

# Second World War Pillbox West Coast Mainline Wiggington Staffordshire



## Historic Building Investigation and Recording



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# World War Two Pillbox, West Coast Mainline, Wiggington, Staffordshire.

## *HISTORIC BUILDING RECORDING AND INVESTIGATION*

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# World War Two Pillbox, Wiggington

## HISTORIC BUILDING INVESTIGATION AND RECORDING

### SUMMARY

*Oxford Archaeology (OA) has carried out a programme of building recording and investigation on a WWII anti-invasion defence pillbox situated at the crossing of the West Coast Mainline Railway and the River Tame at Wiggington near Tamworth Staffordshire. The work was carried out in advance of demolition of the structure as part of the improvement of the line between Tamworth and Lichfield. Two new tracks are being constructed on the site of former tracks which must have been removed before 1940. The pillbox stands on the east side of the present tracks on the site of the removed line, overlooking the river crossing. Piers of a former bridge which carried the removed tracks were also being demolished as part of the work. The pillbox was a local variant and not a standard war office design. The structure was small and rectangular in plan with a single pitched roof to imitate a platelayers hut in size and shape. The entrance was in the east side and each elevation contained a gun embrasure which splayed inwards. There was a central internal anti-ricochet wall which divided the firing positions and left cramped conditions for the defenders. The pillbox core was constructed of shuttered concrete in stages and small blocks of wood were inset into the exterior face of the concrete to act as fixing points, presumably for a false shed structure, now lost, to disguise the true function of the pillbox. Some of these blocks survived but many had gone leaving the empty mortise like cavities. The strength of the structure allowed it to be removed in one piece rather than demolished and it is to be preserved at the Staffordshire Regiment Museum.*

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## 1 INTRODUCTION

### 1.1 Background

1.1.1 Oxford Archaeology (OA) has been commissioned by Network Rail to undertake a programme of historic building recording and investigation on a WWII Pillbox on the West Coast Mainline at the crossing of the River Tame near Wiggington (NGR: SK 1855 0673). The work relates to the demolition of the pillbox in advance of construction of additional tracks on the West Coast Mainline between Tamworth and Lichfield. Due to the historic interest of the building planning approval for the development has been granted with the condition that a programme of building recording be undertaken prior to demolition works. This is in line with national planning guidance (PPG15).

### 1.2 Aims and objectives

1.2.1 The main aim of the work is to produce for posterity a record of the pillbox and its setting prior to demolition/removal.



### 1.3 Methodology

1.3.1 The recording programme consisted of three main elements: a drawn survey, a photographic survey and a written survey. The drawn survey consisted of measured plans sections and elevations of the building made by OA staff on site with annotation to detail any information regarding the construction of the structure and other features of interest. The photographic survey used 35 mm film (colour slide and black and white prints) and digital images and consisted of general shots and specific details (internal and external). The written survey complemented the other surveys and consisted of the written elements of this report describing the pillbox and including notes on background information and setting. The site work was undertaken before demolition works.

1.3.2 The site work was undertaken on the 27th of July, 2005. A project archive will be ordered and deposited with Staffordshire Museum Services (or other agreed body). It will include all site drawings, photographs (contact sheets), slides, photographic negatives, a copy of this report and any other site notes. A copy of this report will also be deposited with the Staffordshire Sites and Monuments Record.

### 1.4 Acknowledgements

1.4.1 Oxford Archaeology would like to thank BIRSE and Network Rail for their co-operation and assistance during this project.

## 2 HISTORICAL BACKGROUND

2.1.1 In 1940 in response to the threat of German invasion it was decided to organise home defence by creating defence lines based on natural or existing features combined with newly constructed obstacles. Areas of the coast most vulnerable to invasion were defended with a combination of new constructions, and adaptation of existing structures known as the coastal 'crust'. Inland defences consisted of a network of 'stoplines' which combined natural and existing features such as rivers and railway embankments with newly constructed pillboxes anti-tank blocks and ditches, minefields etc. (Lowry 1995:78).

2.1.2 Pillboxes had first been used in the Russo-Japanese war, then by the Germans and later the British in WWI. During WWII, as described above, pillboxes in Britain were used mostly in coastal defences and stoplines and for defending specific military sites such as airfields, radar stations and some important civil sites such as factories etc. In June 1940 the War Office issued a series of standard designs for pillboxes. In practice a wide range of variations were constructed as well as standard designs depending on local conditions and needs and other expedient considerations (Lowry 1995:79). The Wiggington pillbox is an example of such a variation. Most pillboxes were constructed



between June 1940 when General Ironside's plans for home defence were approved and May 1941 when a review of pillbox numbers was requested, after this only a few additional pillboxes for airfield defence and other special purposes were built (Wills 1985). Over 18,000 examples were constructed during 1940 (Lowry 1995, 79).

- 2.1.3 The pillbox is sited at a strategically significant point where the west coast mainline crosses the River Tame (Plate 1), this was also the point where the railway crossed the Western Command Stopline No. 5: Tamworth to Burton on Trent (Graham-Kerr, 1993, 35-6). The pillbox stands on the east side of the present railway on the site of two former tracks that must have been removed before the erection of the pillbox c 1940. Surviving piers of a former bridge which carried the removed tracks and stood alongside the existing bridge (No. 86) were also being demolished as part of the work (see Plate 1).
- 2.1.4 The design is not one of the standard types but a localised type with pitched roof which in this instance is thought to be in imitation of a platelayers hut. There are some similar examples on the River Dove in Derbyshire (Osborne 2003, 56-7) (Fig. 3) which connects with the Thame, and were probably part of the same defensive line, but these were not placed by a railway so cannot have been intended to imitate the same type of building.

### 3 DESCRIPTION

- 3.1.1 The pillbox (Plates 2-3, Fig. 2) was rectangular in plan measuring 3.5 x 2.5m and aligned north-south on the east side of the railway line. The roof was a single pitch sloping up from east to west. The highest part of the roof was 2.0m above ground level and 2.65m above the floor slab. The lower parts of the walls were just below ground level, the floor slab was uncovered in one area and seen to extend about 0.4m beyond the exterior walls, its thickness was not seen. The walls were 0.38m thick consisting of concrete which was probably reinforced with steel but this was not visible.
- 3.1.2 The entrance was a rectangular opening at the south end of the east side (Plates 4-5). There was no door fitted or external blast wall to protect the entrance. Each wall contained a gun embrasure, these consisted of a small rectangular opening (approx. 0.23 x 0.45m) in the external face (Plate 6) with a plain internal splay widening to 0.75m (Plate 7), the sills of the embrasures were 1.40m above the floor level. The embrasures in the east and south walls were offset slightly north and west respectively from the centre of the walls due to the proximity of the entrance.
- 3.1.3 On each elevation at roof and embrasure level (and around the entrance) were rows of small rectangular cavities like miniature putlog holes which originally contained small wooden blocks some of which were still in situ (Plate 8). Those remaining had wire nails projecting from them and those missing



revealed wire nails projecting from the sides of the cavities. These blocks must have been nailed to the shuttering with further nails projecting from them to hold them securely in the concrete when the shuttering was removed. The function of these blocks was probably to act as fixing points for a false shed facade to disguise the pillbox as a platelayers hut, any other traces of this disguise had completely gone. Other concrete pillboxes do not display similar 'putlog' holes which makes it unlikely that they are just a part of the shuttering construction.

- 3.1.4 The internal dimensions of the pillbox were 1.8 x 2.7m and the distance from floor to ceiling ranged from 1.8m on the east side to 2.2m on the west. The central anti-ricochet wall was Y-shaped in plan aligned north-south with the fork at the north end (Plate 9). Beneath each embrasure was a series of wooden blocks set into the concrete similar to those on the exterior (see section 3.1.3) but in better condition with all blocks surviving. There were seven blocks below each embrasure (fig. 2) consisting of an upper row of three extending for the width of the embrasure 18cm below the sill with two lower blocks at each end (Plate 10). This arrangement looks as though it may have been for fixing a shelf and support brackets, or possibly a hinged flap or box for ammunition etc.
- 3.1.5 The construction methods of the pillbox using timber shuttering and poured concrete in stages or lifts were clearly visible in the fabric. Marks from the shuttering were visible on all the external and internal elevations including the embrasures, the anti-ricochet/blast wall, and the ceiling (see Plate 9), these indicated that 5 inch wide timbers set vertically were mainly used. Five separate lifts of concrete could be seen on the south elevation (Plate 11) the latest being the roof slab, the first stage must have been the floor slab thus making at least six stages in all.

#### 4 DISCUSSION AND CONCLUSIONS

- 4.1.1 The pillbox is not a standard design but a local variant, designed to imitate the form of a platelayer's hut, and possibly originally had a false hut facade affixed to the wooden blocks set into the concrete. There are some similar examples on the River Dove in Derbyshire (Osborne 2003: 56-7) (Fig. 3) which connects with the Thame, and were probably part of the same defensive line, but these were not placed by a railway so cannot have been intended to imitate the same type of building. The example illustrated by a photograph (Osborne 2003: 56) although virtually identical in form does not appear to have the small timber fixing blocks that the Wiggington pillbox has and so was probably not disguised with a fixed false facade. Disguise of pillboxes as other types of building was common, Wills (1985: 60) illustrates a pillbox in Aylsham, Norfolk, disguised as a garden shed with single pitched roof and corrugated-iron false roof and walls, which defended a crossing of the River Bure. The Wiggington pillbox with a disguise in place may have looked very





similar to this example. There is however no firm evidence of the nature of the disguise fitted to the pillbox.

4.1.2 The pillbox was constructed in stages using shuttering consisting of 5 inch wide vertically set timbers. The gun embrasures splay inwards only, this combined with the small width of the embrasure openings would probably have made it more difficult to easily attain a good field of fire and firing position from this particular pillbox (Plate. 12). It seems likely that this structure was intended for defence by the local Home Guard or infantry armed with rifles or possibly light machine guns.

4.1.3 Fortunately the strength and solidity of the pillbox allowed it to be removed intact rather than be destroyed by demolition and it has been arranged for the Staffordshire Regiment Museum to keep and preserve the structure (pers. comm. Jim Pearson of Network Rail).

Simon Underdown  
August 2005

## 5 BIBLIOGRAPHY

Graham-Kerr A. 1993 'The Tamworth to Burton on Trent Stopline'. *West Midlands Archaeology* 36.

Lowry, B. (ed.) 1995 *20<sup>th</sup> Century Defences in Britain: An Introductory Guide*. York: Council for British Archaeology

Osborne, M. 2003 *20th Century Defences in Britain - The East Midlands*. Lincolnshire: Concrete Publications

Wills, H. 1985 *Pillboxes: A Study of UK Defences, 1940*. Leo Cooper



## APPENDIX I SUMMARY OF SITE DETAILS

**Site name:** W W II Pillbox, West Coast Mainline, Wiggington

**Site code:** WIGPIL05

**Grid reference:**

**Type of evaluation:** Building Recording and Investigation

**Date and duration of project:** July 27 to August 15th2005

**Summary of results:** Building recording and investigation was carried out on a WWII anti-invasion pillbox situated at the crossing of the West Coast Mainline Railway and the River Tame at Wiggington. The pillbox was small and rectangular in plan with a single pitched roof to imitate a platelayers hut in shape and size.. The entrance was in the east side opposite to the railway tracks. Each elevation contained a splayed gun embrasure and there was a central anti-ricochet wall. The pillbox was constructed of shuttered concrete in stages and small blocks of wood were inset into the exterior face of the concrete to act as fixing points, presumably for a false shed structure to disguise its true function of the pillbox. Some of these blocks survived but many had gone leaving the empty mortise like cavities.

**Location of archive:** The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES.



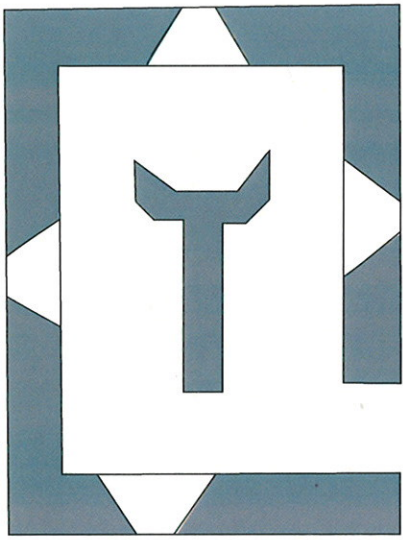
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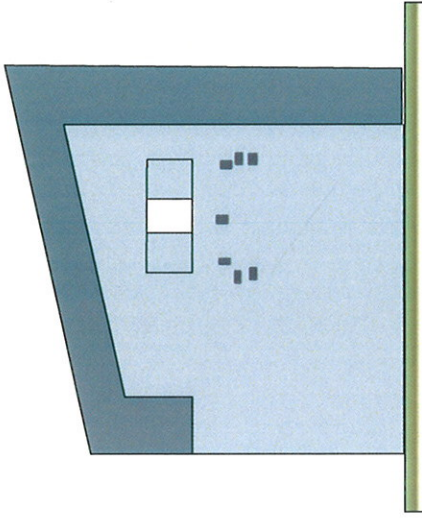
Figure 1: Site location



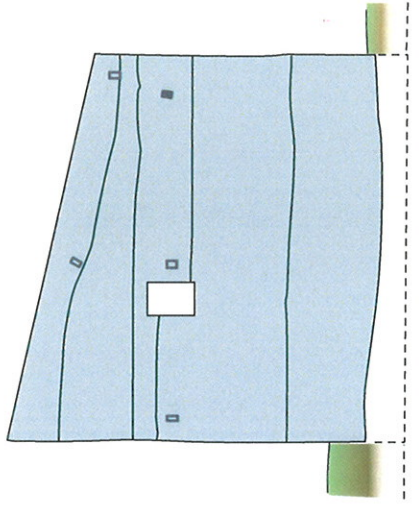
Plan of Pillbox



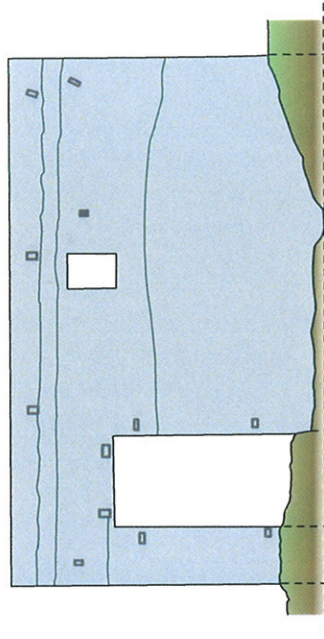
Internal elevation of South wall



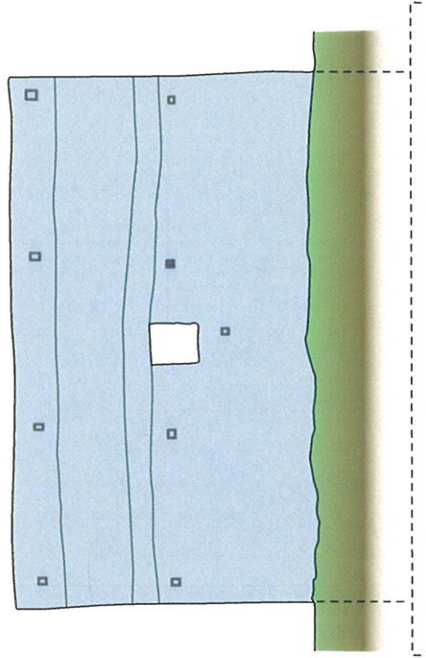
South facing elevation



East facing elevation



West facing elevation



- Cavities for fixing blocks
- Fixing blocks in situ



Figure 2: Plan and elevations

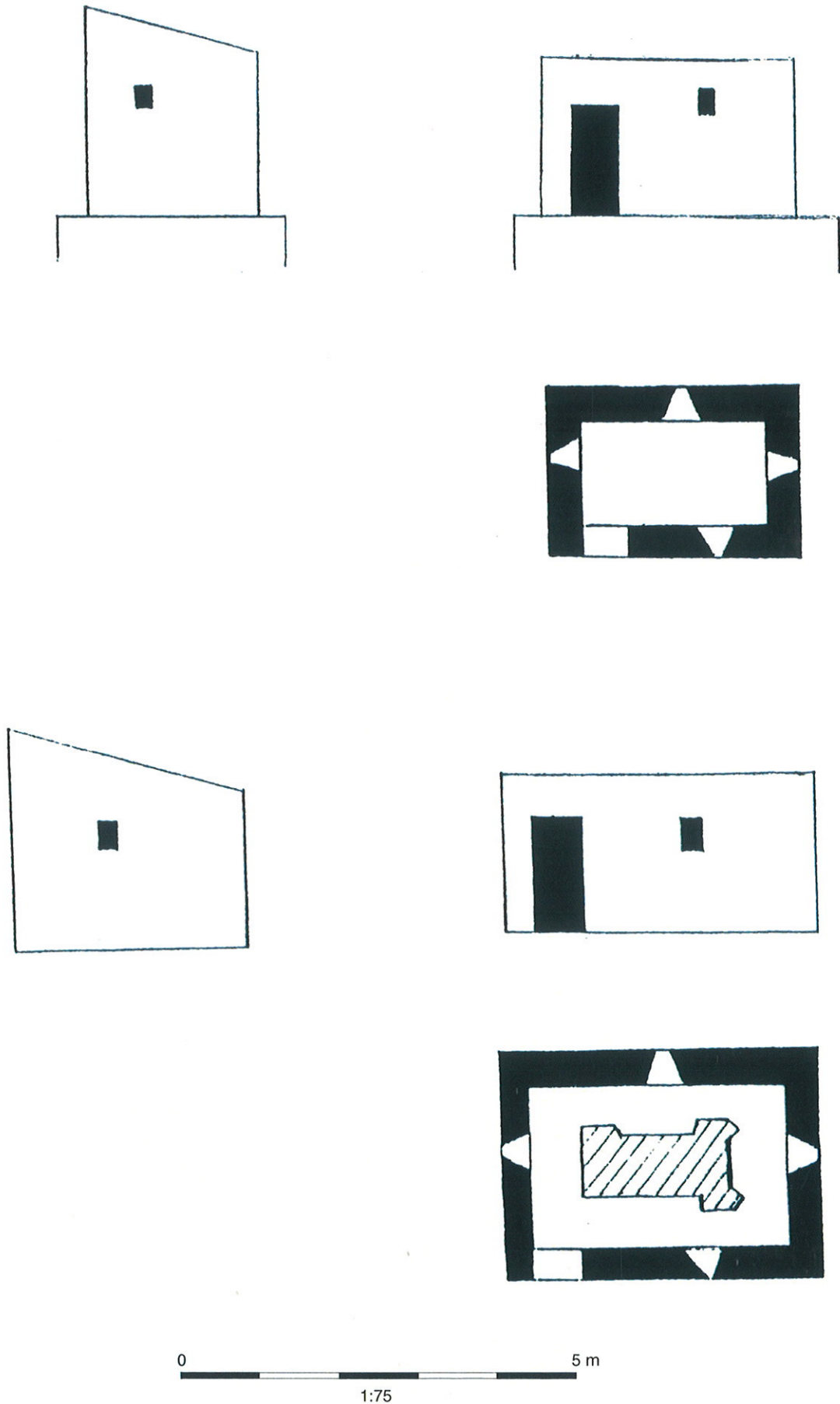


Figure 3; Examples of similar Pillboxes on the river Dove in Derbyshire, (adapted from Osborne 2003:62)

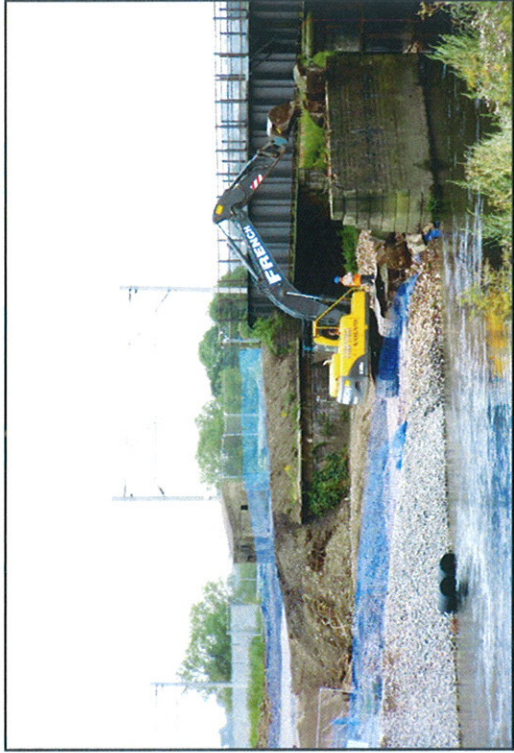


Plate 1: Pillbox in its setting at crossing of West Coast Mainline and River Thame also showing demolition of former bridge piers, looking south-west



Plate 2: General view of Pillbox looking north-west



Plate 3: General view of Pillbox looking south-east, 1m scale.



Plate 4: Entrance to pillbox, looking west



Plate 5: East facing elevation

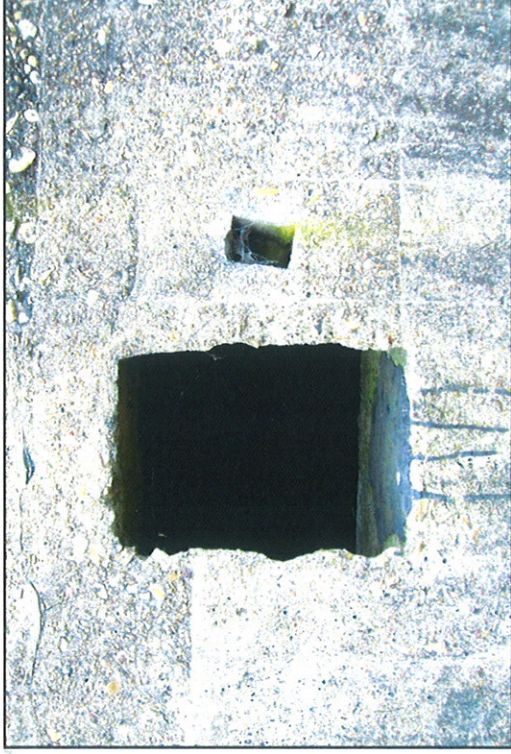


Plate 6: Close up of south facing embrasure



Plate 7: Interior showing west embrasure looking north-west



Plate 8: Part of south elevation showing construction phases and timber blocks

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Plate 9: Interior view showing anti-ricochet wall on right, looking north



Plate 10: Interior view of south embrasure showing timber fixing blocks below, 0.5m scale



Plate 11: South facing elevation



Plate 12: View of railway line and south end of bridge from western embrasure



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