

SECOND WORLD WAR REMAINS ON BLACK DOWN: A REINTERPRETATION

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SUMMARY

In 1978 a report appeared in this journal describing a WWII 'decoy town' on the Mendip Hills, on Black Down (NGR ST475571 area). The site was described as having, "lines of round mounds arranged on a grid pattern. On the south side there is a large air-raid shelter. The only explanation so far offered is that this site is the remains of a 'decoy town' to attract enemy bombers . . . Further information on the site would be of considerable interest" (Aston 1978, 140; see also Russett 1987b, 157 and Brown 1999, 166, which describes the lines of mounds as representing the 'ghost town'). This present paper provides that information, gleaned from archives, the recollections of those involved with the site, and a more detailed description of what remains today. In presenting this analysis of the Black Down site, as well as other contemporary sites and structures located nearby, we argue that a methodology which integrates these three sources of information is the most effective means by which to interpret monuments of WWII (for information on Bristol's anti-aircraft gun-sites, another aspect of the city's defences, see Roberts 1981).

BACKGROUND

In recent years, interest in monuments of WWII has increased, concomitant with the requirement for a level of explanation and interpretation which extends beyond hearsay and educated guesswork (English Heritage 1998). One reason for this has been the requirement—under the terms of planning policy guidance—to develop a sound understanding of all parts of the historic environment, thus giving credibility to decisions involving preservation, mitigation and recording; this level of understanding, at local and national levels, has been one of the principal aims of English Heritage's Monuments Protection Programme (MPP) (English Heritage 2000).

A prerequisite to assessing importance in these terms is an appreciation of such things as typology, chronology and rarity, as well as some recognition of a site's wider historical context. For many types of archaeological site, typically with a long history of research, much of that information is available, and merely requires summary and appraisal. For WWII sites, however, that was not the case until recently: there had been no systematic review of sites, either built or surviving (but note valuable contributions in this field, such as Wills 1985). This synthesis has now been undertaken through two separate but closely related projects: the Defence of Britain Project has used field recording to establish the survival of anti-invasion defences in Britain; and Dr Colin Dobinson for the MPP has made

use of archive sources held in the Public Record Office to provide information on all the major classes of 20th century defence sites (Dobinson *et al.* 1997). This work has typically produced detailed locational and typological information for all sites that were built. The MPP has then recorded which sites survive through follow-up work, checking Dobinson's gazetteer entries on maps and/or recent aerial photographs (Anderton and Schofield 1999).

It is not the intention here to describe the details of the national review, and the general conclusions reached. Rather, our aim is twofold: to describe what these sources combine to tell us about the Black Down site and other associated sites to the south; and to present the methodology as a model for dealing with sites of this period, using archives, alongside physical remains and oral testimony, to provide an integrated interpretation of the form, function and use of WWII sites. The paper is arranged into three main sections, reviewing evidence from: archives; the first hand accounts of those involved with the site during its operation; and the archaeological remains visible today. These sources combine to provide the 'further information' referred to in this journal in 1978, revealing the presence of: a series of elaborate decoys intent on deceiving enemy bombers; obstacles to prevent the landing and take-off of enemy aircraft; and a rocket battery to engage bomber formations attracted by the decoys.

ARCHIVES

The survey of archive sources, undertaken by Colin Dobinson, has provided significant information for the interpretation of the remains of WWII activity on and to the south of Black Down. The sources provide historical context for: the Black Down 'QL' (simulated urban lighting) and 'QF' decoys (diversionary fires); the QL and Starfish—or SF—decoys (Starfish were also diversionary fires) and the ZAA rocket battery at Ashridge Farm, Cheddar; and the lines of mounds representing anti-landing precautions, also on Black Down. A summary of this information follows, extracted largely from Dobinson (1996a–c).

The Decoys

A significant development in modern warfare to emerge during WWII was strategic bombing. In Britain, heavy raiding began in the late summer of 1940 when Germany's planned invasion was preceded by the bombing of airfields and, later, towns and cities. London's first significant raids came on September 7th, soon after which the campaign extended to other urban areas including, most notably, Coventry on the night of November 14th. Throughout the war, these air raids were countered by:

"A flexible and diverse system of air defence . . . Early warning of approaching aircraft was provided by visual detection and radar, which guided fighter aircraft to intercept the attacker. Anti-aircraft gunnery and balloon barrages provided local defence for towns, cities and other vulnerable points. Less conspicuously, many potential targets were shadowed by decoys—dummy structures, lighting displays and fires—designed to draw enemy bombs, by subterfuge, from the intended points of delivery" (Dobinson 1996a, 1).

The decoy programme began in autumn 1939 and developed rapidly into what Dobinson describes as:

"A complex deception strategy based upon day and night dummy aerodromes . . . and dummy factories and buildings. Today, available primary records document the building of some 792 decoys on 593 sites in England. Several thousand men were employed in operating decoys, 695 of which were simultaneously active at the height of the campaign, in November 1942" (*ibid.*).

were alike, and standard layouts, which might reveal the sites as dummies, were avoided. Light displays varied from c. 1.5 ha to 12 ha in area, the size depending on the target to be protected. By mid 1942, six main lighting groups had been developed, covering a range of installations: factory lighting; marshalling yard lights; dock lights; locomotive glows; tram flashes (for street displays); and furnace glows. Four of these lighting groups were in use at Burrington (Table 1). The various effects were used in combination, and the different display types relied on a range of devices which would imitate aspects of uncontrolled or permitted lighting during aerial observation. Many of these devices were very simple, and few are thought likely to leave any physical trace today. Most QL illuminations relied on electrical lighting of varying colour and intensity, powered by generators housed in the night shelter (which is also referred to in this paper as the control building or 'bunker') from which operational control was exercised. Designed to the standard set out in drawing CT 151/41 (Fig. 3) this was an upstanding, earth-banked building resting on a concrete raft 9m in length and divided internally into two rooms. The field control room contained switchgear, a stove and communications equipment; whilst the engine room housed the generators (on cast concrete beds). One entrance at ground level gave access to a lobby between the two rooms, and was shielded by an external blast wall. The other entrance was a roof hatch. Walls were of 0.35m thick brickwork or concrete blocks and the roof was formed of a flat reinforced concrete slab, designed to provide protection against the heavy attack expected in an urban air raid. The night shelter was required to be situated "400 yards from the lights or fires forming a decoy" (PRO AIR 2/4761).

As for the lighting itself, a few light types were replicated simply by installing genuine apparatus at the site—railway signal lights on posts imitating marshalling yards for instance, or sets of vehicle lamps contributing to the replication of a poorly blacked-out habitation or industrial area. Most however were artificial: locomotive glows used a tray of sand or soil, a few yards across, with a canopy fitted with red and yellow electric lights suspended above it. When lit, these would shine onto the tray replicating the dim illumination caused by the open firebox on the footplate of a steam locomotive. Poor blackout lighting relied on the principle that dim but steady lights at ground level are seen to flicker when viewed from high altitude. Thus hurdle and reed lights used screens of wicker to mask a domestic lamp, producing a realistic effect when seen from a moving aircraft. Tram flashes imitating a townscape under blackout, relied on sudden bursts of vivid light. Carbon arc lamps, fitted with a blue glass housing and with an intermittent switch, achieved this effect. In operation, the tram flash would replicate the electrical arcing characteristic of the glancing contact made between the tram's pickup and its power supply.

The QF sites and 'Starfish', based on the principle of diversionary fires and first developed in late 1940, were to be some of the most sophisticated decoys developed, depending for their success on the replication of a similar range of fire effects to those which an enemy aircrew would expect to see when their target had successfully been set alight. Technical development centred on the need to produce variety in fire types, adequate duration of burning, and rapid ignition. Built with the guidance of Sound City Films (a professional cinematic special effects company), a combination of four types of electrically ignited fire were eventually employed; boiler fire; grid fire; basket fire; and coal fire. These were arranged in groups, each defined by a firebreak trench excavated around it, with the whole array often linked by a network of metallised access roads. Most sites employed all four fire types, with the fires controlled from a remote night shelter similar to that described above for QL sites.

In operation, QL, QF and Starfish sites for large urban targets such as Bristol would have worked in tandem, the QL to replicate the object of an enemy attack, the QF and Starfish to suggest its successful outcome and to invite further bombs. The co-location of these site types rendered the policy doubly effective, potentially at least, by creating the false scenario

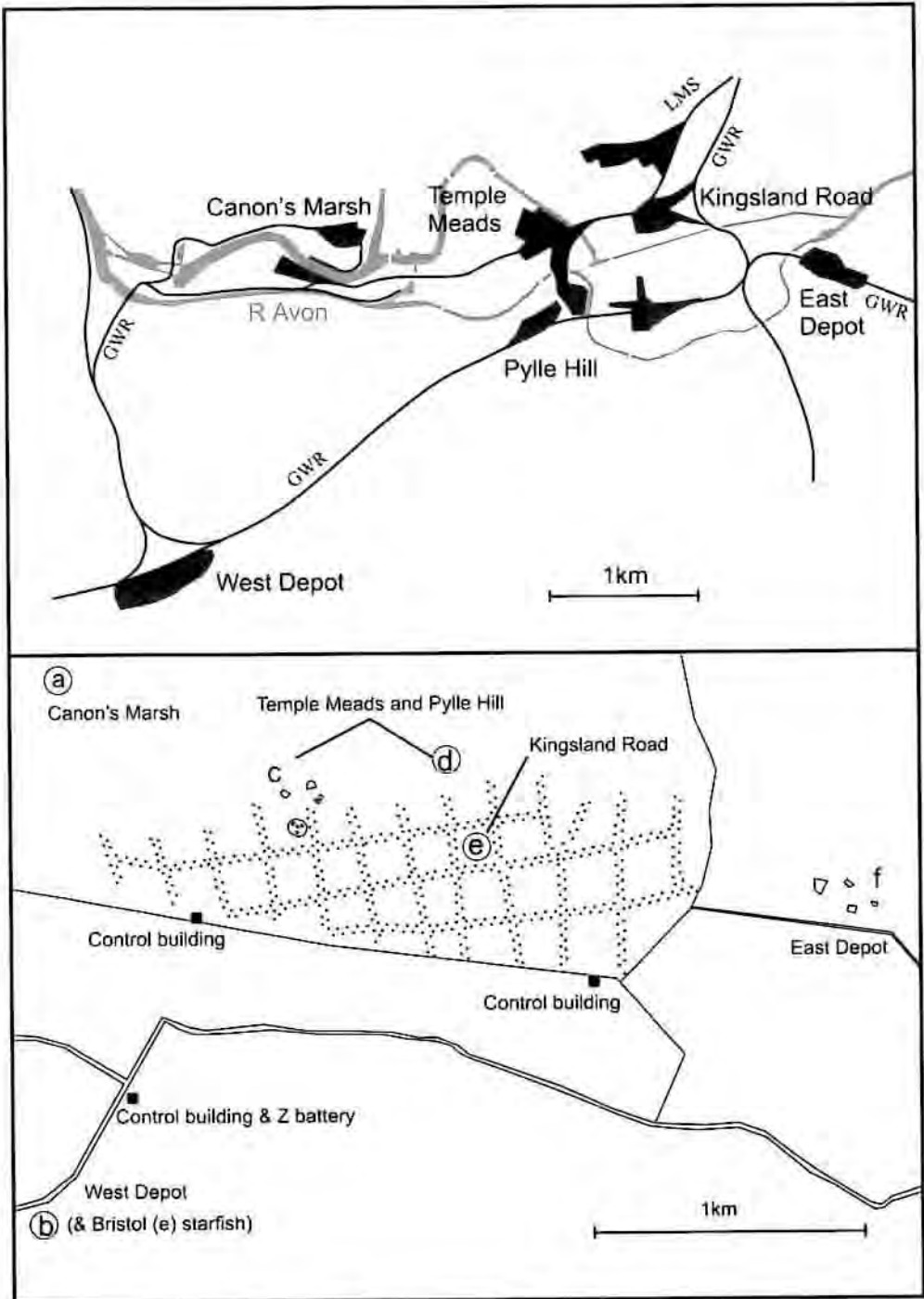


Fig. 2 Plans showing the layout of the railway system in Bristol (top) and the decoy targets (bottom). Large letters indicate the individual elements in decoy C82, those without circles bring QF as well as QL functions. The lines of anti-aircraft obstructions are shown together with the aerial photographic evidence at C82(c) and (f).

Table 1. Components of the Burrington QL decoy (after Dobinson 1996a, 160–65)

Decoy	Type	Target
a	MY/FL/DL	Canons Marsh marshalling yard and dock
b	MY	West Depot
c	MY/FL/LG	Temple Meads station and Pylle Hill goods depot
d	MY/LG	Temple Meads station and Pylle Hill goods depot
e	MY	Kingsland Road sidings
f	MY	East Depot marshalling yard

MY = marshalling yard lights

FL = factory lighting

DL = dock lights

LG = locomotive glows

Sub-sites (c) and (f) had QF additional to QL functions.

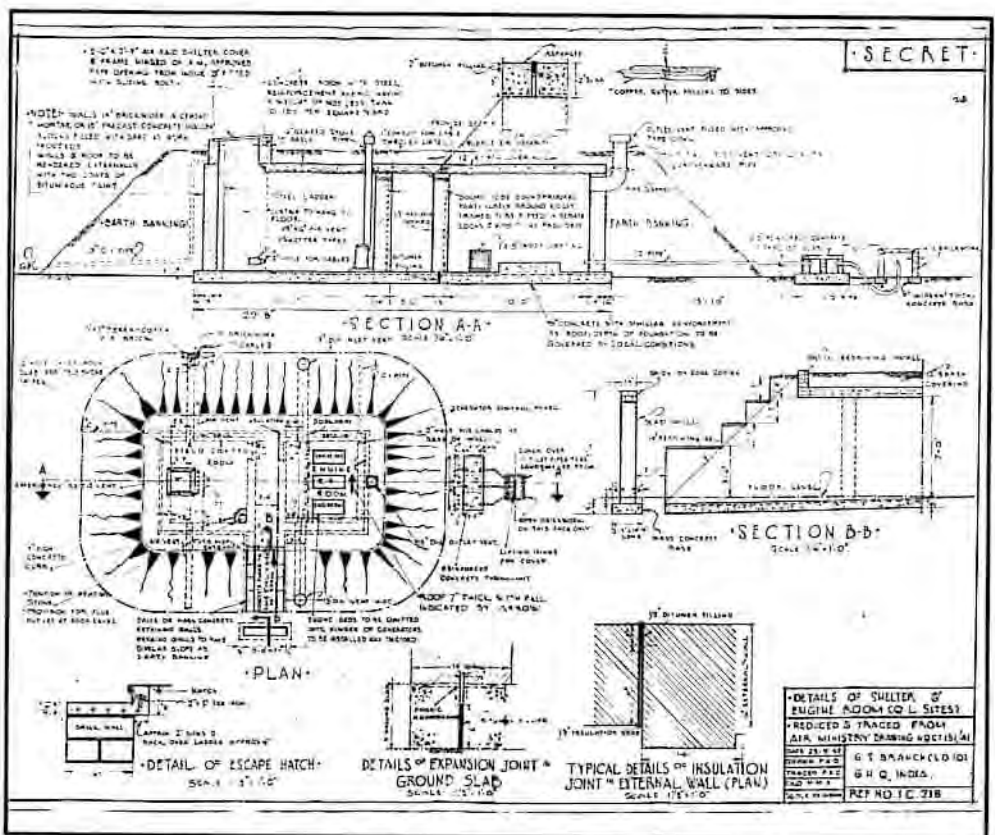


Fig. 3 Plan of QL night shelter, from archive sources.

for an entire air raid several miles from the true target. To effectively mimic the behaviour of true targets, QL lighting was wired in primary and residual circuits: primary circuits controlled only those lights which would be extinguished if an air raid warning was issued at a real target—such as marshalling yard lights, or domestic lighting; residual circuits (or ‘leaky lighting’) were designed to replicate the effects permitted under blackout or which were impossible to control, such as tram flashes or locomotive glows. Prior to attack, both would be left on, but:

“When aircraft are heard approaching the site and before they are immediately overhead the primary lighting is to be turned off and the residual lighting only left on. The exact moment for turning out the primary lighting must be carefully gauged by the man on look-out. Visibility and the height of the aircraft must be taken into account and the enemy must be given plenty of time to see the full lighting and he may be allowed to approach quite close, but *before* he passes, he should see the primary lights go out” (PRO AIR 2/4761—Instructions to QL operators at the site).

The residual lighting remained on to form the aiming point for enemy bombs which, once dropped, would be followed by the ignition of the QF and Starfish.

Various memoranda accessible in public records (AIR 2/4761) give detailed insights into the operation of decoys. For instance, in a letter of 18th September 1941 it was stated that it was, “policy for QLs to be lit on suitable nights whether or not . . . enemy aircraft are reported”, and that, “times for lighting are at the discretion of the Local Controller, but in general all QLs should be lit for 3–5 hours each night”. Doubts over the merits of ‘blinking lights’ had clearly been raised as the following year, and after aerial inspection of QLs in the Bristol area, “it was decided by Lt. Col. Bathe that the present installations of blinking lights are unsatisfactory and should be disconnected at the following sites . . .” [and the letter goes on to list Burrington (b), (c) and (f)]. It continues: at Burrington (f) in particular, “there are four strong blinking lights and they all come on together, and instead of providing a minor blinking effect they give the appearance of lights being switched on, which is most unreal”. Other references to Burrington include discussions about the merits of naked lights: a note in June 1943 states that, “Burrington has no naked lights on residual QLs, but lights do have a screen on one side of the otherwise naked light”. A note the following month requests that bulbs are removed from naked lights (including those with a screen on one side), presuming that hoods will be made for them instead. This note makes specific reference to Burrington (a) and (c)–(f).

The documentary sources provide only limited additional information. They indicate for example that the site was operated by RAF personnel in the form of 951 Squadron, a barrage balloon squadron based at Bristol. Most of the references in their Operations Record Books are brief, however, and relate to observations about weather conditions. It is expected that, if significant events—including attack—did occur, this would have been worthy of mention; that no mention is made suggests that little ever happened here, and certainly that the site never seriously attracted the attention of German bombers. This apparent lack of success, despite the site’s obvious sophistication, can be seen in the context of the decoy programme generally. Official estimates (Mendelsohn 1988, 92) suggest that 68,500 tonnes of bombs fell on the UK during WWII, of which at least 5% were drawn off their targets by the decoy system (the figure may be as high as 10%, given inaccuracies in data collection). In the Bristol area decoys were known to have drawn off between 25–80% of the target’s bomb load on various occasions (*op cit*), official sources stating that “Bristol casualties and damage would have been much worse if its protective decoys had not drawn off so much [ammunition]” (*ibid*, 81). At the Stockwood, Downside and Chew Magna SFs, official figures show that at least 252 high-explosive bombs landed on these sites between December 1940 and April 1941 alone (*op cit*).

The ZAA Battery

Introduced in 1940, the ZAA rocket projectors were simple weapons with variations in the size of ammunition (they used 2 inch or 3 inch rockets) and in the number and arrangement of barrels. They relied on the shotgun effect, using density of rocket fire to achieve results. The 2 inch rockets had a role comparable to Light Anti-aircraft guns, against low level attack and dive bombing, and either exploded a small warhead or released an obstacle in the form of a wire apron on parachutes. The 3 inch rockets flew higher and were comparable to Heavy Anti-aircraft fire against formations of bombers (Dobinson 1996b).

As a class of monument the ZAA batteries display a far simpler range of operational structures than Heavy Anti-aircraft gun positions, and few specialised designs were drawn up to serve them: Nissen huts and sectional trench shelters were the main ones. Documents consulted at the PRO (and cited in Dobinson 1996b) note that radar was used and all sites were provided with domestic accommodation to standard scales and design. Many of the 51 sites recorded in archives as having been built in England were established on or adjacent to Heavy Anti-aircraft positions, at least from early 1942, and were often manned by the Home Guard, usually complemented by the ATS. At their most extensive, sites comprised a regular layout of projector emplacements, a large number of ammunition shelters, a manning hut for the radar crew, an on-site magazine, a fuse magazine (for ammunition assembly), a control building and four troop control posts (*ibid.*). There is no mention in the sources consulted by Dobinson of the presence of a ZAA battery at Ashridge Farm, Cheddar.

Airborne landing precautions

The obstruction of potential landing grounds against troop carrying aircraft was one of Britain's earliest and most extensive anti-invasion defences (Dobinson 1996c). Various methods were used, including trenches, and above ground works including regularly spaced earth mounds, of the type visible on Black Down.

The obstruction of fields using improvised obstacles was first suggested in a Joint Intelligence Committee report at the end of April 1940 [PRO CAB 80/10, COS (40) 326 (JIC)], with work beginning in May when the Home Defence Executive called for areas within five miles of operational RAF airfields to be obstructed, together with potential landing areas and arterial roads around London. Orders issued on May 30th extended the programme to cover all potential landing grounds in a belt within five miles of the coast, with particular emphasis on the approaches to ports. The obstruction of landing grounds was a huge task, and continued until autumn 1941.

By the end of May 1940 the Joint Intelligence Committee estimated that Germany held some 1350 aircraft suitable for landing troops which, if deployed simultaneously, would be able to deliver 20,250 men to Britain in every sortie. Although it was known that Germany also had large numbers of trained glider pilots, intelligence suggested no evidence for the existence of a glider fleet. The danger was therefore perceived to be powered aircraft used as ferry services from the Continent; all obstructions laid down in 1940-1 were intended to combat this. The principal German transport aircraft of the time were the Junkers 52 and the Junkers 86, and obstructions were tailored to the operating characteristics of these aircraft. Both required a distance of at least 366 m to take off and land, and both needed fields with at least 457 m of clear space to operate. Likely landing places would also have to be firm and fairly level with a gradient of not more than 1 in 40. By August 1940 six main varieties of obstacle were recommended for all landing grounds that met these criteria: solid obstructions; posts and stakes; felled trees; haystacks; scaffold and wire; and trenches. The obstacles built on Mendip were solid obstructions in the form of earth mounds and cairns, the latter perhaps supporting posts. The specifications were that these had to be arranged in lines on a 137m square grid, with around 9.1m between objects in each line.

To summarise, from the archives we have the contextual framework which explains the policy behind the decoy programme, the construction of rocket batteries and the obstruction of landings grounds, and some of the operational details pertaining to both QL and QF sites and Starfish. We also have some—but limited—information on the operation of the Burrington and Cheddar decoy sites specifically. Interestingly, these are more by way of instructions on improving the realism of the decoy than describing events which occurred there, the assumption being that nothing much happened and, despite the fine-tuning, it rarely convinced the enemy to divert from their attacks on Bristol.

ORAL TESTIMONY

People who lived locally during the War have been contacted as part of the Defence of Britain Project by Donald Brown (this is described in detail in his book *Somerset v. Hitler*, 1999, especially pp. 165–77). Some have been able to provide useful information on the sites described in this paper, although this is limited to some degree by the climate of secrecy in which the sites were built and operated. A set of instructions makes the point:

“Secrecy is the main object of decoy ‘Protection’. Once a decoy is freely discussed there is a risk of information reaching the enemy not only of the particular decoy, but also of the system and types of decoys generally. The risk is greater in the neighbourhood of towns than in the country. In country districts the local inhabitants soon find out about a decoy, chatter about it amongst themselves and then forget about it. Few countrymen talk freely to those who are not their neighbours. The chief danger in the country is the pompous country house owner, male or female, who considers that any additional risk to his or her person must be due to muddling by the bureaucracy. They frequently protest through various channels including MPs and Ministers. They discuss the iniquity amongst the county families. Considerable information has to be given away in answering these egotists, and in consequence many sites obtain an undesirable degree of publicity. Near towns in addition to the country house owners in the vicinity there is considerable risk of inquisitive people finding out about sites and discussing them with all and sundry.

Static protection is obtained first by locating the site in as secluded an area as possible and secondly by wiring it in and providing adequate and clearly worded notices. Where hedges exist all gaps and gates must be strongly wired. Most people will not attempt to break in, especially in the country. A warden or day guard is also required.

IN ADDITION TO LOCAL ARRANGEMENTS FOR KEEPING AWAY INQUISITIVE PEOPLE, IT IS ESSENTIAL THAT EVERY EFFORT SHOULD BE MADE TO KEEP EACH AND EVERY DECOY AS SECRET AS POSSIBLE. THE FEWER PEOPLE THAT KNOW OF IT, THE BETTER. THOSE THAT HAVE TO KNOW SHOULD BE PUT ON THEIR HONOUR NEVER TO DISCUSS IT WITH OTHERS, AND ALL PAPERS, MAPS ETC. SHOULD BE TREATED AS MOST SECRET AND SECURELY LOCKED UP” (PRO AIR 2/4761—Night Decoys Part IV. A–QL and QF General Instructions for Operation, Maintenance, Protection and Supervision).

Previous commentators have believed that the mounds and cairns which, apart from the night shelters, provide the most obvious and visible remains at this site, represent the fabric of the decoy, with the mounds supporting lights representing the street pattern. Yet, as we now know, these mounds or ‘tumps’ as they appear in much of the testimony, were constructed over a much wider area than that which they now cover. As one account states: ‘turf mounds were to be seen all across Mendip and stone cairns on all large fields at Tynings’. All those in fields were later cleared to permit cultivation, with those on Black Down the only survival. That they were originally more extensive, combined with what we now know from archives, suggests that the prevention of enemy landings close to a strategic

centre like Bristol is the explanation. This is confirmed by Jim Morris, who served on the site as a member of 951 Squadron from 1940–44. He described how the construction of airborne landing precautions was the first task undertaken at the site, prior to decoy construction. Several first-hand accounts describe the construction task. One notes how, "stone was taken from every lime-kiln and pigsty between Charterhouse and Tynings Farm to build tumps" and that a Bristol builder called William Cowlins (identified also in the archives), had the contract: 4s 6d for each tump, and that, "hundreds of volunteers came up at week-ends to build them . . . They were constructed of heather, stone and earth, scraped up and put into heaps 6–8 feet high".

A further account describes the appearance of the decoy, though confusing it with the airborne landing precautions: "beyond Strictly Private notices in red were street lamps, huts, sheds, piles of stones, heaps of bonfire rubbish, turf patterned to resemble streets". Jim Morris's account provides further details:

"Aerial photographs were taken of the marshalling yards at Bristol and superimposed on the Mendips. A London film company built the target on the Mendips. One wooden box had a red lamp inside with a door opening intermittently, giving a red glow to resemble stoking a railway engine. The Temple Meads simulation was NW of the east bunker. Three dimmer switches faded lights up and down or turned them off. Lights were called glow boxes."

The site was flown by day and night during its period of operation. (Jim Morris flew over the site at both times and described it as having 'nothing visible' in the day, but 'like a city when seen at night'.) He goes on to describe the bunkers:

"Three in all, with three generators in each of the top two bunkers—ie. on Black Down—and electrical equipment in the other. Cabling was well planned and neatly done. The cables ran along the surface, sometimes raised on wooden posts, but [also] under paths. The cables were lifted when the site was closed, except where they went under the paths; these could still be there".

His description of SF1e is also useful, including reference to:

"High elevated tanks with pipes down to iron troughs of bales of straw, soaked with creosote ready to fire quickly; there was an intermittent flow of water and creosote through a WC ballcock system to the fire troughs. When water flowed, it flared up to brilliant white and yellow fire, like magnesium. Once started it was unapproachable and unstoppable".

This compares to the 'wall of light' experience recorded at a comparable site in Cornwall (Jones 1998, 16) where the area is still known by this name.

A further source refers to the ZAA battery close to SF1e. The site was described thus:

"Adjacent to a bunker—which is still visible today—were twelve concrete blocks with brass protractors. It was top secret with the rockets stored in a big corrugated shed. The launch pads were made from two pieces of scaffolding about 2" in diameter and welded about 5–6" apart. The rockets were about 3–4" in diameter. They lay between the two pipes and slid back onto an electrical contact. There were four rockets on each block giving 48 in all. The warheads exploded within a cube of about five miles. Firing was all done by operators in the bunkers, using electrical circuits. There was a deafening sound."

In operation, the ignition of glow boxes at the decoy, or of rockets at the ZAA battery, was ordered from RAF HQ, telephone number 126 at Bristol, via a GPO telephone at Lower Farm and later at Tynings. This was received by the Flight Sergeant who passed the order (the so-called '126 call') on by field telephones which rang in all three bunkers.

Although testimony appears to confirm that the decoy didn't attract the attentions of

German pilots on a regular basis, first-hand accounts suggest it was not a completely safe posting. One report describes a 'land-mine' being dropped 20 yards west of the eastern shelter making a crater the size of a room (now visible at NGR ST478567); there were fragments like molten aluminium and the occupants felt the whole shelter lift off the ground. A moment later the ZAA battery fired its rockets. An informant recalls being "told later that we had hit a bomber with that salvo".

ARCHAEOLOGY

English Heritage's national survey has shown that comparatively few WWII sites survive in anything like their original form (Anderton and Schofield 1999). This is particularly true of decoys as these were only ever ephemeral features and, with the exception of the night shelters, were systematically cleared at the end of the war. Similarly, only one or two ZAA batteries survived systematic clearance in 1946; and few areas of airborne landing precautions remain, most fields of such size having been returned to agriculture in the immediate post war years. So, what does survive at Burrington, and how does the field evidence tie in with that from archives and testimonies?

Parts of the decoy system survive on the ground and are well known, particularly the control buildings. All three survive virtually intact, although the southern one has suffered as a result of its use for agricultural purposes. It would seem that these buildings were arranged to control the site's various functions as follows:

Western control building	Burrington (a) and (c)
Eastern control building	Burrington (d)–(f)
Southern control building	Burrington (b), SF1e and ZAA battery

The ZAA battery is a rare survival, possibly the only one of its type to survive in England, and one of only two in Britain (the other one known being at Golta on Orkney). It survives as a series of at least eighteen of the nineteen emplacements for rocket launchers visible on 1946 aerial photographs (and not twelve, as suggested in testimonial evidence). Several of these feature cast iron rings (not brass as described above), calibrated in degrees for aiming the projectors (see Brown 1999, 171 for photograph). These were obviously in short supply and the other emplacements have had the marks cast into the concrete. The concrete base of the corrugated iron shed, used for rocket storage according to Jim Morris, survives by the road, as do the bases for three smaller shelters used for storing rockets for immediate use. A short distance up the lane to the north, at the junction with the road, is a pole believed to mark an original entrance to the site.

The most obvious surviving features on Black Down are the mounds and cairns. These survive across 2 sq km, stretching almost to its limits to the east and west, to the break of slope to the north and to the edge of agricultural land to the south. In all there are three parallel WSW–ENE alignments and twelve which run roughly at right angles on an approximate NNW–SSE alignment. Some of the mounds have been eroded to varying degrees, but the majority are remarkably well preserved (Fig. 4). They generally vary between 0.9–1.3m high by 2.5–3m wide, and are generally spaced at intervals of 8.5–11.5m. The cairns, which are of drystone construction, are to be found exclusively on the south-facing slope on the east side of the site, north of the eastern control building (Fig. 2). These are often squared off with dimensions of c.1.3m across and between 0.2–0.8m high. These cairns appear too low to have acted as obstructions in their own right, although it is possible that they originally supported posts, or that it was merely their appearance from the air that was sufficient to prevent a landing. The square to rectilinear areas of ground that these alignments enclose vary between 350–420m across, areas larger in size than the specifications recommend, but



Fig. 4 Photo of 'tumps'.

perhaps just small enough to prevent Junkers 52 and 86 aircraft from landing and taking off. Interestingly, the construction of these mounds and cairns appears to have respected the Bronze Age barrow cemetery at the east end of the Down, and a single barrow towards the west, despite the obvious haste with which these later mounds were constructed (see Robertson 1999 for a general discussion of this issue). The Bronze Age barrows were all, at the time, Scheduled Ancient Monuments. Finally it should be noted that one other area of mounds has been recorded above Axbridge where they were seen on immediately post-war aerial photographs (Russett 1986a, 156). Their similarity to those on Black Down was noted and it was suggested that they formed part of another decoy town; they were no longer visible by 1971.

In addition to the well known and previously recorded mounds and night shelters, remains of some of the decoys have now been located. This was achieved using the grid references provided by Dobinson (1996a) and follow up work using 1940s and more recent (in this case 1970s) aerial photographs. It is known that (a) is now the site of a coniferous plantation and little is visible on 1946 aerial photographs (36/TUD/UK 15/25/5276). The only sign is a track which leads from the western control building and appears to branch out in the area of (a). This may represent access to the site or could relate to its clearance. The site of Burrington (b) and SF1e was already under cultivation in 1946, although there is a very slight suggestion of a triangular soil mark on aerial photographs (3G/TUD/UK 15/25/5332). The size and shape of this is similar to a series of firebreak trenches which are visible at Burrington (c) (3G/TUD/UK 15/21/5355) where four sets are visible, two of which are curvilinear and two rectilinear (Fig. 5). These firebreaks appear to respect, and in the case of the southernmost firebreak, abut the mounds which form the grid pattern across Black Down, confirming what Jim Morris said, that the tumps came first. In addition, when magnified, the largest of the four firebreaks—the southernmost—can be seen to have four smaller internal rectilinear firebreaks, while a series of structures, and their shadows, are visible

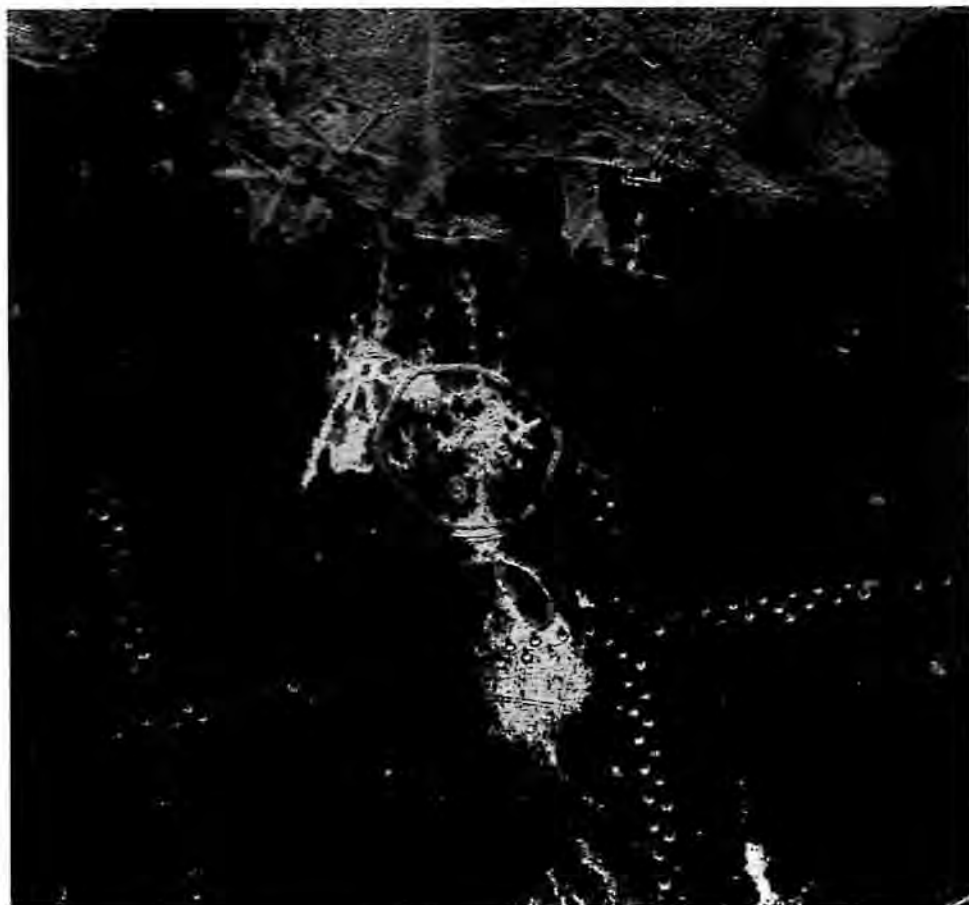


Fig. 5 Burrington (c) as it appears on 1946 aerial photograph (Crown copyright).

within the three northern firebreaks. From the west there are: two in the first firebreak; two or three in the second; and four in the third, an 'L'-shaped area. In the 1971 photograph (OS/71082/199) the structures and internal firebreaks appear to have gone, yet the outer firebreaks are still visible. Survival of these features was confirmed on a field visit in February 1999, when the vague traces of the larger southern firebreak, and the western of the three northern firebreaks were located. Clearer evidence for the other two was found however, in the form of a clear firebreak in each case surviving as a narrow ditch, and some associated features. These include a platform to the east of the northernmost firebreak which may represent some storage facility or shelter specifically for use with Burrington (c), and hollows within this firebreak, closely approximating both in size and location to the internal features visible on the 1946 photograph.

Burrington (d) and (e) are not visible on the 1946 photos but at Burrington (f) four sets of firebreaks are visible: three (two rectilinear and one curvilinear) are located in one field to the west, and one (rectilinear) in the adjacent eastern field. Within each firebreak structures are clearly visible: five in the largest westerly firebreak; two in the northern; three or four in the eastern; and five or six in the southern firebreak. No evidence for this was visible

on the 1971 photograph; however, the fields were by then under arable cultivation, and these ephemeral features will have long been removed.

What this evidence suggests therefore is that the remains of decoys employing fires, with their firebreak trenches and associated internal structures, are more likely to survive than the simulated lighting. As Jim Morris implies, much of this was removed when the site was closed, and buried cabling may be all that survives of these QL sites.

CONCLUSION

In one way Black Down and the area to the south constitutes an unusual site, providing a rare association of well preserved remains relating to defence and deception during WWII: the ZAA battery and the decoys are examples of only a handful of survivals nationally; the airborne landing precautions are rarely preserved so well, and over such a large area. But the site is also in some ways typical. The Public Record Office contains vast amounts of information, from the general and strategic (summarised now in the MPP reports) to the specific, which contribute to the interpretation of individual sites, both in terms of operational procedures and function; while much has been gathered in the way of personal testimony, either as part of a national initiative (feeding for example into the Defence of Britain Project), or local studies such as *Somerset v. Hitler* (Brown 1999). Archive research (Dobinson 1996 a-c) provides an overview that is invaluable to future studies of this type. Oral testimony gives the human story, of those who manned the decoys at Black Down and Cheddar; it also gives some impression of the atmosphere at the time. Photographs are important too. Some, such as that reproduced as Fig. 6, put people firmly in the frame, people that are too easily forgotten in more conventional archaeological research.

But interpretation based solely on either personal testimony or archive sources should be treated with care. Often those involved with the sites were not fully appraised of their role, and memories do fade; archives on the other hand are not always a complete record, and may not take full account of local variations in design or policy implementation. In this particular case, some testimonies perpetuate the wartime myth of the mounds representing the decoy town (as expressed in Brown 1999, where the interpretation on pp.165-6 contradicts that on p.32—the latter is correct); while simple factual errors, such as the identification of 'brass protractors' at the ZAA battery, and the number of emplacements, could cause confusion, especially where the physical remains have been removed. There is also the question of how much reliance we can place on statements describing the evolution of the site and its phasing. By contrast, archives relating to Black Down tell us little of what went on there, and—from the sources consulted—fail to identify the ZAA battery altogether. Then there are the construction details: the archives document the very precise specifications for setting out airborne landing precautions, yet those specifications are not precisely adhered to in this case. It is possible that other sources, for example the records of the contracting firm, may provide some explanation for this; or maybe it was simply a result of the speed with which the task was undertaken.

There are therefore limitations in all the sources described here, and the dangers of only using the evidence of recorded archaeological remains are clear from earlier interpretations of the site. But what this analysis of Black Down has provided is the opportunity to demonstrate how the critical use of all available source material can contribute to a fuller and more informed interpretation of sites of this date, enabling us to understand their historical context and what they meant at the time to those who served on them, and to the local communities for whom they were 'shrouded in mystery'. It is interesting, for example, that decoy myths seem to have entered local folklore in areas where these sites existed. The 'wall of light' has already been mentioned; and at Black Down the decoy town story has prevailed, with



Fig. 6 Crew of RAF Starfish station on Blackdown, on parade for Armistice Day 1944 in Cheddar.

images of 'Ben Hur' type film sets on the Down, the fronts of buildings supported by lines of mounds. In some ways it seems a shame to dispel that myth, but in our view it has been necessary for reasons of historical accuracy.

ACKNOWLEDGEMENTS

We are indebted to Don Brown and Robert King for providing the recollections of those involved with the sites described in this paper, to Robert King for supplying fig. 6 and to Don Brown for reading an earlier draft of the paper. Those whose accounts are reproduced, at least in part, are: Howard Edwards, Rosemary Hodges, Jim Morris, John Penny and Mary Smith. We are also grateful to the Mendip Wardens Service for their assistance, and the owner of the ZAA battery for allowing access. Much of the section describing archival records is taken from Dobinson 1996a–c.

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