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The excavation of two Auxiliary Unit Operational Bases on Bromyard Downs, Herefordshire



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Summary:

In the book: *The Mercian Maquis* (Lowry and Wilks 2002), two Operational Bases – underground bunkers built for the local patrol of the GHQ Auxiliary Units, the planned ‘stay-behind resistance’ in the event of German invasion, in Warren Wood were described. As part of the Lottery Funded, “Bromyard Downs Project”, run by Bromyard Downs Common Association and Herefordshire Wildlife Trust and in partnership with Herefordshire Wildlife Trust and the National Trust; Herefordshire Archaeology was contracted to try and locate the sites of these bunkers and assess their survival.

Both bunkers were located within Warren Wood (under National Trust ownership), and a trench was excavated over each in order to assess its state of preservation. It is understood that both bunkers were “decommissioned” by the military during the late 1960’s or very early 1970’s.

The first (‘OB1’) was found to be of concrete construction and had been blown up in order to ensure that children could not gain access to it. The second (‘OB2’) was of corrugated iron and brick construction and had been deliberately backfilled.

Disclaimer: It should not be assumed that land referred to in this document is accessible to the public. Location plans are indicative only. National Grid References are accurate to approximately 5m. Measured dimensions are accurate to within 1m at a scale of 1:500, 0.1m at 1:50 and 0.02m at 1:20m

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Introduction to the project

The work reported here forms the second archaeological element of the much wider Bromyard Downs Project, funded by the Heritage Lottery Fund and aimed at the conservation and understanding of Bromyard Downs, a rare area of managed historic common grazing in eastern Herefordshire. The Bromyard Downs Project is a Lottery funded project, run by Bromyard Downs Common Association and Herefordshire Wildlife Trust in conjunction with the National Trust and other partners, and encompasses all aspects of the area's environmental and cultural heritage.

The archaeological aspects of the project were first formulated in 2012 in discussion with the late Fran Griffiths, Conservation Manager at HWT. The first archaeological project, a metal-detector survey of the disused Victorian Rifle Volunteers' firing range on the Downs was reported earlier in 2016 (Baker & Hoverd 2016; HER 53707. EHE 80171).

The principal aim of this second archaeological investigation was to bring to light another outwardly obscure but nevertheless highly significant and locally-valued aspect of the military history of Bromyard Downs, by locating and investigating the sites of two Auxiliary Unit Operational Bases in Warren Wood described in the book *The Mercian Maquis* (Lowry and Wilks 2002). These were secret underground bunkers built in late 1940 or early 1941 for the local patrol of the stay-behind resistance organisation that was created by the Army at the same time as the much better-known Home Guard. Said to have been destroyed by the Army for safety after the war, the sites of these bunkers were approximately known, mostly by local people who had played in them as children in the post-war period, but with only the slightest traces of them visible on the surface, they were passing into the realms of local folklore. The project therefore sought to identify them with precision, assess their condition as archaeological monuments, temporarily restore their public visibility and fully restore them to their rightful place in the history of Bromyard.

Like the earlier report, this work is respectfully dedicated to Fran, who passed away early in 2013.

Historical introduction

With the German occupation of France in July 1940 the invasion of Britain appeared inevitable, and the Army's GHQ Home Forces under General Edmund Ironside rapidly evolved a series of measures to counter the threat, based on the assumption that an enemy landing on the beaches of southern England could not be prevented. 'Stop Lines' where rivers and other natural barriers were strengthened by hastily-built fortifications were introduced to protect areas of strategic importance – not only London but the industrial Midlands. The Local Defence Volunteers, later known as the Home Guard, were established. And, in great secret – to the point where their existence is scarcely known even to the present day – a stay-behind resistance movement was created to carry out acts of sabotage, intelligence-gathering and assassination behind German lines. These were the GHQ Auxiliary Units. Initially an offshoot of the Home Guard and recruited from their ranks, they would consist of

usually mainly corrugated iron, often in the form of ‘elephant shelter’ sections – prefabricated curved sheets forming something like an underground Nissen hut or large Anderson shelter, with brick-built end walls and entrance arrangements. Operational Bases were usually built on sloping ground to allow for easy drainage and were carefully ventilated, usually by means of ceramic pipes with a camouflaged opening at ground level. Precautions were taken to make OBs grenade-proof in case of discovery, so vertical entrance shafts were often carried down below floor level and were separated from the main living area by one or more blast walls. The trap doors to the main entrance shaft and escape tunnel were usually heavy and counterweighted and, again, carefully camouflaged.

For further information, readers are referred to the website of the *British Resistance Archive*. This contains amongst much other information and documentary footage the statistic that 534 OBs had been built across England by the end of 1941 and upwards of 1000 by the time the Auxiliary Units were stood down in 1944. The *Archaeological Data Service* website lists around 258 Auxiliary Unit Operational Bases on the *Defence of Britain Project* database. A replica, publicly-accessible, OB has been built by the National Trust in the grounds of Coleshill House near Swindon, Wiltshire, where Auxiliary Unit personnel were sent for commando training.

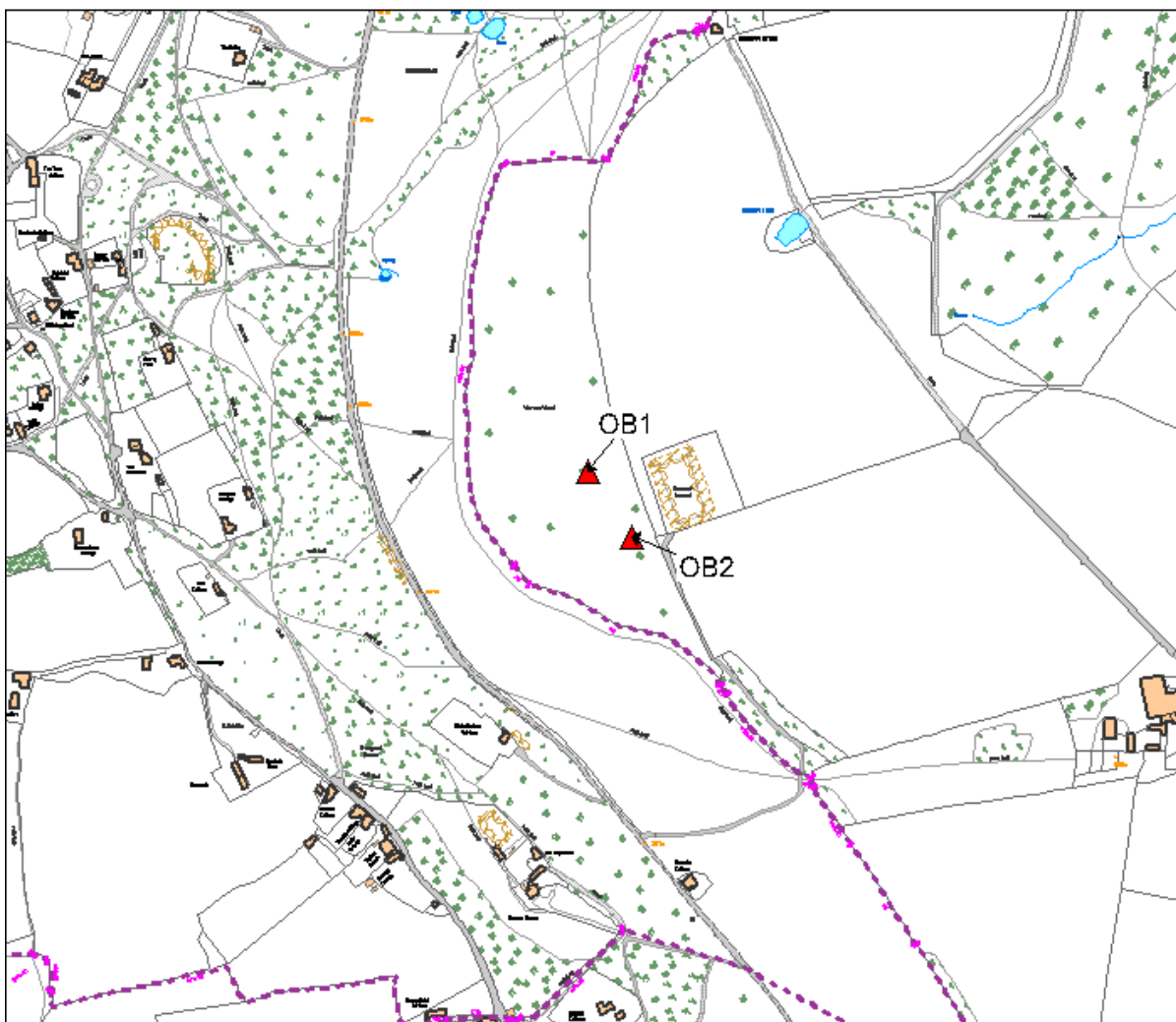


Figure 2: Locations Of Operational Base 1 (OB1) and Operational Base 2 (OB2).
The Bromyard Downs Operational Bases

Previous knowledge of the Auxiliary Unit Operational Bases at Bromyard derives from three sources. The principal account is contained in the book *The Mercian Maquis* by Bernard Lowry and Mick Wilks, published by Logaston Press in 2002 and reproduced below. To this may be added the recollections of local people who, as children (invariably boys), played in the disused bunkers in the 1950s and 60s before their demolition; many such memories were recounted to the excavation team. Lastly, there are some recollections from members of the Bromyard Patrol recorded by surviving relatives that were prompted by the publication of *The Mercian Maquis* book.

Lowry & Wilks' description of the Bromyard Downs Operational Bases derives from a first-hand account by John Thornton, a former member of Jacob Patrol, who operated in the Bromyard area. According to Mr Thornton:

'Two Operational Bases were built, both in Warren Wood overlooking the racecourse on Bromyard Downs. The first was L-shaped and built of concrete blocks but it was too small. With six of us in there it was very claustrophobic and we had problems with fumes. We asked for another one to be built. At that time we stored our explosives in the large outbuilding next to the oasthouse at Brookhouse Farm.'

'The second OB was built some distance away from the first. It was at the top of the wood, near the reservoir and I believe was still there two years ago. It may still contain the bunks' [the authors add at this point: 'Subsequent inspection shows that it has been destroyed and the hole filled in']. 'It was built of corrugated iron with a brick, 20 feet long, escape tunnel. The builder was a local contractor who was helped by the bailiff's men. The tunnel emerged between two large rocks in a quarry. We were not too happy with the original hinged entrance so we made our own with counterbalance weights and covered it with tree grease so that leaves and twigs would stick to it and disguise it. The bailiff [of the Lower Brockhampton estate, then in private ownership] was always prying into our affairs which was a worry to us and at one stage he started to mark the trees around our OB for felling. I telephoned Heath Agnew [the patrol sergeant] and he managed to get this stopped. The bailiff was not happy but any felling would have exposed the OB.'

'We stayed at the OB at weekends, from Friday to Sunday. After three days we would be getting on each other's nerves and would be ready to leave. I found it particularly difficult to stay there for any length of time and always preferred to be above ground. One man was always outside keeping watch armed with the patrol .22 rifle. The .22 was usually loaded with the long bullets [.22lr calibre] but we also had the short ammunition, too. There was a telephone in the OB connected via two wires to another one hidden under a yew tree near the road. From there the observer could watch the common and give warning of anyone approaching. The Downs would have made an ideal area for German camps, vehicle parks or fuel dumps.'

'For lighting we had two Kelly lamps, small, single wick paraffin lamps with a small glass bulb. Inside we had a store of food, mainly tinned, such as corned beef, peaches etc. We ate the food cold and raw and did not cook. Water could be obtained from a well on the Downs and we intended to live off the land as far as we could. We also had a large, sealed, stoneware jar of rum. Despite the seal, the other

patrol members drank the rum which looked like treacle. The jar was refilled with water and the seal replaced. We should have been shot for this because I think some of the more nervous members would have needed the rum to carry out operations if there had been an invasion’.

‘Towards the end it became very damp and we had a rota for checking it a couple of times a week. However, not every member stuck to this system. The last time the patrol met was to take out the blankets and food that were then loaded onto an Army lorry, the armaments going to Yarkhill. The .22 went missing – we would all like to have kept it – and the Army had to fetch it back from one of the patrol members’.
‘When the second operational base was built, the original one became our explosives store’.

(John Thornton interviewed in Lowry & Wilks 2002, 61-3).

Operational Base 1, HER 53748

The site of the first Operational Base was eventually found by metal detector survey. The description contained within Lowry & Wilks, is vague to say the least, providing no clues as to its location within Warren Wood (part of National Trust Estate) and describing it as “L” shaped and made of concrete blocks. A number of pieces of reinforced concrete block were found at NGR SO: 6717 5519 and after small scale excavation by hand. this proved to be the remains of the entrance shaft into the bunker.



Plate 1:
Reinforced
concrete blocks
and other
remains under
excavation.

It quickly became apparent that the reports that this bunker had been blown up, in order to make it safe and stop children playing in it once and for all, were accurate.

A trench, measuring 1.5m east – west and 1.3m north – south was excavated by hand to a maximum depth of 0.8m.



Plate 2: OB1 entrance shaft remains showing the concrete beams lining of the shaft which is cut into bedrock.



Plate 3: Vertical photograph showing the bedrock floor of the shaft under the concrete slab.

It would appear that in addition to blowing the OB up, the remains were then bulldozed in order to fill in the void and tidy up the site. This has resulted in a lowering of the ground surface. It is understood that in order to access OB1, there was a short, vertical shaft onto a bedrock “step” before a second drop into the bunker itself. It would appear that it was the base of the shaft that was encountered within this trench.

Little detail can be added to the scant description within the Mercian Maquis publication. The lack of descriptive detail is due to the fact that this OB was too small

for the patrol to all fit in and therefore not used for its intended purpose. After the construction of OB2 (70m to the south), OB1 was only used as the explosives store.

The survey has successfully located the bunker and the excavation has confirmed that it was utterly destroyed during the late 1960's or early 1970's by the military.

Operational Base 2, HER 53749

The site of the second, larger, Operational Base was tentatively identified in a reconnaissance by this report's authors in 2013 on the basis of Mr Thornton's account (above) in *The Mercian Maquis*. A shallow linear depression amongst scrub opposite the reservoir at the top of the hill and within c. 20 feet of the only quarry face contained a few visible fragments of mid-20th-century brick and tile located at NGR SO 6721 5513.

On February 29th 2016 a trench cut by mini-excavator east-west across the depression first identified quantities of apparent quarry waste (crushed limestone) under the topsoil either side of the depression with a more mixed fill within it containing occasional ceramic floor tiles and similar rubble. Further excavation then revealed the flat top of solid limestone bedrock on the west side of the depression, terminating at a straight north-south cut edge. This was investigated and pieces of corrugated iron soon came to light and effectively confirmed the initial identification of the site as that of the OB. Those sheets that appeared to be in situ were left in place and were resolved into a damaged and distorted curved roof with the topmost sheets torn off. The excavated area was then enlarged horizontally to provide a stepped profile so that the excavation could be safely taken down to the level of the OB floor. This was achieved with the mini-excavator, revealing the concrete floor surface. The backfill under the remaining roof slopes was later excavated by hand to provide an east-west sample section through the structure.



Plate 4:
Operational
Base 2 under
machine
excavation.

Description

The OB was found to have been built in a vertically-sided north-south cutting, 3.62m (12 feet) wide, cut to a depth of around 2.5m (8 ft 6 ins) below the present ground level, up to at least 2.1m (7ft) into solid limestone bedrock. The surface of the limestone was higher on the west side of the OB than on the east side: the reason for this was not established. The footings of the OB were not explored below floor level but the sheets of the corrugated iron roof and sides were founded apparently outside the floor slab, possibly on some kind of drainage gullies to collect ground-water running down the outside of the roof and condensation running down the inside. The internal width of the OB at floor level was 2.95m (c.9ft 10ins). The floor was found to have a raised sill on each side just within each side wall and a cement fillet or skirt had been added along the base of the corrugated iron sheets, sloping at 45-degree angle, again, it seemed, to control condensation and prevent water running down the roof and onto the floor.



Plate 5: OB2 showing the remains of the corrugated wall and roof and the concrete floor.

The corrugated iron sheets rose vertically to c.20-30cms above the floor before curving inwards, suggesting that the building had a nearly semi-circular profile (rather than at first curving outwards to form the greater part of a circle). If this was indeed the case, its maximum internal floor-ceiling height can be reconstructed to have been about 1.74m (5ft 8ins) or slightly over, giving a depth of burial of the roof apex of about 0.66m (2ft 3ins) or slightly less – in approximate terms a six-foot high structure buried with two feet of cover over the roof. The corrugations were larger

than those found in modern corrugated iron sheeting and the sheets were of heavier gauge, they may be 'elephant shelter' sections of First World War vintage or design. The sheets were riveted together and their underside (inside) face was whitewashed.

The overall length of the OB was not established, though the ventilator brickwork (described next), the full-depth excavation and the cut into the limestone defined at bedrock surface level added up to a total length of c. 10m, which the OB will have exceeded.

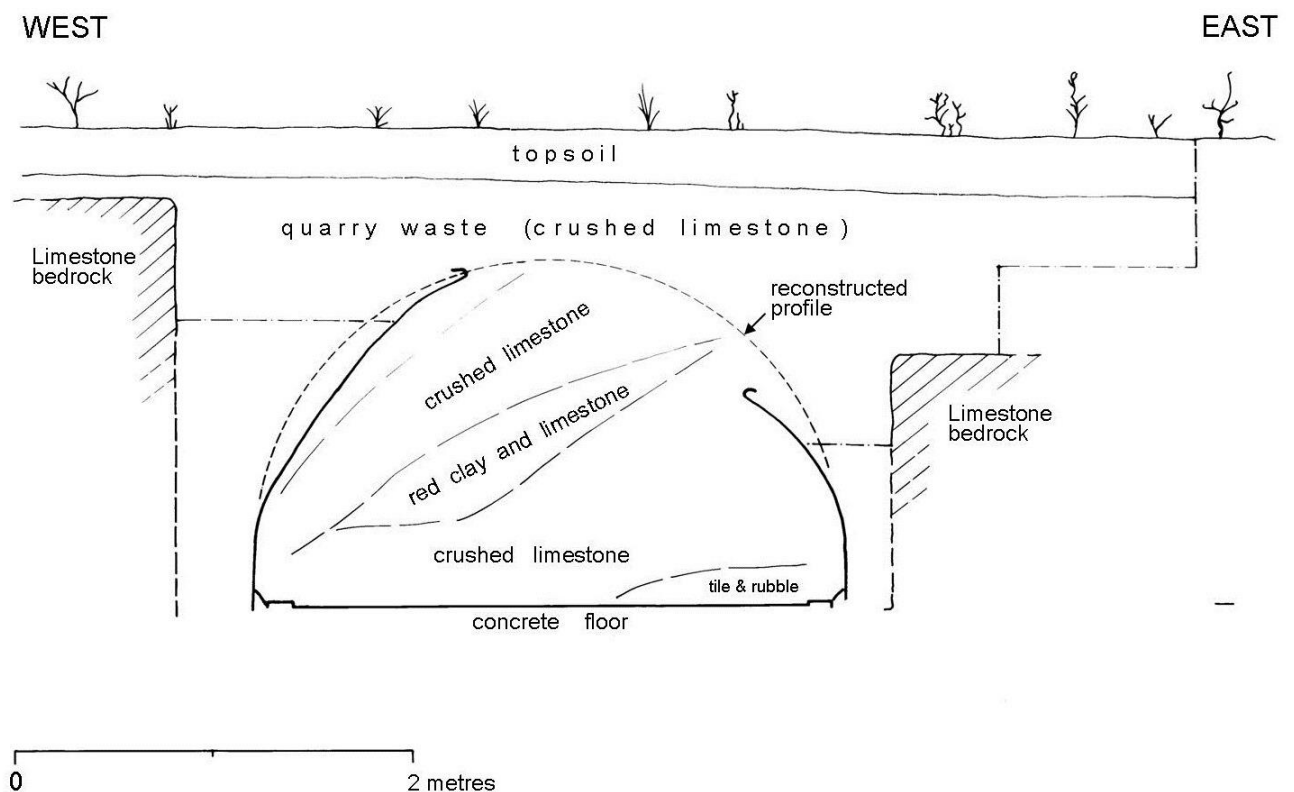


Figure 3: Cross section through Operational Base 2 looking north. Note how the bedrock was cut to accommodate the structure.

About 1.5m north of the full-depth excavation an H-shaped brickwork footing was found just within the western cut into the bedrock. The footing was 1.13m long (north-south), two bricks thick, with short (16cm) returns projecting into the OB cut and slightly longer returns (25cms) on the west side. From the centre of this footing a 4-inch-diameter drainpipe composed of brown glazed sections led gently upwards over a distance of 4.5m westwards and terminated with a 90-degree angled pipe section pointing upwards to the surface. This is interpreted as a ventilator or flue pipe formerly linked via a (missing) connector pipe through the roof of the OB presumably to, or over, the documented paraffin stove.



Plate 6: Detail of the wat that the concrete floor was attached to the corrugated iron superstructure, showing the cast "step" and the concrete fillet.



Plate 7: The remains of a brick flue and ventilator pipe used to take fumes from the paraffin stove out of the bunker.



Plate 8: The ventilator pipe which runs from the brick built flue, out of the bunker for 4.5m before terminating in a vertical section.

The 4.5-metre offset from the OB is likely to have been designed to render it grenade-proof and mislead searchers as to the exact position of the OB. The corrugated iron of the OB roof was built into the brickwork of the east-side returns of the H-footing, demonstrating that it was an integral part of the OB construction. The brickwork would have been carried down to floor level and would have formed a small cooking or heater bay, though the oral account shows that, in practice, no cooking was actually undertaken in the OB.

It is assumed that the vertical entrance shaft of the OB was at its north end, beyond the investigated area. No trace was seen of the documented 20-foot long escape tunnel which would have led from its south end to the quarry face, this too lying beyond the excavated area. Excavation along the adjacent section of the quarry face with the mini-excavator failed to find the entrance. At the south-east end of the face the bedrock and other natural strata were seen to have been cut away but the nature of the cut could not be determined as it was partly covered by a massive dump of scree-like quarry waste material, interpreted as part of the work by the Army to make the former OB safely inaccessible. However, dowsing on the surface suggested that the tunnel may have projected southwards from the OB along its axis.

As reported already, both Operational Bases are thought to have been destroyed by the Army for safety, probably at the end of the 1960s. While the concrete OB 1 to the north appears to have been blown up, the 'softer' corrugated iron and brick OB2 was rendered inaccessible by less violent means. The top sheets of the corrugated iron superstructure were torn off, possibly by a mechanical excavator. The interior was then filled with material tipped from the east, presumably from a lorry or trailer accessing the site from the track between the OBs and the reservoir. The material used for backfilling was, in order, a mixture of limestone rubble and mid-20th-century floor tiles (used and unused) and tile pieces; crushed limestone; red clay with limestone pieces; and further crushed limestone – which was identical to the local bedrock and appears to represent quarry waste from the immediate vicinity and/or material from the 1940-41 cut for the OB. The original backfill down the sides and over the roof of the OB could not be distinguished from the tipped material derived from the final infilling of the site. The backfill, together with the surviving wall/roof sheets was then compressed, distorting the OB's profile.

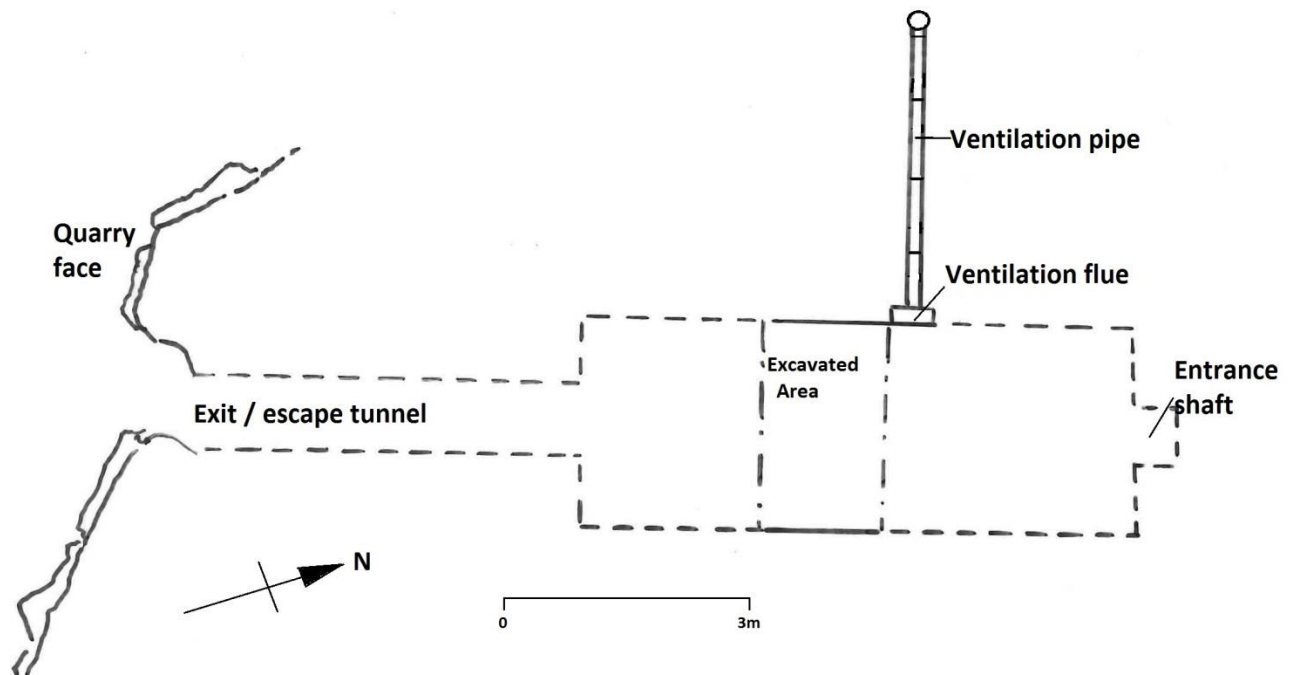


Figure 4: Suggested plan of OB2, based upon the excavated evidence, location of the quarry face in relation to the excavation and the description contained within Lowry & Wilks 2002.

A number of artefacts were recovered from the backfill, some of which were clearly 'foreign' to the OB in use and were imported along with the backfill material – for example a porcelain telegraph pole insulator, along with the quantities of ceramic floor tile. A large galvanised bucket may perhaps have been used as the Elsan chemical toilet within the OB.

Discussion and conclusions

The project was successful in its basic aims of identifying the sites of the two documented Operational Bases, confirming their original construction methods, assessing their present condition and presenting them, however briefly, to the general public. The latter was perhaps the most satisfying aspect of the project, the excavations having been visited by many local residents including, in a single morning, three grandsons of former members of the Bromyard patrol. On the final day of the excavation a visit was made by 150 pupils and staff of the nearby Brockhampton Academy, which featured strongly in the story of the Auxiliary Unit patrol in the Second World War. This provided a fantastic opportunity for the pupils to see, first hand, the remains of the bunkers and to have the history of the bunkers and their role during WW2 explained. The final day also saw the regional news "Midland's Today" film the site, Radio Hereford & Worcester recorded interviews and the work featured in a half page article in the Hereford Times newspaper.

In the course of the five-day fieldwork the excavation team heard a great many personal recollections of, and related to, the OBs. Many related to their long period of post-war disuse when they served as an unofficial adventure playground. Over 100 people visited the site over the first 4 days of site work in addition to the 150 school children and many others on the final day (see table below). Access to OB1 was down a step then sideways and down the original access shaft at its north end. Access to OB2 seems to have been on the level via the escape tunnel from the nearby quarry face. OB2 when thus visited is said to have had its beds and a chair still in place. Exploring the OBs was not without risk, in several senses, one visitor recording that his adventure cost him a caning the next day from the school headmaster. A more sobering recollection related to the original OB construction process and was told to the team by the grandson of a patrol member. A young man who lived in the area disclosed to the patrol member that he knew what was being built and where (whether this was instrumental in the decision to construct a second OB is not known). Sometime after the war the two men met again and reference was made to the episode, at which time the ex-patrol member made it clear to his informant that he would have been shot without hesitation the moment the Germans invaded!

The basic construction details were found to be, as documented, that the first OB was concrete built, the second was largely corrugated iron. What had not been recorded was that each was cut deeply into solid limestone bedrock – an undertaking that must have been as gruelling as it was difficult to conceal, whether from passers-by or from aerial observation. Other unrecorded details were the anti-grenade precautions observable in each: the offset or staggered entrance shaft of the earlier OB1, and the offset ventilation of the later OB2. The second OB was also notable for the care taken in its construction, particularly with regard to drainage, though from the account in *The Mercian Maquis*, this did little to alleviate its generally damp condition as a place to live in.

The state of OB1 as found was consistent with accounts given by visitors to the excavation of its having been blown up by the Army. OB2 in contrast was simply torn open and filled in. The state of its entrance shaft was not established but there is no

reason to believe that, though backfilled and distorted, it is not substantially complete underground – and could, in the future, be re-excavated.

Date	Relative of patrol member or played in the bunker	Interested locals	total
29 th February	6	12	18
1 st March	11	29	40
2 nd March	15	22	37
3 rd March	9	24	33
4 th March	12	165	177
4 th March	Press & TV	Local Radio, regional News and Local Paper	
			305

Table 1: Breakdown of visitors to the site during the 5 days (including the visit by Brockhampton Academy on 4th March).

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We would particularly like to thank Hannah Welsh (Project Manager, Bromyard Downs Common Project, Herefordshire Wildlife Trust) for all of her help and liaison.

Sources

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Website: The Archaeological Data Service

Website: The British Resistance Archive