WILTSHIRE ARCHAEOLOGY FIELD GROUP

YATESBURY AIRFIELD DEFENCE SITE, CHERHILL, WILTSHIRE.

Measured Survey: January 2013
Earthwork Survey: May 2013
Aerial Photographic Analysis: Aug 2013
Report Number 2014.01
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<th>Event:</th>
<th>Building Recording and earthwork survey of Cherhill Down Barrow and Gun Emplacement</th>
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<td>Event type:</td>
<td>Survey</td>
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**Project Details:**

**Event/Activity Types –** Building Recording and Earthwork survey

**Thesaurus Event Types**

- BUILDING SURVEY
- PHOTOGRAPHIC SURVEY
- ANALYTICAL EARTHWORK SURVEY
- AERIAL PHOTOGRAPH INTERPRETATION

**Event/Activity References** - None recorded

**Organisation:**  
Wiltshire Archaeology Field Group (WAHNS)

**Associated Individuals**  
Brian Clarke, Stella Maddock, Dan Miles and Amanda Dickson

**Associated Organisations** -

**Location**

**Grid Reference**

Centred NGR 406740 169630

**Administrative Areas**

- **Civil Parish**  
  Cherhill, Wiltshire

**Address** - None recorded

**Description and Sources**
Description

The field investigation of a Second World War gun emplacement built into a Bronze Age bowl barrow was undertaken by the Wiltshire Archaeology Field Group. The extant Second World War structures were surveyed to English Heritage Level 3 standard and a photographic record was undertaken. An analytical earthwork survey of the barrow was undertaken using the tape and offset method.

The Second World War light anti-aircraft gun emplacement consists of open twin gun pits, blast shelter and observation post and zig-zag blast entrance.

Sources

Report: WAFG. 2014.01 YATESBURY AIRFIELD DEFENCE SITE

Associated Monument - NE of Knoll Down, Bronze Age bowl barrow

Bowl barrow damaged by wartime building. O Meyrick found a beaker, Middle Bronze Age sherds, shale fragments and human bones superficially. B) Side bank of the Old Bath Road overlies South side.

Updated Monument Record for MWI9085 - SU07SE526

Mon. Name:

Bronze Age bowl barrow with Second World War gun emplacement

Description:

Bronze Age bowl barrow with a Second World War light anti-aircraft gun emplacement built into its centre. The extant gun emplacement consists of a twin gun-pit, blast shelter and zig-zag blast corridor. It is one of five light anti-aircraft gun emplacements that made up part of the airfield defences of the Radio School at RAF Yatesbury.

There is confusion over the archaeological finds recovered from the barrow, but the only confirmed finds are the surface finds from 'around' the barrow, found by Owen Meyrick, comprising pottery sherds, bone and shale.

Thesaurus Event Types:

bowl barrow, anti aircraft gun post, blast shelter, blast wall

Associated Monument:

Yatesbury Airfield (MWI9085 - SU07SE526)
Investigation undertaken by:

Wiltshire Archaeology and Natural History Society (WANHS) Archaeology Field Group (WAFG)

Authorship: Brian Clarke, Stella Maddock, Dan Miles and Amanda Dickson

Acknowledgements

The Authors would like to thank the following members of the field group who took part in the surveys - Bob Clarke, Sharon Benfield, Robin Holley, Mike McQueen, John Sanigar and Tony Hack. Thanks also to John Girvan for his reconstruction drawing and Roger Thomas and Gordon Chivers for their expert information on the site.

Disclaimer

This report has been compiled with all reasonable skill, care and attention to detail within the terms of the project design and within the general operating procedures of the Wiltshire Archaeology Field Group and WANHS. No responsibility is accepted whatsoever to third parties to whom this report or any part thereof is made known. Any such party relies upon this report at their own risk.
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1. Barrow Records analysis.

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1. **Introduction.**

Cherhill Bowl Barrow is recorded on the Wiltshire HER (No. MWI7870 (SU06NE617)), the National Heritage List for England (Scheduled Monument No. 1010133) and the National Record for the Historic Environment (No. 215627). This bowl barrow is unusual in that during the Second World War, a brick and concrete structure was built into the centre of it. All the various records describe the barrow and its investigation, though very few details are provided of the later feature built into it.

The Second World War feature has been described in the records as an observation post, a defence post and a pillbox. However, following an initial site visit and discussion with military archaeologist Roger Thomas, it has been suggested that the Second World War feature may not be an observation post but a type of light anti aircraft gun emplacement. Local resident and chair of the Yatesbury History Society, Gordon Chivers, also described this site and another just to the north of the Radio School as being gun emplacements.

The majority of Second World War military buildings are built to a standard type and pattern, and official plans and drawings of these are well documented. However, after undertaking a literature review, posting questions on the Forum of the Airfield Research Group, and through discussions with Roger Thomas, it appears that this is not the case for this type of light anti-aircraft site. Furthermore, very few of this type of gun emplacement have been researched and recorded in any detail. In addition, this site is even more unusual, because it was built into the centre of a Bronze Age barrow.

2. **Location.**

The barrow is located alongside the Old Bath Road in the parish of Cherhill at NGR 406740 169630 and overlooks the site of Yatesbury airfield to the north.

3. **Geology.**

The barrow is sited on chalk at the junction between the Lewes Nodular Chalk Formation and the Holywell Nodular Chalk Formation.
4. Research Aims and Objectives

Research on military defence sites is referred to in the South West Regional Research Framework (Webster, 2007) Aim 64: Improve our understanding of the less-researched areas of Post-Medieval to Modern defence and warfare. Airfield defences is one of these less-researched areas of modern conflict sites.

4.1 Overall Research Aim

To identify and understand better the Second World War features in relation to the Bronze Age barrow and their place within the context of the airfield defence scheme of RAF Yatesbury.
4.2 Research Objectives

- Record information on the Second World War site's structure, fabric and condition.
- Survey the Bronze Age barrow
- Undertake documentary and aerial photographic analysis of the Second World War airfield of RAF Yatesbury.
- Enhance the HER and Designation records of the site.

5. Historical Context of the Second World War Gun Emplacement

5.1 Establishment of an airfield at Yatesbury

An aerodrome was first established at Yatesbury during the First World War. The Royal Flying Corps aerodrome of Yatesbury consisted of two sites or camps with their own landing grounds; the northern camp along Jugglers lane and the southern camp along the A4. The aerodrome was closed in 1919, however, in 1936 a new civilian flying school was established by the Bristol Aeroplane Company (BAC) on the site of the earlier northern camp (SU 0541 7094). At the outbreak of the Second World War this airfield was taken over and converted by the military to train airborne wireless operators. In 1938, near to the site of the First World War southern camp, an extensive hutted encampment was built (SU 0652 7017) to train radio operators (fig. 2). This was known as No. 2 Electrical and Wireless School, later renamed No. 2 Radio School, (Francis, 1998). Here wireless operators were given ground and aerial training. In 1942, a radar training facility, originally known as No. 9 RDF School, was built just to the north of the eastern part of the camp. The Radio school continued after the end of the Second World War and finally closed in 1965. The site was quickly returned to farm land and today (2013) only the gymnasium and the remains of the camp road layout survive from this extensive site.

5.2 Second World War Defence Schemes

Defence schemes were established at airfields during the Second World War to protect them from air and ground attacks. These included the construction of various defences, such as anti-aircraft gun emplacements, pillboxes and slit trenches. In September 1940 the Taylor Report (PRO AIR 14/196) was issued which introduced a national system of airfield defences. This established that the scale of defences was based on the location of the site rather than its function. Subsequently, three main classes of airfield were created, based on the scale of attack they were at risk from. Yatesbury was classified as a class III airfield with “a small risk of attack, liable to air attack or small scale parachute attack for no particular tactical reason but as a diversion or nuisance”( Taylor Report, 1940). Class III airfields would
have been defended by around 10 to 16 defensive elements, including air and ground defences, both inward and outward looking. These would have been manned by around 150 to 200 men.

![Diagram of RAF Yatesbury and surrounding area]

Fig. 2 Position of the gun emplacement in relation to RAF Yatesbury

6. **History of archaeological work at the barrow**

There is no clear evidence for the barrow having been opened by antiquarians in the 19th century (see Appendix 1 for further discussion on this). So the earliest known archaeological record of the barrow is an entry in the Rev. E.H. Goddard’s list of Wiltshire barrows published in WAM Vol. 38 (1913) p.221. He records: *Cherhill 6. Large bowl shaped barrow on Yatesbury boundary just N of Old Bath Road, and a map reference OM 27SE*. The entry for the barrow also says *Opened, no record* but Goddard does not provide any references for this so it is unclear what is meant (see Appendix 1). If the barrow was previously opened it is not known when or by whom.

The barrow was scheduled in 1925 (SM No. 19037). At some time after this, probably during the 1930s/40s but possibly later, and pre-1957, Owen Meyrick recorded surface finds he’d made from around the barrow in his site register and on an OS 6 inch map (Sheet XXVII). The finds, the site register, and the map are held by WANHS at the Wiltshire Museum in Devizes (see Appendix 1 for details). In his register Meyrick states *Barrow*
previously opened, no record but this appears to be a straight copy from the entry in Goddard’s list.

Meyrick’s fieldwork could have taken place before, during, or after the construction of the gun emplacement into the barrow during WW2 (1939-45). It’s not known whether any kind of archaeological investigation was carried out before or during the construction of the gun emplacement into the barrow between 1939 and 1945.

Grinsell’s Archaeological Gazetteer in Vol. 1 of the VCH for Wiltshire (1957) lists the barrow and mentions Meyrick’s surface finds and the brick-built structure inserted into the barrow 1939-45. It does not refer to any excavation or opening of the barrow.

Apart from official inspections/measurements/1:2500 survey by RCHME etc in 1970 and 1973, and subsequent mapping from aerial photos by English Heritage, there does not appear to have been any other archaeological work at the barrow.

7. Method Statement

The investigation of the site consisted of three elements:

- Documentary Research - Analysis of aerial photographs and airfield plans.
- A building and photographic survey of the Second World War features.
- An earthwork survey of the barrow.

7.1 Documentary Research - Analysis of aerial photographs and airfield plans

Aerial photographs held in the English Heritage Archive (The Engine House, Swindon) were viewed and interpreted by Amanda Dickson and Dan Miles. These aerial photographs are an important source providing a snapshot in time of the site during the war and document changes between 1941 to 1946 (details of prints viewed in Appendix 2). The aim of this analysis was to provide a geographical and temporal setting to the site in terms of its spatial relationship to Yatesbury airfield and inclusion in its defence scheme.

The Yatesbury Record Site Plan (Ref. 4552/45) and the Yatesbury Schedule of Buildings (Ref. 124/48) held in the RAF Museum, Hendon, were examined and analysed. These provide a detailed plan and register of all the main buildings on the airfield, including on the flying site, the Radio School and the Radar site.

7.2 Building and photographic survey of the Second World War features

The structure was surveyed to English Heritage Level 3 standard (English Heritage, 2006) and included the recording of the plan, form, method and phasing of construction, the
internal layout and any fixtures and fittings. A detailed photographic record was also undertaken.

The structure was recorded using a running dimension method. A tape was run horizontally along each wall in turn, and cumulative measurements noted for the start and end of each feature along that wall. The diagonal across the structure was noted to check accuracy. Vertical measurements were taken across all features to enable elevations to be drawn. The direction of each section of the zigzag entrance passage was determined using a prismatic sighting compass and its length measured. A plan and section were drawn at a scale of 1:50 and elevations at 1:20 (Appendix 3, Figs. 1-4).

7.3 Earthwork survey of the barrow

The barrow was surveyed using tape and offset. A baseline was laid out along the top of the southern bank of the Old Bath Road and offsets at 90° were taken to the bottom and top of the banks and southern arc of the barrow. The distance along the base line and distance along the offset were recorded. Subsidiary base lines at 90° to the original were laid out at 0 and 35 metres and offsets from these were used to locate the base of the western, northern and eastern flanks of the barrow. The height of the top of the barrow above the base line was determined using a levelling staff and this together with the measured distance (hypotenuse) was used to calculate the horizontal distance. The coordinates from the above were then plotted at a scale of 1:200 to produce a plan (Appendix 3, Fig. 5).
8. Results

8.1 Aerial photograph Interpretation and Airfield Plan

8.1.1 The gun emplacement is identified in the earliest available aerial photograph, dating to 1941 (11/02/1941, RAF/HLA/395). The gun emplacement is visible as a solid structure in the centre of the Bronze Age barrow and surrounded by a ring of barbed wire. It is also visible on later aerial photographs, dating to 1942 and 1946. Similar features were identified encircling the Radio School which is located on the north side of the A4 road. There appear to be four more of these features, visible as rectangular structures divided into two compartments and surrounded by a ring of barbed wire. These are located at SU 06406 70748, SU 06983 70658, SU 06993 70126 and SU 05953 70319. The most northerly of these (SU 06406 70748) is the one described by Gordon Chivers as being a gun emplacement.

Other defensive features have also been identified at RAF Yatesbury. A number of pillboxes, some of which also supported light anti-aircraft gun emplacements, defended the northern flying field. A large number of small v-shaped slit trenches have been identified surrounding the Radio and Radar Schools. It is thought that these would have had a defensive role in protecting the airfield rather than for ground crew protection from air raids despite the seemingly irregular pattern of some of the trenches (see Fig. 4).

Fig. 4 Aerial photograph mapping indicating the gun emplacements in relation to the Radio School camp (for clarity, only roads are depicted). This map is not to scale.
8.1.2 The airfield plans and register of buildings (4552/45, 124/48) do not record the gun emplacements identified in the aerial photographs. However, this is not unusual, as airfield defence schemes are rarely recorded on these type of airfield plans. However, the airfield plan does identify a number of defence posts and a battle headquarters. This battle headquarters coincides with the most westerly gun emplacement site identified in the aerial photographs (SU 05953 70319). This site would have coordinated the airfield defences of Yatesbury.

8.2 Building Recording of the Second World War Gun Emplacement

![Diagram of gun emplacement]

**Fig. 5** Plan of light anti aircraft gun emplacement

The Second World War gun emplacement was built into the southern half of the Bronze Age barrow, destroying most of the central area. It consists of three different parts; an unroofed brick rectangular gun pit (twin); a brick and concrete roofed blast shelter, and a concrete lined zig-zag blast entrance way, that opens up on the eastern side of the barrow.

8.2.1 Gun pit

The gun pit is an unroofed rectangular brick structure divided into two chambers by a central wall (Fig. 6). The chambers are interconnected by an entrance way in the northern
part adjoining the blast shelter. The floor is of concrete and the walls are brick in English bond with alternate courses laid with headers and stretchers facing. The bricks measure 22 x 10.5 x 7 cm.

A small rectangular concrete plug with iron ring is evident in the centre of the west chamber (Fig. 7). It was not ascertained whether a similar plug was evident in the eastern chamber, due to fallen rubble from the central wall. The concrete plug has been interpreted as a mounting plug or cover that was used to protect a gun mounting when not in use. This would have been removed when the light anti-aircraft gun was inserted into its mounting socket.
8.2.2 Blast Shelter

The blast shelter would have provided the occupants with protection during attack. The shelter is brick built with a concrete roof and floor. It is accessed through an entranceway in the southern wall of the shelter from the eastern gun pit. The upper courses of brick in the south wall of the shelter are slightly offset from the lower courses; the change appears to be at the level of the outside floor of the weapon pit. The bricks are laid in the same pattern as that of the weapon pits.

The roof is constructed of concrete reinforced by metal rods running through it. It was built using shuttering, and the outline of the individual boards and various wood knots are visible imprinted in the roof. Two layers of concrete were laid, the top layer overlaps the lower one by 8cm on the western, northern and eastern sides. Grooves on the external sides of the roof created by the shuttering boards are visible. The upper surface of the shelter’s concrete roof is covered in pitch.

The floor of the shelter is also made of concrete and there is a soak-away in the north-east corner of the shelter. This soak-away measures 15 x 15 cm and is lipped indicating that a grate would have been in place. There are three other openings in the shelter: fireplace, window and slit opening. The fireplace has been inserted into the east wall of the shelter. It appears to have been inserted post initial construction of the shelter as the opening has been cut through existing brickwork and the side walls of the fireplace are not bonded with the main wall (Fig. 8). This brick fireplace measures 72 x 55 cm x 60cm deep and would have contained a stove. There are the remains of a boiler plate and the entrance of an air pipe at the back of the fireplace. The barrow mound has been dug out behind the east wall to allow the fireplace to be constructed. A gap remains which would have been where the flue pipe exited, drawing the smoke out of the stove. An air inlet pipe is visible in the ground, which would have drawn air into the back of the stove.

A window and a small slot have been opened in the northern wall of the shelter. The window does not seem to be a type of embrasure to provide a northern defence of the gun emplacement. But, as it overlooks the Second World War airfield site, it may have been used as an observation window or for signalling to the base.

There are no internal fittings inside the blast shelter. There is evidence of various nails in all four internal walls of the shelter, however, the purpose of these is not known. No electrical fittings have been identified.
8.2.3 Zig-zag Blast Entrance

The gun emplacement is accessed via a concrete lined corridor or passageway that is cut through the eastern side of the barrow, entering into the eastern chamber of the gun pit (Figs. 9 & 10). This blast entrance would have provided protected access to the emplacement and its zig-zag shape would have reduced the effects of a direct hit.

The sides of this blast entrance are made of concrete covering a brick rubble core. Corrugated iron shuttering was used to shape the concrete sides, and the grooves of this shuttering are imprinted in the concrete. The concrete lined sides have collapsed inwards in several places and the brick core has been revealed. Some of the bricks have the letters; LBC PHORPRES. These bricks are Flettons made by the London Brick Company.
8.3 Finds

During the recording of the gun emplacement, a number of long 4 eye screw pickets (152 cm) and shorter 1 loop anchorage pickets (45 cm) and lengths of barbed wire, were found at the base of the northern side of the barrow (Fig. 11). These are corroded and are not made of galvanized metal. These pickets (main and anchorage) are standard military (First and Second World War) models. Combined with the evidence from the aerial photographs of the gun emplacement surrounded by an outer perimeter of barbed wire, it suggests that these pickets and barbed wire date to the Second World War and were used to create the protective perimeter barrier.
8.4 Barrow Earthwork Survey.

Fig. 12 Earthwork survey
The main results of the survey are illustrated in figure 12. The Old Bath Round impinges on the southern slope of the barrow and the eastern and northern slopes have been disturbed by ploughing in the adjacent fields.

The ditch which originally surrounded the barrow is no longer easily discernible on the ground and the fabric of the barrow has slumped making it difficult to locate precisely the bottom edge of the mound. However, traces of the ditch were visible on the eastern side when the site was covered in snow.

9. Condition survey of the barrow and gun emplacement

9.1 The condition of the gun emplacement is relatively good, though weathering and the dumping of rubbish into the open gun pit has caused damage to various parts. The blast shelter is in the best condition, with just a few small areas where the concrete has been eroded revealing sections of the iron reinforcement.

The open gun pit is in poorer condition. The top course of brick has eroded away, the brick dividing wall has collapsed at its northern end and the gun pit is overgrown and full of rubbish.

The concrete blast entrance is in a poor condition. Sections of the concrete rendering have collapsed inwards, revealing the rubble core beneath.

9.2 The condition of the barrow is relatively good, although, obviously the central area has been removed due to the gun emplacement. However, the main part of the barrow is in an area of non cultivation with the only modern damage being caused by tree growth on the northern side of the barrow. The southern part of the barrow has been cut by the old Bath Road. The northern and eastern edges of the barrow are in cultivated fields and are under threat from plough damage.

10. Site interpretation.

10.1 Gun Emplacement

From the various strands of the investigation, the Second World War feature, built into the centre of the Bronze Age barrow, has been identified as a light anti-aircraft gun emplacement. The gun emplacement was built prior to February 1941 and consisted of a twin gun pit with a rear blast shelter, which would have protected the personnel if under attack. Access to the emplacement was protected by a zig-zag shaped blast entrance, and by a perimeter barbed wire fence. A pile of barbed wire and pickets found on the northern side of the barrow may be the remains of this perimeter fence.
A stove was inserted into the blast shelter, after its construction, but within the time frame of its use during the Second World War. This would have provided the personnel with heat and a means of heating food and drink. No evidence of any electrical fittings has been found, though a small generator could have easily been located on top of the blast shelter roof or next to the barrow.

Although no official RAF type site plans are known, a similar type of structure was recorded by Roger Thomas as part of a RCHME project at RAF Little Rissington in 1996. (Thomas, R. 2013, pers comm). This light anti aircraft gun emplacement had a similar twin gun pit with protective rear blast shelter – though its plan is somewhat different to that at Cherhill.

The type of anti-aircraft guns used is not known, though evidence of the mounting plug suggests that it would have been a light machine gun mounted on some type of stand. Two types of stand were used during the Second World War for airfield defence light anti aircraft guns; the Motley mounting for the Bren light machine gun, and the Stork type mounting for the Lewis guns (Thomas, R. 2013 pers comm). Due to the single central mounting socket, it has been suggested that the Lewis gun on a Stork type mounting may be the best interpretation for weaponry used on the site.

![Fig. 13 Stork mount with Lewis Gun.](image-url)
There is a small window in the northern side of the shelter looking down over the Radio School. This would have had a shutter, and has been interpreted as a signalling window rather than as an embrasure, as it does not seem to have had a defensive purpose. The gun emplacement could have had a dual function as an observation post, especially from 1943 when the threat of bombing and invasion had largely dissipated.

Fig. 14. Reconstruction of the gun emplacement by John Girvan

10.2 Context within the Yatesbury Airfield Defence Scheme

Dating to at least 1941, the gun emplacement formed part of the airfield defence system of RAF Yatesbury. It was one of five light anti aircraft gun emplacements that surrounded the Radio School. These all seem to have been similar in form with twin gun pits, blast shelter and a barbed wire perimeter fence. These light anti aircraft gun emplacements formed part of the defence scheme that protected the flying field, the Radio School and Radar site. Six pillboxes (some with light anti aircraft guns) defended the flying field to the north, and all three sites had small V-shaped slit trenches. All these defences would have been controlled by a central battle headquarters which was located just to the south of the Radio School at SU 05953 70319.
Fig. 15 View from the gun emplacement over the site of RAF Yatesbury

Of these defences, four pillboxes survive on the northern flying field, however only the gun emplacement investigated here survives of the defences surrounding the Radio School. Of the whole of the extensive Radio School site, only one building, the gymnasium, survives, as the rest of the site was demolished and returned to cultivation in the mid 1960s.

11. Project Archive and Copyright.

The project archive and digital and paper copies of this report will be deposited at the Wiltshire Heritage Museum, Long Street, Devizes. Copyright remains with the authors.

The project report is also available on the Wiltshire Historic Environment Record and through OASIS on the ADS Grey Literature Library.

12. Bibliography


Public Record Office Files AIR 14/196 *Taylor Report 27 September 1940*.

RAF Museum, Hendon. Airfield and building drawings:

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