzie Drew and Diane Callow, 1997, Langley and round about. Sandwell Community Libraries

10 Archive

The site code allocated by Sandwell Borough Council was LGPB 05 The archive consists of:

- 2 photo record sheets
- 1 films of black and white photographic negatives
- 1 films of colour photographic transparencies
- digital photographs
- plan of the pillbox (A2 permatrace) with dimensions and 2 elevations

The archive is currently held by Marches Archaeology awaiting transfer to Sandwell Borough Council.

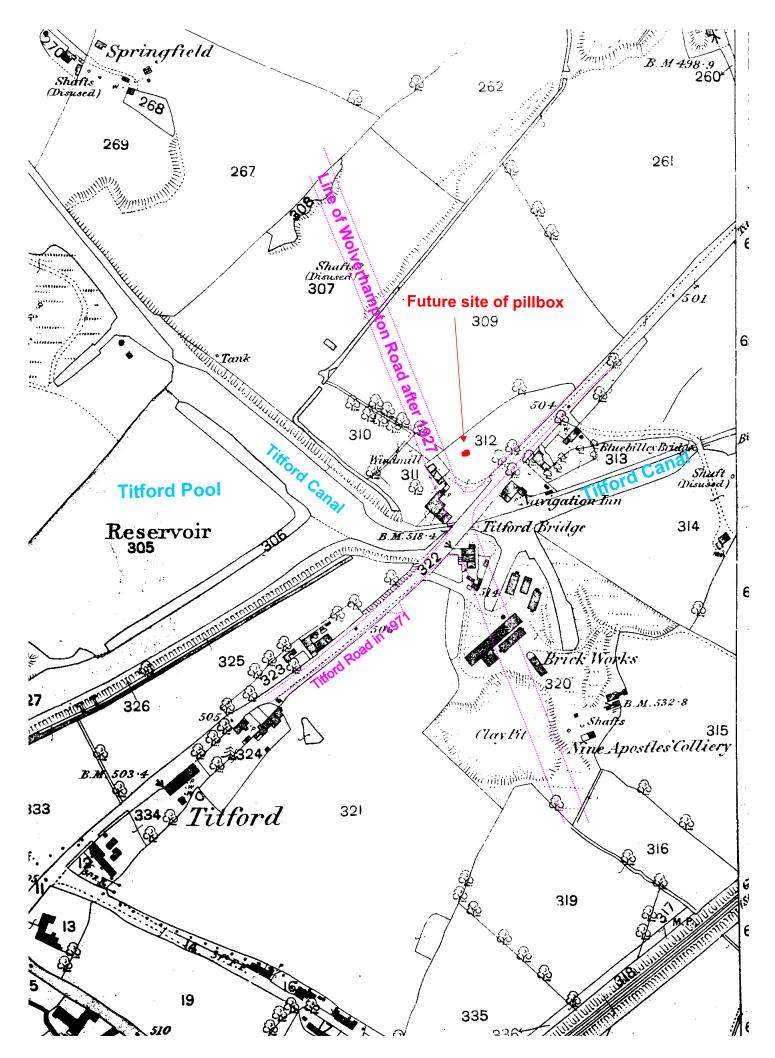


Fig 2 The site in 1885 showing the future route of the Wolverhampton Road (from 1:2500 1st edition Ordnance Survey Staffordshire LXXII.1)

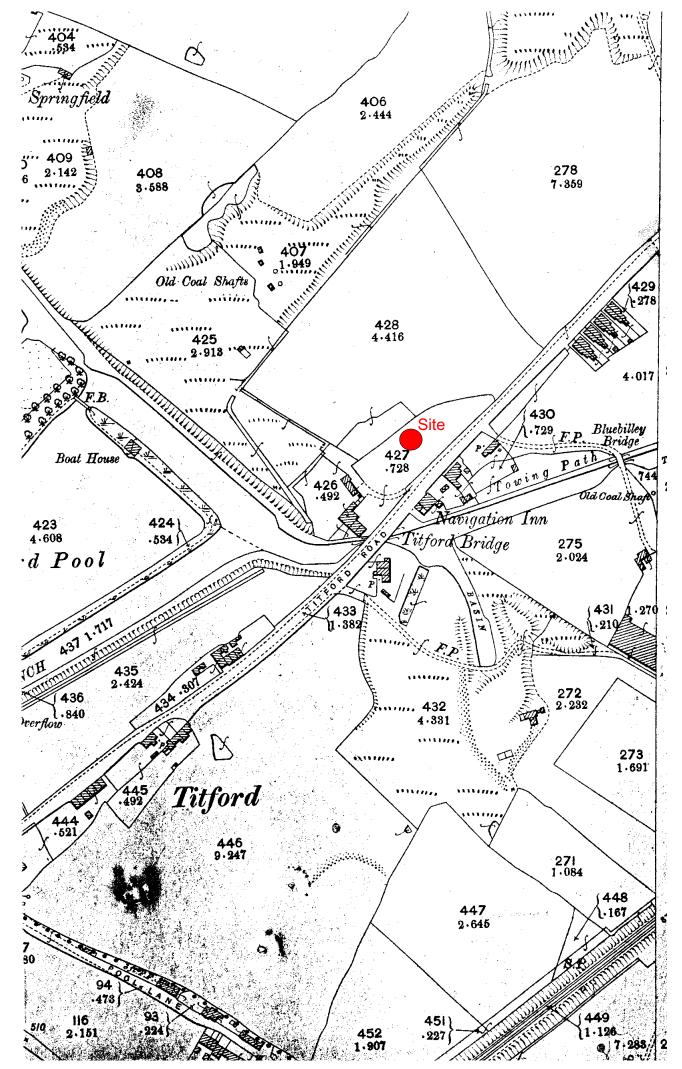


Fig. 3 - the site in 1904 (from 3rd edition Ordnance Survey 1:2500 map)

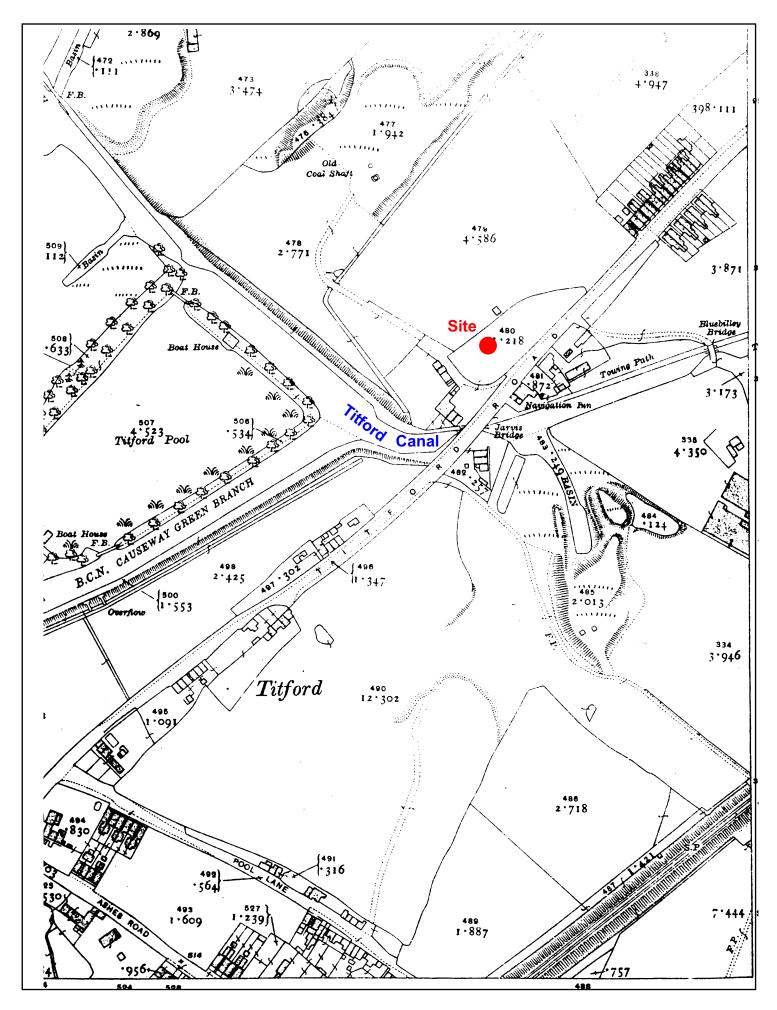


Fig 4 - the site in 1919 (from the 4th edition Ordnance Survey 1:2500 map)

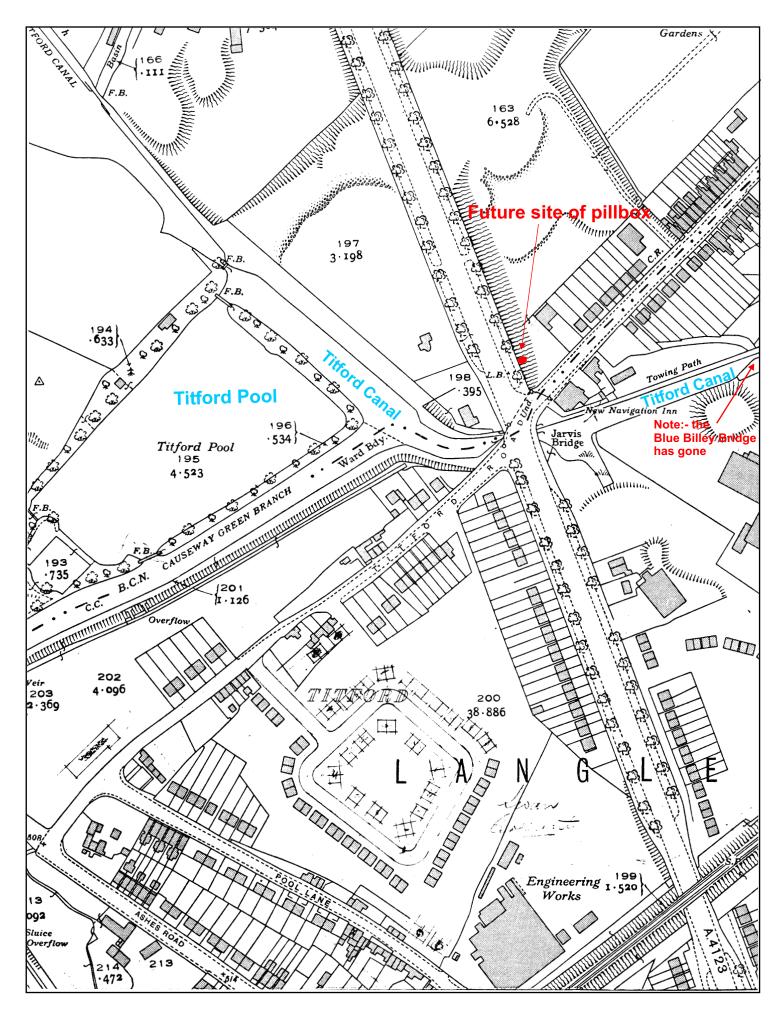


Fig. 5 The site in 1937 showing the new route of Wolverhampton Road (from 1:2500 4th edition Ordnance Survey Staffordshire LXXII.1)

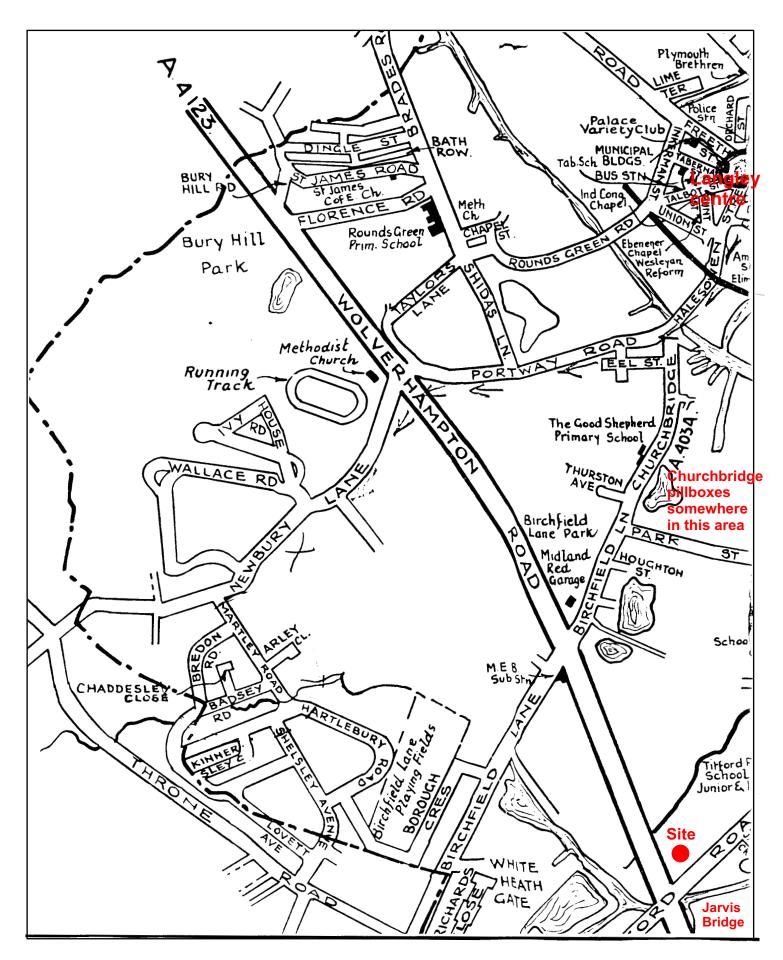


Fig 6 - detail from a 1963 street map of Langley showing the location of Churchbridge and the Jarvis Bridge pillbox

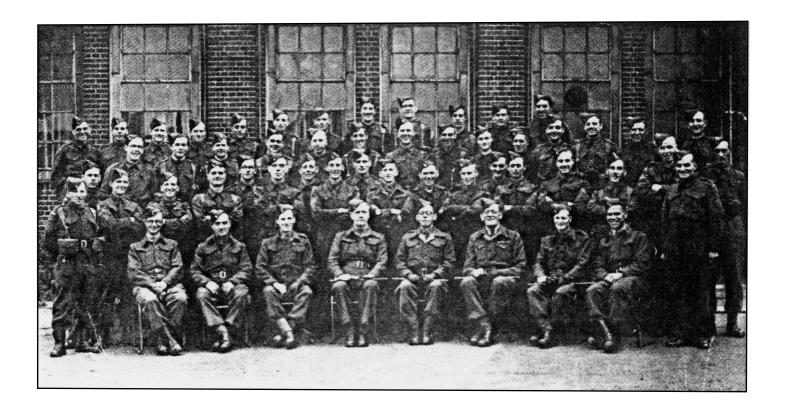


Fig. 7 The Langley Home Guard c. 1940 (from Drew and Callow, 1997)

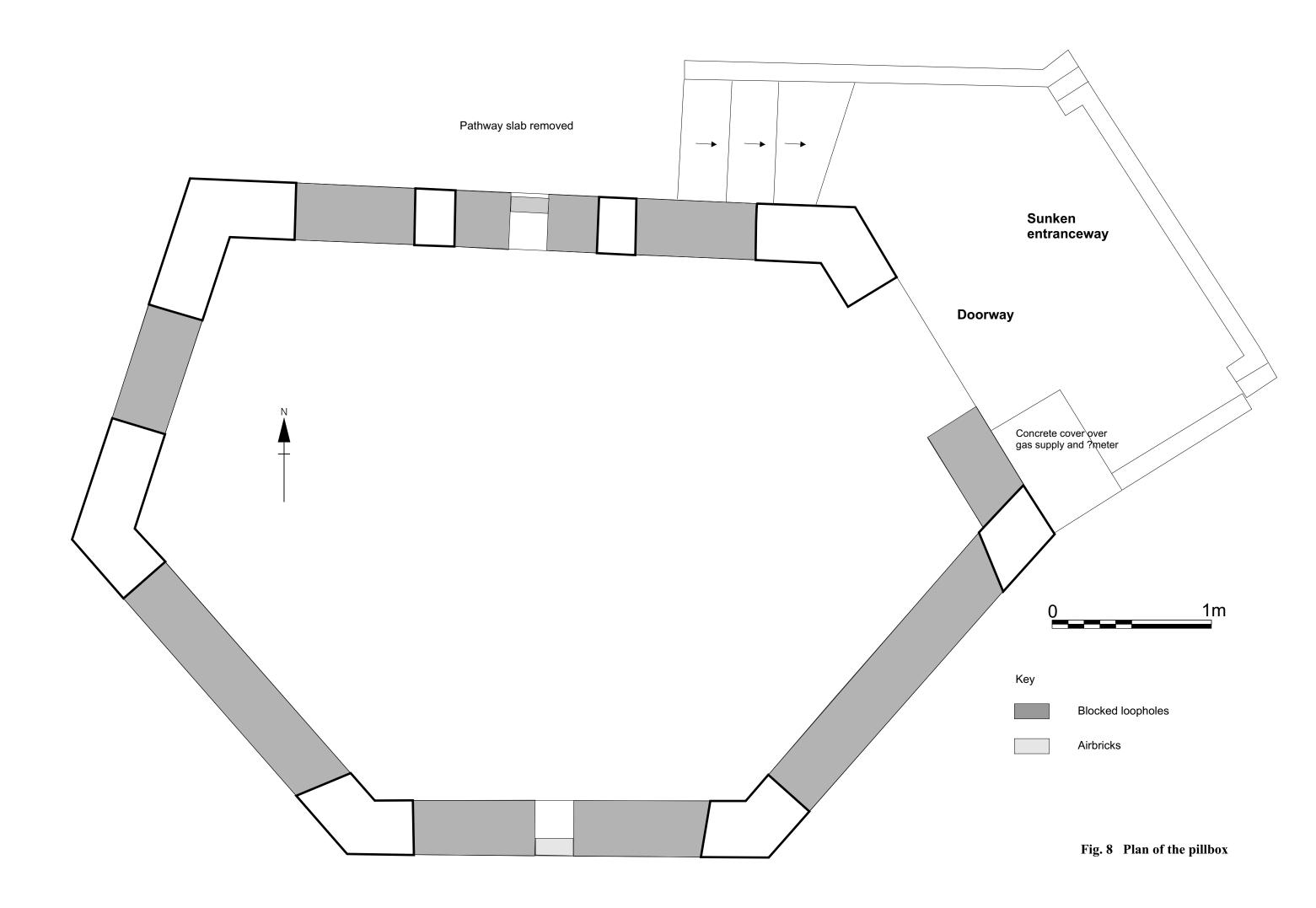




Plate 1 - the pillbox from the south-west



Plate 2 - view across Jarvis Bridge from the pillbox



Plate 4 - the Jarvis bridge - east side



Plate 3 - view from Jarvis bridge to the pillbox



Plate 5 - the canal to immediate west of Jarvis Bridge





Plate 6 - view of steep grass slope to east of pillbox

Plate 7 - slope up the man-made causeway for canal bridge



Plate 8 - north-west elevation



Plate 9 - internal north-west elevation



Plate 10 - south-west elevation



Plate 11 - internal south-west elevation



Plate 12 - south elevation (west end)



Plate 13 - south elevation (east end)



Plate 14 -internal south elevation



Plate 15 - south-east elevation



Plate 16 -internal south-east elevation



Plate 17 - entrance to pillbox looking north



Plate 18 - detail of brick 'quoins' at south-east corner



Plate 19 - entrance / north-east elevation



Plate 20 - detail of unfinished brickwork at north-east corner



Plate 21 - north elevation looking south-east



Plate 22 - internal north elevation (east end)



Plate 23 - north elevation (west end)



Plate 25 - detail of north-east corner



Plate 24 -internal north elevation (west end)



Plate 26 - date painted on south elevation



Plate 27 - shuttering / plank marks (underside of roof slab) Plate 28 - mark made by accrowed support for shuttering





Type 24 pillbox near Combe Bottom, Guildford, Surrey. Note the narrow loopholes on this Type 24 and the others examples shown here



Type 24 pillbox (on Pillbox study Group Website)



The long wall of the Type 24 pillbox at Offenham Weir, Worcester (Worcester Archaeological Service SMR)



Type 24 pillbox (on Pillbox study Group Website)



The short front walls of a Type 24 pillbox at Offenham Weir, Worcester - part of the Avon stopline (information from Worcester Archaeological Service SMR)



The interior of the Type 24 pillbox at Offenham Weir, Worcester showing machine gun brackets below left hand embrasure

(Worcester Archaeological Service SM)

(Worcester Archaeological Service SMR)