

# Chapter 3

## Anti-invasion defences

**T**HIS CHAPTER discusses the perceived invasion threats along the Somerset coastline during the Second World War and the measures taken to counter them. It covers the period from the summer of 1940, when the invasion threat was greatest, to the autumn of 1944, when the threat had vanished. It is based on an analysis of the available sources of information, which are primarily in the National Archives but in some key areas documentary evidence is patchy or appears to be non-existent. In other areas there is a plethora of detail, which can only be summarised. Unfortunately no maps showing detailed layouts of defences or areas of responsibility have yet been discovered; neither has any Home Guard documentation referring to the defence of the Somerset coast. This chapter attempts to give a broad overview of the main features of the plans, which were prepared to defend the Somerset coastline, its ports and facilities in the hinterland. It is not intended to be a history of anti-invasion defences along the Somerset coast and, as key information sometimes only appears in later documents, it does not attempt to follow a strict chronological sequence.

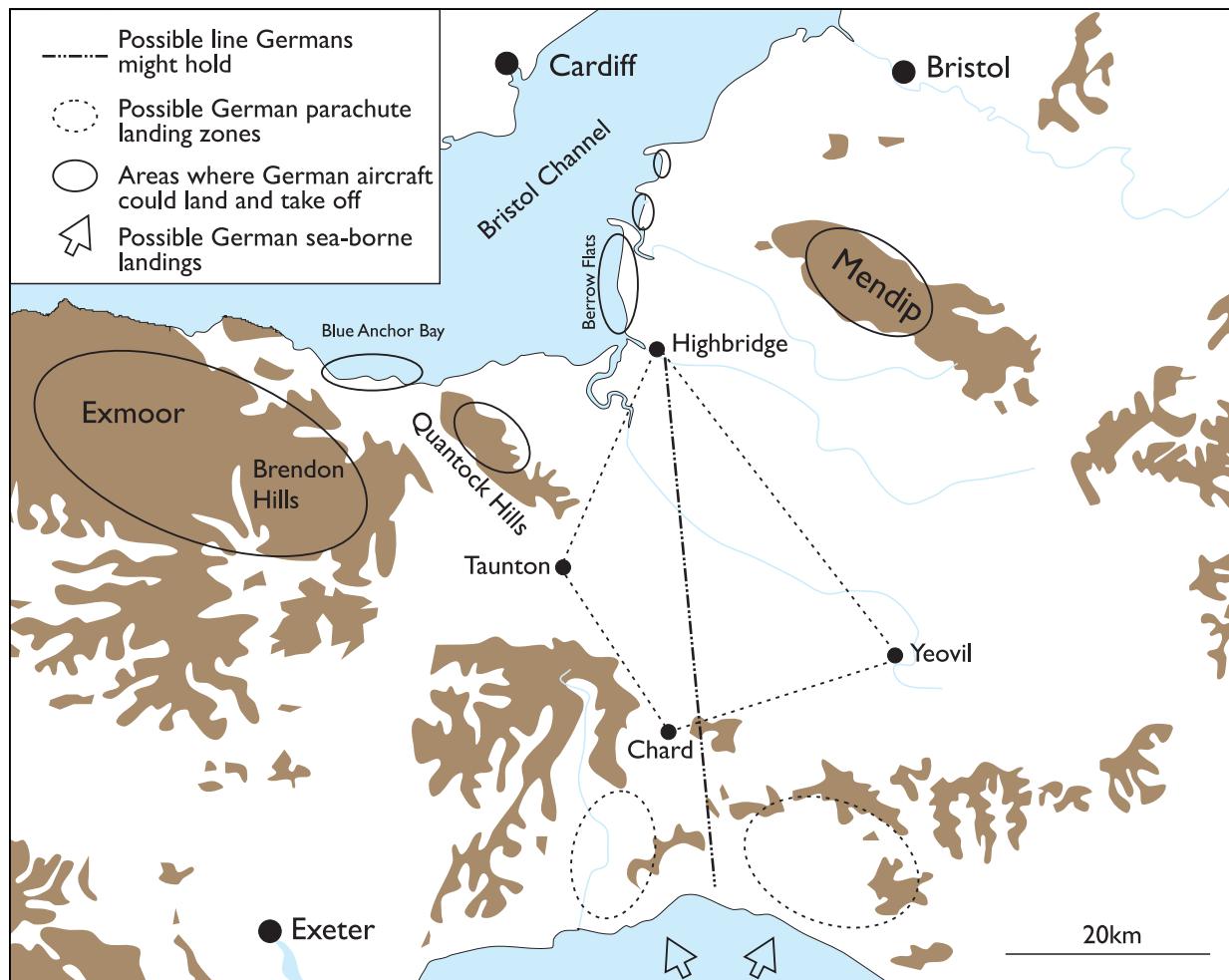
### The perceived German threat

After the deployment of German forces into France following the French capitulation in June 1940, the threat of seaborne invasion of the United Kingdom was considered to be greatest along the coast between the Wash and the Isle of Wight. On 5 August 1940

Churchill identified the western coastal sector from north Cornwall to the Mull of Kintyre (which included the Somerset coast) as the least vulnerable to seaborne invasion (Churchill 1949, 259). It was recognised that, along the coast to the west of Portsmouth, sea conditions would rule out the use of the river barges that were being then assembled in the Channel ports. Landings in the South West were likely to be from either modified merchant vessels or specially constructed flat-bottomed landing-craft. By 1941, the perceived threat was increased to include ‘fast armoured motor craft and amphibian tanks’.

### Anti-invasion strategy

Before considering the anti-invasion measures taken in Somerset, it is first necessary to briefly review the national anti-invasion strategy. This was first to mount air attacks on any invasion fleet before it left the continental ports. On the sea voyage (which would be hampered by mine-fields), ships of the Royal Navy, together with RAF aircraft, would attack the invasion fleets. When the invader reached the coast, beach defences with anti-tank obstacles and barbed wire, covered by fire from pillboxes, trenches and gun emplacements formed a ‘coastal crust’ to impede his landing. The troops manning these defences were expected to ‘fight to the last man’ to destroy the enemy on the beaches and to delay any move inland so that mobile forces could be moved into position to destroy the invader (Churchill 1949, 257–59). Key routes towards the threatened beaches were



**Figure 3.1:** The perceived German threat to the Waist of the South West, following a successful capture of Plymouth.

kept open to allow the rapid deployment of reinforcements. At the same time, denial measures were prepared to prevent the enemy from using docks and harbours or from capturing transport and fuel stocks.

## The threat to the South West

On 19 July 1940 Southern Command issued *Operation Instruction 16* to the newly formed 8 Corps which was taking over responsibility for the defence of Devon, Cornwall and Somerset. This identified that the most likely threat to the South West was an enemy diversionary attack to capture Plymouth, which might be a prelude to a main invasion elsewhere or, more likely, follow such an attack with the aim of drawing

off reserves. Plymouth would have given the Germans a major port to land follow-up forces and sustain operations. The city incorporated Devonport, an important target in its own right as a major Royal Navy dockyard, one of its three manning divisions and home of the Royal Navy's HQ Western Approaches which controlled all shipping sailing to and from the Atlantic (Lavery 2006, 31, 107, 177). This HQ also included the HQ of 15 Group RAF Coastal Command (Collier 1957, 57–58).

A major German force landing in the South West would seriously threaten shipping in the Western Approaches and the Bristol Channel (TNA WO 166/57: *Operation Instruction 16* to 8 Corps, 19 July 1940). It would offer an advanced base from which to attack Ireland

with a view to gaining Irish ports and airfields to attack shipping further out into the Atlantic and in the Western Approaches. German bases in Ireland would have posed a serious threat to key western ports in the UK especially those in the Bristol Channel (Butler 1957, 276). After the capture of Plymouth, the Germans were expected to mount a second attack to cut off the whole of the south-west peninsula by taking and holding a defensive line from Bridgwater through Ilminster to Lyme Regis (Figure 3.1 on the facing page). This would allow them to build up their forces in the South West and launch an attack to capture the Port of Bristol. Southern Command warned 8 Corps that enemy occupation of the south side of the Bristol Channel would deny Britain use of the waterway and its ports with serious implications for the country (TNA WO 166/57: Southern Command *Operational Instruction 16* to 8 Corps, 19 July 1940). As Churchill later noted, one tenth of British imports were coming through the Bristol Channel ports in August 1940 (Churchill 1949, 580). A number of courses open to the Germans for this operation across what the British called the 'Waist of the South West' were postulated, including seaborne assaults in Dorset or east Devon but the most likely option was believed to be a large scale airborne attack near the Dorset coast combined with airborne landings in Somerset. These landings might be on Somerset beaches, on the low ground in the area bounded by Highbridge, Yeovil, Chard and Taunton or on open spaces on Exmoor and the Brendon Hills (TNA WO 166/1317: *Somerset Sub Area Coast Defence Scheme*, 15 August 1940).

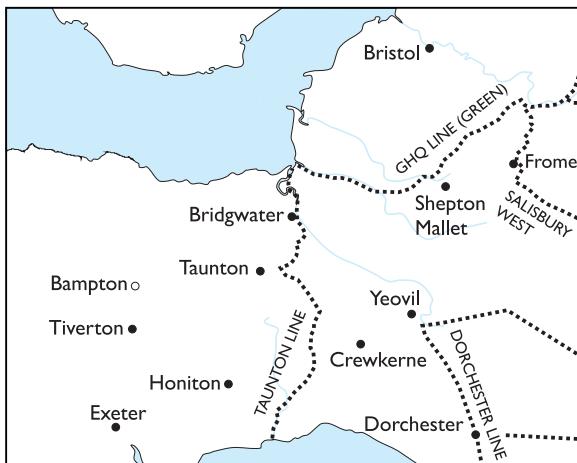
In contrast to the situation in west Wales, where significant defences (including beach anti-tank obstacles and stop lines) were constructed, the threat from Ireland itself is hardly mentioned in any documents about anti-invasion defences in Somerset. The only reference found is in the *Severn Sub Area Defence Scheme 2* dated 14 December 1940 where the first threat listed was 'landing in force after bases have been established in Ireland' (TNA

WO 166/1314). Nevertheless the authors have found that when discussing the war with older members of the population in Somerset, a threat from Ireland (often called by its Irish name, Eire) is frequently mentioned. There is evidence to suggest that recurrence of this theme was because of a general belief during the war, particularly in the South West, that this was a distinct possibility. From 10 May 1940 the Home Intelligence Department of the Ministry of Information (MOI) compiled daily reports on the morale of the nation using the Mass Observation social survey organisation together with a network of contacts and covert sources. During June and July 1940 the south-west region of MOI reported (Addison and Crang 2010, 62, 131, 149, 201) that: 'the invasion of Eire is also rumoured in a large number of places' (1 June); 'some anxiety on the coast about the possibility of invasion from Eire' (19 June); 'dangers from Eire are often discussed' (24 June); 'many references in the morale reports to fears of invasion and some speculation that Hitler would seize control of Ireland and turn it into a springboard for an assault on Britain' (week 8–13 July). These rumours still appear to be firmly embedded in local folklore in and around Somerset.

## British plans

### Inland defences (stop lines)

Inland from the beaches, a series of 'stop lines', based primarily on features like waterways or escarpments, were built to impede enemy movement forward, particularly by tanks, and to buy time for any available reserves to counter attack. A key feature of stop lines was the creation of a continuous anti-tank obstacle to attempt to prevent the rush of armour that had been recently experienced in France and Belgium but many stop lines also included sufficient defences along their length to prevent infantry from crossing the obstacle or from attacking to build a bridgehead. The most important stop line was the GHQ Line (GHQ



**Figure 3.2:** Somerset's stop lines with anti-tank islands in the Waist of the South West. The island at Bampton was abandoned in favour of Tiverton and the islands formed along the Taunton Stop Line are not shown.

was an abbreviation for General Headquarters Home Forces). This was intended as the final line to keep the invader from reaching London or the industrial heartland of the country in the Midlands (Collier 1957, 129). The GHQ Line ran from Burnham-on-Sea eastwards along the river Brue and across Somerset to join the river Avon (Figure 3.2). This section was called the 'GHQ Line Green'. One part of the line then ran north via Chippenham into the Cotswolds to join the Severn estuary as the 'Bristol Outer Defence Line' but in August 1940 work was suspended on the northern part. The main GHQ Line ran eastwards along the Kennet and Avon canal (GHQ Line Blue) to Reading then south of London and finally northwards towards Yorkshire.

To stop enemy infantry or armour from advancing out of the South West, the Taunton Stop Line was built across the 35-mile (56km) land gap between Burnham-on-Sea and Seaton (TNA WO 166/1317: *Somerset Sub Area Coast Defence Scheme*, para 16, 15 August 1940). This line followed the river Parrett to Bridgwater, where it joined the Bridgwater and Taunton canal and ran to Creech St Michael, where it used the bed of the old Chard canal to Ilton and then ran along the Great Western Railway

line to Chard Junction. From there the stop line followed the river Axe to Seaton; a total distance of about 51 miles (82km) (Figure 3.2). The basic line with westward-facing anti-tank and anti-infantry obstacles covered by pillboxes and some gun emplacements was completed during the autumn of 1940 but the in-depth defences were never finished and the line was abandoned in 1941 (TNA WO 199/1803).

After General Ironside handed over as Commander-in-Chief of Home Forces to General Brooke on 20 July 1940, the policy of building stop lines was curtailed and was finally abandoned in April 1941 with a new emphasis on mobile operations and the creation of anti-tank islands and centres of resistance. (TNA WO 166/1251: Southern Command letter SC.Z/7347/G (Ops), April 1941).

## Anti-tank islands

Towns that were at important nodal points on the road system were defended as 'anti-tank islands' with roadblocks on all routes into the built-up areas to deny enemy tanks and transport columns use of the roads through them. In most of these towns, two rings of roadblocks were constructed with the inner ring utilising buildings and other obstacles to form an enclosed 'tank proof' area. In the summer of 1940 anti-tank island defences were prepared at 37 towns in the Army Southern Command including Exeter, Bampton (later Tiverton), Taunton, Honiton, Yeovil, Frome, Shepton Mallet, Bristol, Crewkerne and Dorchester (TNA WO 166/57: OpI 24–Annex B, 15 August 1940). Somerset County Council files show that work started in July (SRO S/5/3).

In 1941 the 12 major crossing points on the Taunton Stop Line were given extensive all-round defences to make them into anti-tank islands. These included Bridgwater (east of the river Parrett), Durston Station, Creech St Michael, Ilminster, Chard (east of the railway) and Axminster. In contrast, none were constructed on the GHQ Line in Somerset. By 1942 some 80 towns in Southern

Command had been prepared as anti-tank islands (TNA WO 199/544: Southern Cmd letter S.C.Z/11098/G (O), 3 March 1942).

## The threat from the sea

A seaborne invasion of Somerset was considered to be unlikely. The August 1940 *Coast Defence Scheme* issued by HQ Somerset Area (TNA WO 166/1317) stated that 'Landing of troops on the beaches from the sea is not to be greatly feared; the approach from the enemy shore is long, the Bristol Channel is difficult for small boats to navigate and except for an hour or two before and after high tide a mud bank is disclosed by the tide which it would be very difficult if not impossible for armed and heavily equipped men or AFV [Armoured Fighting Vehicles] to cross.' The writers of the defence scheme believed that an invader would need to land on a rising spring tide, within two hours of high water, so that the disembarked forces did not have to cross vast expanses of mud or sand under fire from the shore and so that landing craft would not become stranded until next high tide. This greatly restricted the times when landings would be possible and, as the enemy was expected to land at dawn, the number of suitable dates was even more limited.

In the Bristol Channel, high water at Burnham-on-Sea is some eight hours later than at Dover or the beaches along the Kent and Sussex coasts. On the East Anglian beaches (to the south of Southwold) high water is about one hour before high water at Dover. It would be impossible to coordinate dawn landings in these two areas, which were considered to be the most likely options for the main thrusts of any German invasion. Despite this, it was estimated that between five and six hours notice of a seaborne attack might be anticipated in Somerset except in poor visibility, but that airborne attacks could take place with little or no warning (TNA WO 166/1317: *Somerset Sub Area Defence Scheme*, part II, para 16, 4 December 1940).

Assessments of the Somerset coast concluded that the harbours at Portishead, Bridgwater, Watchet and Minehead would be of value to the enemy and must be defended while Combwich and Dunball might possibly be. None of the harbours were considered sufficient to provide the Germans with a permanent base. Porlock Weir and Highbridge were not mentioned (TNA WO 166/1317: *Somerset Sub Area Defence Scheme*, 4 December 1940). All these harbours would have been of limited use to the invader. Access was totally dependent on tidal conditions and navigation of the Parrett estuary requires expert knowledge of the river and its constantly changing conditions.

The Coastguard Service, which had been moved from the Board of Trade to the Admiralty in May 1940, made an assessment of UK landing beaches in August 1940 and confirmed that the Somerset beaches were not well suited for seaborne landings. The Somerset coast was therefore placed in Priority Four (the lowest priority) for beach defences within the South West. This overall assessment remained unchanged from 1940 until the threat of invasion had passed in 1944 (for example, TNA WO 166/298: *Appreciation of Defence Problems*, 18/2/1941). Nevertheless, operation orders continued to set defence commanders along the Somerset coast the primary task of repelling a seaborne invasion but often in conjunction with airborne landings.

## Blitzkrieg tactics

The use of airborne forces in the invasion of Norway and Denmark and later of the Netherlands and Belgium, confirmed that surprise was the key element of the German 'blitzkrieg' strategy and Germans were to be expected to appear in strength, with little or no warning, at the most unlikely places. Any invasion was expected to be preceded by intense fighter and bomber attacks on ground objectives like beach defences. Large scale drops by paratroopers dressed in British uniforms and equipped with

British weapons captured at Dunkirk would attack military posts from the flank or rear. The Germans were expected to take high risks, to use unorthodox tactics and exploit new weapons, and to be prepared to suffer high losses in order to achieve their objectives. The use of persistent gas to contaminate areas on the flanks of their attack and choking gas in the area being attacked was predicted. Once any selected landing grounds had been secured, troop carrying aircraft and gliders would land and their air-portable transport might include British vehicles captured in Flanders. Any attack was expected shortly before sunrise to allow a night approach to maximise the chance of surprise and to give the attacker the benefits of long hours for the first and most important day of the operation (TNA WO 166/1317: *Somerset Sub Area Coast Defence Scheme*, para 2, August 1940).

## Aircraft landing on beaches

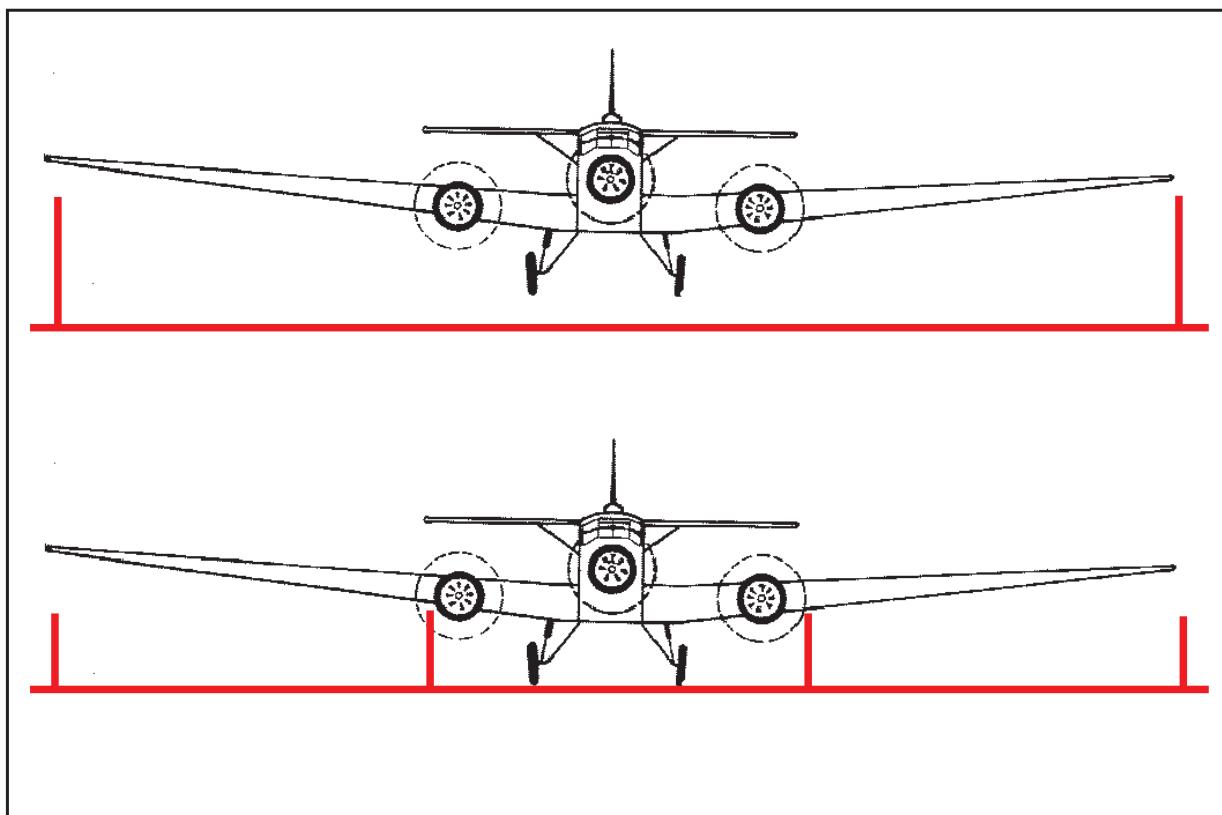
*Luftwaffe* aircraft landing on some of the beaches of Somerset as part of an invasion force was considered to be a high threat. The sandy beaches considered most suitable for both airborne or seaborne landings were (from north to west) Sand Bay, Weston Bay, Berrow Flats, Blue Anchor Bay and Porlock Bay, although the latter had shingle. The beach at Steart was identified in early plans but was rapidly excluded presumably because the mud flats would make landings by sea or air extremely difficult if not impossible. The threat of aircraft landing on the sand strips near to the high water mark of most of these beaches was taken very seriously.

By August 1940, Sand Bay, Berrow and Weston beaches had all been partially obstructed against aircraft landing. Cairns of Mendip stone were used at Weston-super-Mare and Middle Hope Cove, which survived until after the war. Burnham-on-Sea, Berrow and Sand Bay beaches were obstructed with rows of poles set in large squares and in 1941 Blue Anchor Bay beaches were similarly obstructed

(see page 32). Examination of the defences built to obstruct aircraft from landing on these beaches clearly indicates that the threat was from Junkers 52 (Ju 52) transport aircraft, each of which could carry up to 16 fully armed men (Figure 3.3 on the next page).

Unlike a seaborne landing which it was assumed would be restricted to a relatively short period before high water, aircraft could land on the sands at the head of the beach from perhaps an hour after high water on the ebb tide until the next flood tide reached the sand again some eight or ten hours later. For example, high water at Watchet is typically seven and a half hours later than high tide along the south coast between Portsmouth and Dover but low water is about six and a quarter hours before high tide at which time the upper sand on the Somerset beaches would be available for aircraft. This could have allowed German seaborne landings on the south or East Anglian coastlines to be coordinated with simultaneous air-landing of troops on Somerset beaches. It should be pointed out that this conclusion was not recorded in any wartime documents.

The use of gliders to capture the key Belgium fortress of Eben Emael on 12 May 1940 greatly increased the awareness of the potential glider threat. However, along the Somerset coast glider landings were considered to be unlikely as it was believed that gliders would be released from their Ju 52 tug aircraft before crossing the south coast of England as towing over hostile territory was assessed as being too risky and with typical glide ranges of perhaps 20 miles (30km, depending on the release altitude and wind speed and direction), it was thought unlikely that they could have reached Somerset beaches. As gliders were able to land in a very short distance and the Germans were prepared to accept major damage to them on landing, there were no practical ways of obstructing potential landing grounds against gliders as these would have to ensure that the gliders were so badly damaged that their passengers would be seriously injured.



**Figure 3.3:** Dimensions of obstruction posts to damage Ju 52 on landing and prevent take off. Upper 12-foot (3.65m) poles at 30-yard (27.5m) spacing, lower 6-foot (1.8m) poles at 10-yard (9m) spacing. Both set in lines to form 150-yard (137m) squares. The wingspan of a Ju 52 is 29.25m.

The Ju 52 however, was capable of landing on a wide road or beach and taking off again to return to base to shuttle in another load of soldiers. Ju 52s needed to land and take off into the wind and the use of open spaces like beaches rather than fields would allow them to take off immediately after unloading without having to taxi back to the other end of a field and turn in order to take off again into the wind. Landing ground obstructions on moors, open spaces and beaches were designed to damage any Ju 52 sufficiently badly to ensure that it could not take off and return with more troops or supplies.

The operation orders issued for Somerset Coast Defence in 1940 stated that it was not clear whether the enemy aircraft would land on the beaches or on the moors. (The use of the term ‘landing’ can be confusing but in this context implied the landing of aircraft like the Ju 52 rather than any seaborne land-

ings.) It was considered that if the beaches were heavily defended, the enemy would be more likely to land on the moors. The vast expanses of Exmoor and the Brendon Hills with open moorland, large fields and, in many places, straight wide roads running roughly east–west into the prevailing wind, offered numerous potential landing grounds, which were impossible to obstruct or defend. With relatively few isolated villages, the Germans might achieve surprise and land a significant force unseen and unopposed.

The Mendip Hills and, to a lesser extent, the Quantocks were also considered to be potential landing grounds. The Defence Scheme document states that throughout Somerset, ‘numerous other landing grounds’ were also obstructed, but no comprehensive lists have yet been discovered. Sites have been identified on immediately post-war aerial photographs at Maes Knoll, Dundry, Fry’s Hill,



**Figure 3.4:** Aircraft landing obstructions on the open moorland of Black Down near Shipham. These obstructions were constructed of double lines of heaps of stone or turf. It is likely that they survived wartime clearance for agriculture because the site was used for several bombing decoys (Somerset Studies Library, RAF 3G/TUD/UK/15/25/PART I 5279, 14/1/1946).

Axbridge (SHER 11520) and Black Down (SHER 24114, Figure 3.4); at the last, the earth and stone mounds erected as obstacles still survive.

It is of interest that the MOI surveys of public opinion include a report on 27 May 1940 from Bristol: ‘some anxiety over the hills and the moors in the west as parachute landing sites’, while on 23 July 1940 Bristol reported: ‘concern in Somerset about number of flat fields containing no obstacles’ (Addison and Crang 2010, 42, 261).

It was also believed that seaplanes might land on the reservoirs at Cheddar, Blagdon (Mendip), Ashford, Cannington (site so far unidentified) or Durleigh and it was stated that the local authorities responsible had taken steps to obstruct them. Blagdon and Cheddar reser-

voirs were obstructed by Bristol Waterworks Company with moored rafts (Brown 1999, 32). The lower reaches of the Parrett, Brue, Axe and Yeo were also considered to be suitable for seaplane landings at high tide but no specific defence measure against seaplanes are cited (TNA WO 166/1317: *Somerset Sub Area Defence Scheme*, 11e, 11f).

On 13 July 1940, Army Southern Command issued guidance about how the Germans were expected to attack and capture airfields. Assuming that Somerset beaches were thought to be potential temporary airfields, similar tactics might be used (Smith 1989, 100). It would have been suicidal to attempt to land paratroops or aircraft on defended beaches before the defences had been suppressed. An attack might therefore start at dawn with a

sweep by enemy fighters over the beach at medium height to assure local air superiority. The fighters might then be followed almost immediately by very low-flying bombers at about 25-50 feet (8–15m) dropping sticks of light bombs on the defences. Heavy fighters would then attack the defences with their front cannons and machine guns.

At the same time companies of parachute troops would be dropped (as companies) at several points about 1000 to 1500 yards (900–1400m) inland. These parachute troops would form up again in their companies in about 12–15 minutes and storm the beach defences from the rear. Beach obstructions would then be cleared to allow significant numbers of Ju 52 and large troop transports to land on the beach at the rate of about six a minute. On landing, these troop transports would disgorge troops armed with heavy and light machine guns, 2-inch and 3-inch mortars and possibly 3-inch mountain guns. The aircraft might also carry motor cycle and side-car combinations. Light anti-aircraft guns (20mm automatics with an effective range of about 4500 feet (1.4km) and capable of use as anti-tank and anti-pillbox weapons) might also be landed to defend the beach and a fighter ‘umbrella’ would be maintained over the area until the beach-head defences were ready (Smith 1989, 100).

Clearly not all these stages might be part of an attack on a beach intended as a landing ground but, as will be seen from the following paragraphs, the Somerset coastal defence plans were primarily based on this airborne threat. The paramount need would be for the Germans to achieve local air superiority and British air defence systems are therefore discussed in some detail later.

## Defence of the coastal area

The Somerset coastline is about 65 miles (100km) long and the hinterland included in the coastal defence plans varied in depth from between five to ten miles (8–16km) from the

sea. The 1940 concept for the defence of the Somerset coastal areas was to maintain an aerial and seaward watch over the area, to station troops near to all beaches to repel any landings, to have mobile reserves ready to reinforce troops defending beaches or to contain enemy landings on the moors and to prepare, and if necessary ‘immobilise’, the sea ports (TNA WO 166/1317: *Somerset Coast Defence Scheme*, 4, 15 August 1940). Beach defences were to be organised in defended localities prepared for all-round defence and defence schemes were designed to meet both landings from the beaches and also attacks by air-landed troops near to the coast. Pillboxes, intended primarily to house machine guns or concrete infantry section posts for riflemen, were built along the threatened beaches and fire trenches dug for infantry sections.

The Coastguard Service manned stations along the Somerset coast. These were supplemented by permanent Army observation posts and, during the night, by coast-watchers (Figure 2.3 on page 8). Observer Corps posts and Army searchlight sites near to the coast watched both air and sea. Across the area the Home Guard manned observation posts of their own from dusk to dawn, while Somerset Police and Customs & Excise gathered intelligence. All troops holding defensive positions on beaches and aerodromes ‘stood to’ daily at one hour before sunrise and only ‘stood down when visibility justifies such action.’ During the hours of darkness, beaches (including cliffs where landings were possible) were to be patrolled and one third of the garrison was ready for immediate action. At other times half of the troops on beaches or aerodromes were to be instantly available (TNA WO 166/1243: *Somerset Sub Area Defence Scheme*, para 40, 30 December 1940).

In addition to RAF Coastal Command sorties flown west of Lands End towards the Bay of Biscay and in the English Channel, 8 Corps ordered the RAF Army Co-operation Squadron based at Weston Zoyland to fly dawn patrols around the south-west coastline with a

view to identifying any invasion fleet at sea or in the process of landing (TNA WO 166/298: 8 Corps *Operation Instruction 1*, 9 August 1940).

Units manning coast defences were also expected to be able to communicate by visual lamp signalling to any naval vessels in the area. Procedures were issued with brevity codes for requesting naval gun-fire from warships onto land targets. Basic signals were also laid down for intercommunication between ground forces and RAF aircraft.

On 23 June 1941, HQ Western Area, which was by then responsible for both Somerset and Bristol, issued the *Western Area Defence Scheme*. This listed defence commitments in priority order with aerodromes first, Bristol and Avonmouth docks second and 'the small harbours at Minehead and Watchet' in third place out of ten commitments. Lower priority commitments included manning anti-tank islands, vulnerable points and the north Somerset coast (TNA WO 166/1251: *Western Area Defence Scheme*, S4, para 11, 23 June 1941). Anti-parachute reaction forces were held ready to attack landings on the Quantock Hills, in central and south Somerset and in the valley to the north-east of Clevedon (TNA WO 166/1317: *Somerset Sub Area Defence Scheme*, part V, plan).

As will be discussed below, many of the troops assigned for beach defence came from training units in Taunton and orders were given that no roadblocks were to be erected along the A358 between Taunton and Williton, the A39 between Porlock and Othery (except in Bridgwater), the A38 between Taunton and Bristol (except again in Bridgwater) and the A370 between Highbridge, Weston-super-Mare and Bristol. This was to minimise any delays in deploying troops to counter an invasion in the coastal area (TNA WO 166/1317: *Somerset Sub Area Coast Defence Scheme*, appendix I, 15 August 1940). For the same reason, arrangements were made for the police to close certain roads to all civilian traffic within one to three hours of the request being received.

## Centres of resistance

The coast defence plans required the Somerset ports and major coastal towns (Portishead, Weston-super-Mare, Burnham-on-Sea, Bridgwater, Watchet and Minehead) to be placed in a state of all-round defence as 'centres of resistance'. This was a pre-war concept laid down in *Field Service Regulations* and was not based on the blitzkrieg experiences of 1940. Later in the war, many centres of resistance were not provided with all-round anti-tank defence. By December 1940, Highbridge and Brent Knoll hill were also included and infantry slit trenches survive at the latter (SHER 15995, Figure 3.5 on the facing page). At Portishead the defence plans included the town, harbour and power station and eight roadblocks were built in December 1940 on main routes into the town (TNA WO 166/1317: *Somerset Sub Area Defence Scheme*, para 33; SRO C/S/5/3). The importance of Bridgwater lay not only in its docks but also because it was the only crossing point on the Parrett between its mouth and Burrow Bridge, and was also at the intersection of the A38 and A39 main roads which joined to cross the river. The town between the Parrett and the Great Western Railway to the east was fortified as an anti-tank island on the Taunton Stop Line in 1941. Loop-holed walls near the docks on the west side of the river suggest earlier harbour defences (SHER 12381).

The beach defences of Watchet were authorised on 18 January 1941 (TNA WO 199/1812) and several anti-tank roadblocks were erected on routes into the town (Wilson 2004, 165; SRO C/S/5/3). At Clevedon approval for beach defences was given in April 1941 (TNA WO 199/1812). There is no evidence to suggest that these 'centres of resistance' were ever provided with effective all-round defences, which is in stark contrast to the anti-tank islands constructed in 1941 on the Taunton Stop Line. These stop line anti-tank islands all had a perimeter of continuous anti-tank obstacles and barbed wire fences covered at all points by substantial pillboxes.



**Figure 3.5:** Surviving slit trenches on Brent Knoll. The angle-iron pickets would have supported sides (revetment) formed from expanded metal; some small areas of this survive (Somerset County Council HER, 2003).

## The threat of tanks

The threat of tanks landing on the Somerset coastline was considered to be minimal and along the coast and throughout the immediate hinterland, there was an absence of any anti-tank cubes, scaffolding, ditches, mine fields, bridge demolitions or other anti-tank obstacles other than those on the stop lines, or in anti-tank islands and centres of resistance (SRO C/S/5/3). Nevertheless, a major assumption in the defence plans was that the Germans had the capability to transport special light tanks in aircraft capable of landing and taking off on roads or open spaces. Contemporary documents mention the *Luftwaffe* constructing special planes to carry two five-ton ‘tankettes’ (TNA WO 166/298: 8 Corps INTSUM 7, para 5b, 22 September 1940). Senior RAF officers also identified a tank threat from the air. General Pile noted that in May 1940, Dowding (the Air Officer

Commanding-in-Chief of Fighter Command) and Portal (the Chief of Air Staff) were ‘of the opinion that the Germans might land small tanks by air’ (Pile 1949, 103).

An analysis of the works orders for the construction of anti-tank roadblocks in the coastal defence zone (SRO C/ S/5/3) and the absence of blocks on routes leading off the beaches suggests that the tank carrying aircraft that the Germans were believed to possess were only expected to be capable of landing on the hard surfaces of roads and not on beaches. This lack of anti-tank obstacles on exit routes from the Somerset beaches is in stark contrast to the Dorset or east Devon beaches where dual rows of anti-tank cubes or beach scaffolding together with barbed wire were erected. Unlike the Dorset, Cornish and both the south and north Devon coasts, there were no pre-arranged RAF targets planned against tank exit routes off the Somerset beaches (TNA WO 166/298: 8 Corps Defence Scheme:

Beach Targets, March 1941). The HQ Western Area *Defence Scheme* instruction issued on 23 June 1941 advised that: ‘This coast is already well provided with artificial defences and wire obstacles but has not yet been prepared for anti-tank defences. Schemes will be prepared for the blocking of exits from harbours or favourable landing beaches against tanks so that they can be put into effect if the priority of this coast rises and labour and materials become available’ (TNA WO 166/1251).

There is no documentary evidence or surviving infrastructure to suggest that any anti-tank obstacles were ever constructed on or near Somerset beaches. Anti-tank roadblocks were built on the approaches to the harbours of Watchet and Portishead to prevent access to the ports rather than to contain any tanks landed in them. However, as will be discussed later, anti-tank roadblocks were definitely constructed on some routes north off Exmoor and the Brendon Hills against air-transportable tanks landed on the moors. Throughout Somerset there was also the threat of tanks which had landed to the west or south attempting to move across the county.

## Port denial measures

Denial measures for the ports of Avonmouth and Portishead were prepared by the local Flag or Naval Officer in Charge (FOIC/NOIC), and were intended to prevent the off-loading of military vehicles, tanks and stores for a period of between seven to ten days. No denial measures are recorded for Minehead or Watchet (TNA WO 166/298: *8 Corps Defence Scheme*, amendment 2, 8 Feb 1941). However at Watchet, the West Quay and the slipways to both the West Beach and main harbour appear to have been prepared for demolition with large charge-chambers constructed in the roadway (Vernon Stone pers. comm.). The Admiralty intended to remove a section of Birnbeck Pier at Weston-super-Mare to prevent its use by an invader but it was found that the pier was built of continuous-girder construction and removal

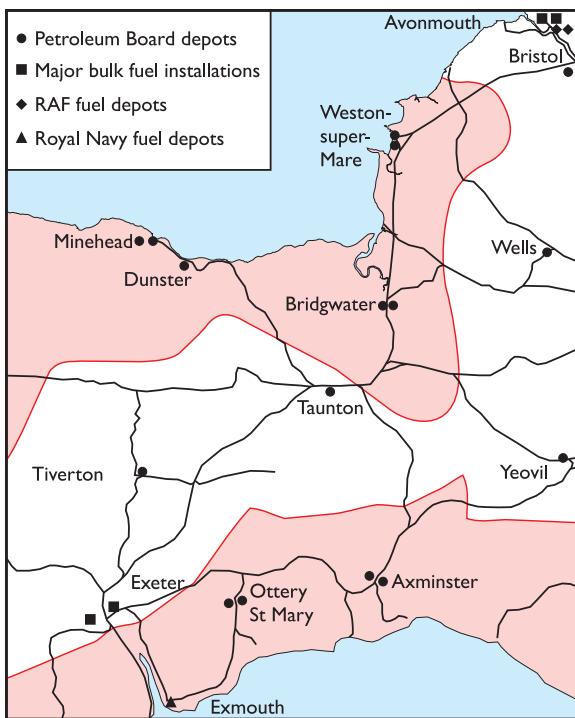
of any section would cause the whole structure to collapse (Pawle 2009, 141). The piers at both Minehead and Clevedon were not included in these denial measures but Minehead pier was removed in 1941 (Figure 4.1 on page 47) to improve the arc of fire of the emergency Coast Artillery battery sited on the harbour wall (see page 47).

In tidal waters the Admiralty was responsible for the immobilisation of vessels and small craft and the senior Royal Navy officer was responsible for the issue of passes allowing fishing boats to sail from harbours. Private craft on inland waters were always to be immobilised when unattended and, in the event of an invasion, further unspecified denial measures were planned by the Somerset Rivers Catchment Board for implementation by the Bridgwater Port and Harbour Authority (TNA WO 166/10824: *Somerset and Bristol Sub Area Defence Scheme*, appendix L, para 3, 13 April 1943).

## Fuel denial measures

Denial measures were vital to ensure that an invader could not capture food, fuel or transport thereby increasing his mobility and reducing his logistics. This was particularly important for parachute or air landed forces, which would have lacked transport for both tactical movement of infantry and for logistic support. Across Britain all vehicles and petrol pumps had to be immobilised every night to deny their possible use to an invader.

Figure 3.6 on the facing page shows the ‘Pink Area’ where the threat of invasion was considered to be significantly higher and special additional measures were required. This area included the Somerset coast, Exmoor, the Brendon Hills and most of the Quantocks. Within the Pink Area, stocks of fuel were limited to the basic essentials only and measures prepared to enable the Home Guard to immediately cap petrol pump tanks with concrete to prevent the extraction of bulk fuel. Trains of full fuel tank waggons were not



**Figure 3.6:** The Pink Area, fuel depots and railways (based on plans in TNA WO 166/298). The Pink Area covered locations where there was a higher threat of invasion. Special precautions were implemented to deny the Germans access to the fuel stocks held in the area. The locations of depots are approximate and are not recorded in Dorset.

permitted to remain overnight in the Pink Area and plans were made to destroy the coastal fuel depots at Weston-super-Mare, Bridgwater, Dunster and Minehead.

### The ‘Fifth Column’ threat

Landings were also expected to be supported by the ‘Fifth Column’: a network of agents or Nazi sympathisers, which was (wrongly) believed to have already been set up in Britain. After the successful German attacks in Norway, Denmark, Belgium and The Netherlands, rumours abounded of the decisive role that the Fifth Column had played in the swift defeat of these countries and their governments in exile in London appear not to have denied them. It is not intended to review major concerns of the Government over the Fifth

Column threat or measures taken to minimise it but they are well documented in the Official Histories (Hinsley and Simkins 1990, 47–64). There are numerous references in the MOI surveys of the concern in the civilian population about the Fifth Column which was viewed by all as a very real threat (see, for the South West, Addison and Crang 2010, 80, 81, 88, 434). Agents or spies were also expected to be landed by parachute or on isolated beaches (see page 39).

Shortly after the outbreak of war, military guards had been placed on key points like Whiteball railway tunnel on the Somerset–Devon border and the Air Defence of Great Britain (ADGB) Burnett magazine near Keynsham together with measures to defend the only four aerodromes that then existed in Somerset (Whitchurch, Weston-super-Mare, Yeovil and Weston Zoyland). Foreign nationals from enemy countries and ‘aliens’ were interned in special camps with military guards. These included the holiday camps at Paignton (Internment Camp 23) and Seaton (Camp 24). By mid October 1939, Seaton was holding some 274 Class B internees and Paignton 30 Class A, those internees considered to be the most dangerous (TNA WO 166/1252).



**Figure 3.7:** Williton Police Station. In May 1940 all placenames and signposts were ordered to be removed to confuse the invader. The bottom left-hand part of the scroll bore the name ‘Williton’ and was chipped away. Similar action was taken at Dunster Police Station (David Hunt, 2009).

## Control of movement

On 31 May 1940 orders were given to remove all signposts and name boards to hinder an invader's road movement (Figure 3.7 on the previous page). The MOI reported from Bristol on 12 July, 'Motorists on Salisbury Plain refused directions by villagers' but on 14 June had recounted a case of 'a stranger to the region travelled 360 miles [575km] in the west country without difficulty, thanks to hotel and other private advertisements on the road, and the clearness of the white lines on the roads leading to towns' (Addison and Crang 2010, 113).



**Figure 3.8:** The 'EL' emergency licence. The original was 5½ by 4 inches (133 x 102mm).

In the Coastal Defence Area, ten 'vehicle check points' (VCPs) were set up by the Army to hinder movement of Fifth Columnists or agents landed by sea or air. In total, there were some 50 VCPs across Somerset. In addition, across the county, the Home Guard routinely set up temporary roadblocks and checked night movement along selected roads within their areas of responsibility. If the threat of invasion increased, VCPs would be manned by police supported by armed Home Guard, who would enforce the civilian 'stay put' policy and keep key routes free for the military to move to battle stations or reinforce the coastal areas. 'Immobilisation Parks', also called 'Civilian Car Parks', were set up nearby and after the 'Stand Firm' order had been given, vehicles attempting to leave the area

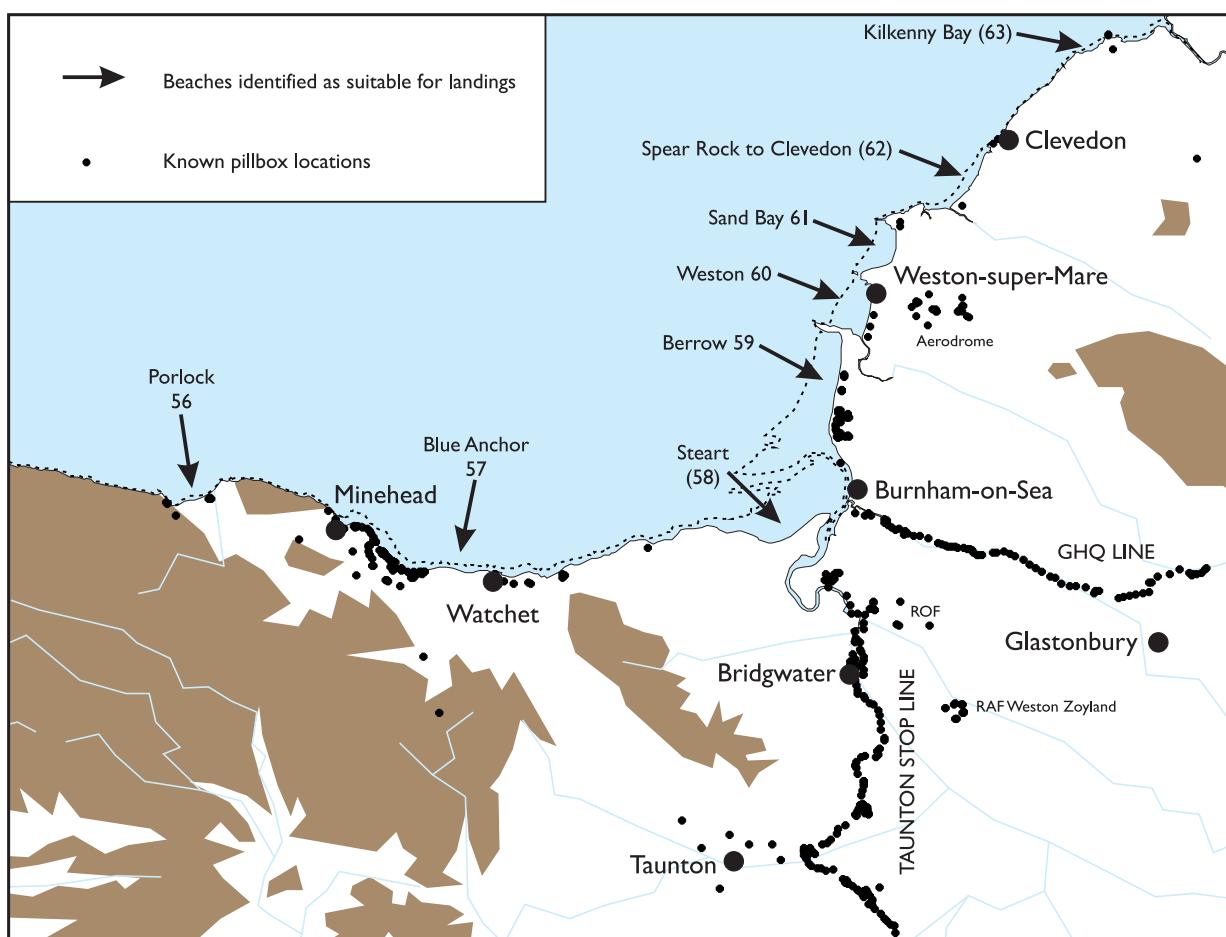
without the necessary 'EL' (emergency licence) would be impounded and either immobilised or immediately requisitioned by the military. If the threat of invasion became imminent, the police were then to centralise and immobilise all civilian vehicles and, if these were likely to be captured, the police were under orders to 'fire' them (TNA WO 166/1317: *Somerset Coast Defence Scheme*, 15 August 1940).

## Landings on the coast

### Blue Anchor Bay

Extensive defences were constructed across Blue Anchor Bay in the approximately five-mile (8km) wide area between Minehead and Blue Anchor which were commenced in August 1940 and were further strengthened in 1941. A grid of stout 6-foot (1.8m) high wooden posts about 10 yards (9m) apart forming boxes with sides about 170 yards (155m) long was built along the upper reaches of the beaches. These obstructions were specifically designed to damage any Ju 52 troop transport aircraft attempting to land on the beaches to prevent them from returning to base to bring in additional waves of soldiers, supplies or equipment. At least 76 pillboxes have been identified in the Blue Anchor Bay area (details in SHER) and there were possibly more (Figure 3.9 on the facing page). These primarily cover the open beaches and their immediate hinterland with a few providing defences for villages like Carhampton, Dunster and the town of Minehead (Figure 3.10 and Figure 3.11 on page 34). Compared to Berrow Flats or the Taunton Stop Line, over three times more pillboxes per mile have been identified across Blue Anchor Bay.

In January 1941, an Army-manned 4-inch QF naval beach defence gun was installed covering the eastern end of Blue Anchor Bay. This was one of only 12 such guns in the South West and was the sole gun to be deployed in this role in Somerset. These guns were intended to fire at 'hard' targets like landing craft on the beach but would not necessarily



**Figure 3.9:** Anti-invasion defences on the Somerset Coast. Numbers refer to Southern Command identified beaches; those in brackets were considered at low risk (listed, for example, in TNA WO 199/1624).

have been effective against airborne landings, indicating that a seaborne invasion threat was certainly still under consideration. The gun was returned to the Royal Navy in January 1942 (TNA WO 166/2038).

The importance given to Minehead harbour in the summer of 1940 is indicated by the construction of an 'emergency coast defence battery' (see page 47) although the harbour had a significantly lower tonnage landing capacity than Watchet harbour. The current Harbourmaster of both ports estimates that up to two 500-ton vessels could berth simultaneously at Watchet, while at Minehead only one vessel of this tonnage could be berthed (Vernon Stone pers. comm.). Despite this Minehead was protected by a battery while the two 4-inch naval guns planned and reconnoitred for the harbour at Watchet were never implemented

(TNA WO 166/2060). In 1941, however, a pair of 6-pounder guns covering the harbour mouth at Watchet were installed, and manned by the Home Guard.

As well as these, the fixed Bofors AA guns at Doniford range were also capable of engaging ships which have to approach the harbour mouth from the north-east. This inward passage to the harbour ran close to the shore past the Doniford AA range firing point. Although anti-tank ammunition was available for Bofors guns, the 2-pound shells of the Bofors are not likely to have been very effective against merchant vessels or landing craft. The guns at Minehead were returned to the Royal Navy in early 1942 and were never replaced although they and the additional two guns for Watchet remained on the list as a low priority replacement (TNA WO 199/1111).



**Figure 3.10:** Pillboxes camouflaged with beach pebbles on the coast north of Dunster Beach. SHER 35362, 35363 (Timothy Dawson, 2002).



**Figure 3.11:** Blue Anchor Bay. The only surviving section post of some 23 constructed in the first phase of coast defences in the summer of 1940. The post has 11 loopholes and is sited to cover the beach with rifle or machine-gun fire along the high water line. There is a pit for a light AA machine-gun in the centre of the roof. SHER 35367, Listed Grade II in 2010. The beach defence gun was sited in the woods, just below the horizon (David Dawson, 2010).

## Airborne landings on the moors

The threats of aircraft or parachutes landing on the vast expanses of Exmoor and the Brendon Hills have already been mentioned. In the event of an invasion alert, vehicle mounted infantry were to be deployed to carry out patrols along key routes on Exmoor and the Brendon Hills. These patrols were to be started as soon as the order ‘Stand To’ had been issued. The order would be given when conditions were particularly favourable for an invasion to bring regular forces to a complete state of readiness to resist an invasion (TNA WO 208/2969, appendix XLI, see Figure 3.15 on page 40). Analysis of both the coastal defence plans for west Somerset and the deployments of troops during the major invasion scare in September 1940 (for example in TNA WO 166/4660), suggest that German troops landing on Exmoor or the Brendon Hills were then considered to be the major threat. By 1941, the objectives of enemy airborne troops landing on Exmoor or Quantocks, or of seaborne troops landing on the Somerset coast west of the river Parrett, were considered to be ‘penetration through Bridgwater or Taunton’ (TNA WO 166/1251: Conference minutes, 12 July 1941).

The main body of the German air-landed troops was expected to advance southwards towards the A361 or A38 to take the Waist of the South West and would need logistic support. The capability to do this by air was limited, particularly for bulk commodities like ammunition and fuel, so the threat of an attack northwards towards the coast would seem likely to have been a secondary operation with the aim of securing the west Somerset ports and beaches to enable a temporary supply chain to be established. The priority given to their defence has already been mentioned.

Within the western part of the Coastal Defence Area, several anti-tank roadblocks, some with associated pillboxes, were built in December 1940 (TNA WO 166/1317: *Somerset Sub Area Defence Scheme*, amendment of 30



**Figure 3.12:** Pillbox at Vale House, Roadwater, with camouflage roof reconstructed in 2008 by Exmoor National Park Authority. It was built in 1940 to cover an anti-tank roadblock closing routes towards the west Somerset coast for German troops landed by air on the Brendon Hills. ExHER MSO12289, Scheduled Monument 35320 (David Dawson, 2009).

December 1940, para 43(a)(2)). These blocks were sited at defiles on the main routes north from Exmoor to the coast. Blocks are recorded to the north and south of Dunster and at Withycombe, Roadwater, Raleigh’s Cross and Sticklepath together with blocks on the A39 at Allerford to the east of Porlock and at Periton on the Porlock-Alcombe road.

The ‘works orders’ for the construction of these blocks clearly state that the expected direction of enemy attack was from the direction of the moors. Pillboxes still survive at Raleigh’s Cross (SHER 35369) and Roadwater (ExHER MSO12289; Figure 3.12). The importance of these anti-tank blocks on the routes north off Exmoor and the Brendon Hills is indicated in the *Somerset Sub Area Defence Scheme* where the Dunster sector commander was ordered to task an ad-hoc battalion of the Somerset Light Infantry, that had been allocated to him, to patrol specified routes

across Exmoor and to be prepared to take up defensive positions at these defiles on routes off the moor. The anti-tank blocks were strengthened in May 1941 and again in November 1941 but other blocks on routes leading eastwards from Porlock Bay were not (SRO C/S/5/3). These strengthening measures were similar to those implemented across the South West at this time, to ensure that the blocks would stop the latest and heaviest German tanks (SRO C/S/5/3).

While the open terrain on the moor and hills favoured the invader, once the enemy attempted to advance down the valleys to the coast, the deep narrow and twisting lanes with substantial hedgerows and small fields would make movement along the roads slow and difficult. Unlike the open fields of northern France in the German offensive in May 1940, it would be difficult for armour to break away from the roads to bypass blocks or attack them from flank or rear. Tanks would be at constant risk of close-quarter attacks using rudimentary anti-tank petrol bombs ('Molotov cocktails') or other grenades and would have to advanced 'closed down'. This would severely restrict the vision of the tank commander and driver and hinder navigation in this complex terrain even more.

Infantry movements along the roads would also be slow and it would have been difficult to bring infantry forward to attack roadblocks or blocking positions that were holding up the tanks, particularly as the tanks in a German *Zug* (a troop of four or five tanks) were only equipped with wireless receivers and only the troop leader had a transmitter (Jentz 1998, 272–74). In such close country, the troop leader would be unable to see what was happening to his leading tanks and could not receive reports from them. *Luftwaffe* Stuka ground-attack aircraft might have been available to attack these blocking positions.

These routes to the coast had a very limited capacity compared to those routes southwards off Exmoor and the Brendon Hills along which the main air landed force might move into

the Waist of the South West. This difficulty reinforces the suggestion that the advance northwards to the coast was expected to be a secondary operation with German air-portable tanks attacking north towards the coast to capture the harbours and beaches concurrently with the main operation southwards to secure the Waist of the South West. The defences at Watchet included anti-tank roadblocks on routes into the town (Wilson 2004, 165 map) but these blocks do not appear to have been strengthened, later in 1941, to resist more modern tanks when other blocks in Somerset were (SRO C/S/5/3). Roadblocks were also later built on routes off the Quantocks at Spaxton, North Petherton, Nether Stowey and Cannington.

A review of potential invasion beaches carried out in 1943 (TNA WO 199/1624) reported that the beaches of Blue Anchor Bay would be suitable for the landing of infantry, armoured vehicles and trucks. Despite this assessment, the lack of roads from the beaches would have greatly restricted the quantity of supplies and stores that could have been landed. It must be remembered that the support of the airborne troops attacking and potentially holding the Waist of the South West would only be planned to be a temporary measure until the Germans could establish a more effective supply route through Plymouth or other south coast ports. The importance of British denial measures to prevent the enemy from capturing transport or fuel and thereby lightening his logistical requirements has been discussed (above, page 30). Nevertheless, the logistic problems of using the long sea route from France or Plymouth to the Somerset coast and landing over the beaches would have been considerable.

Despite this, the area was still considered a likely invasion site and GHQ Auxiliary Unit patrols trained to operate as 'stay behind parties' were established in the area to attack the follow up forces, landing grounds or logistic traffic from captured ports after the initial thrust had passed (see page 42).

## The north Somerset coast

Berrow and Weston-super-Mare beaches, together with their hinterlands, were considered to be more likely options for airborne landings than Exmoor as they would allow troops to form up and to move more easily onto their objectives: particularly Taunton and Ilminster. With low tides, the beaches at Berrow and Weston-super-Mare had large areas of firm sand that the tide might not cover for several days, which would allow the beaches to be used as temporary landing grounds on which the *Luftwaffe* might land up to 3000 men per hour (Figure 3.13 on the following page). At Weston-super-Mare the aerodrome was also near to the beach.

Between September and December 1940, 8 Corps tasked its mobile reserve divisions to be prepared to counter attack both airborne and seaborne landings at Berrow: the only Somerset beach where a seaborne threat was identified (TNA WO 166/298: 8 Corps *Operation Instruction 3* for 3 Division, 10 September 1940 and *Operation Instruction 11* for 50 Division, 1 December 1940). The option of Berrow or Weston-super-Mare then being used to launch a German secondary diversionary attack against Bristol was also mentioned, which might be coordinated with other airborne landings on Mendip. To counter these threats, significant forces including dedicated artillery support with a section of 25-pounder guns and a permanent allocation of five Vickers medium machine guns (MMG) were deployed there, with their crews held at a high state of readiness. Concrete MMG emplacements, together with other pillboxes, still survive and wartime air photos show the emplacements each with an adjacent Nissen hut to accommodate the crews. At least 34 pillboxes were built along nearly seven miles (11km) of the coast between Brean Down and Burnham-on-Sea (details in SHER; Figure 3.9 on page 33). On the issue of the invasion alert order ‘Action Stations’, mobile Bofors guns (which could have either an anti-aircraft or a limited anti-

shipping role) were to be immediately deployed to the Berrow area from the anti-aircraft practice camp at Liddymore near Doniford. The requirement to hold the hill at Brent Knoll with its commanding views over Berrow Flats and the hinterland has been mentioned above. After the fortification of Steep Holm in 1942 (see page 52), the coastal guns from the South Battery were also tasked to fire ‘beach barrages’ onto Berrow Flats (TNA WO 166/10824: *Somerset and Bristol Sub Area Defence Scheme*, appendix B, 13 April 1943).

## The GHQ Line

Both Berrow and Weston-super-Mare were also within the perimeter of the Green Line section of the Bristol Outer Defence Line and were to the rear of the westward-facing defences of the Taunton Stop Line. Southern Command therefore directed that the junction of both stop lines with the coast at Burnham-on-Sea was ‘to be made into a strong point capable of prolonged resistance against attack from any direction’ (TNA WO 166/298: Southern Command Operation Instruction 24, 15 August 1940). No evidence has yet been found of these all-round defences. Troops at Burnham-on-Sea and Berrow were also ordered to hold the major crossing points of the river Brue on the Green Line at Highbridge, Basin Bridge, River Bridge and Westhay. Significantly, a German guide prepared in 1940 for the invading forces recognised that ‘the marshy depressions of the Parrett and the Brue block approaches to Bristol from the south’ (Wheeler and Matthews 2007, 56).

## Vulnerable installations

### Raids on coastal installations

Throughout the period from 1940 to late 1944, the possibility of airborne or seaborne raids on important installations near to the coast was also identified. Such raids might be up to company strength (about 100 men) or small



**Figure 3.13:** The vast expanse of Berrow Flats seen from Brean Down as the tide recedes. Note the cars driving onto the firm sand that could have been used to land enemy aircraft (David Dawson, 2010).

parties landed by parachute or from U- or E-boats. By April 1942, it was ‘considered unlikely that the enemy would be able to land in force on the coast of South Somerset Sub Area [the coast to the west of the river Parrett], small diversionary landings by either by sea or air are not improbable’ (TNA WO 166/6775). Later in the war, the possibility of destructive raids on key installations within the ‘sea raid zone’, which extended up to 5 miles (8km) from the coast, was identified. It was expected that raiders would either fight to the last man (‘suicide raids’) or accept capture after achieving their objectives.

Lists of potential targets for sabotage or ‘Vulnerable Points’ (VP) include communications installations like the BBC transmitters at Clevedon and Washford (see page 73), the Post Office ship-shore radio transmitters at Portishead and their associated receivers at Burnham-on-Sea (see page 91),

the two MI5 Radio Security Service directional finding stations at Stockland Bristol (see page 92), the transatlantic submarine cable station at Weston-super-Mare pier, together with the cable balancing houses in Bridgwater and Perry Bridge, and the GPO telephone repeater station on the Bristol–Plymouth cables at Rooks Bridge. The War Office School of AA Defence (SAAD) at Doniford was another VP. It would have been of particular interest to the Germans as the school specialised in AA radar. Other likely targets included the Avonmouth Docks, and the oil facilities there and at Berwick Wood, aircraft factories at Filton and Weston-super-Mare or the Royal Ordnance Factory at Puriton. The barrage balloon experimental station at Pawlett (see page 89) was also included.

By the summer of 1943, the assessment of the Commander-in-Chief Home Forces was that there was ‘no possibility at present of



**Figure 3.14:** Pillbox at Uphill covering one of the exits from the beach (David Hunt, 2009).

an invasion of the United Kingdom' but there was still a threat of sabotage and anti-invasion preparedness must be continued for 'the possibility that a sudden and unexpected change to the war situation might alter existing conditions for the worse' (TNA WO 166/10904: South West District Operational Policy 17, para 6, 1943). On the 22 September 1944 Southern Command advised that there was no longer any need for defence works to be maintained for anti-invasion or anti-raid purposes (TNA WO 199/1779: Home Defence file).

### Precautions against enemy agents

Agents or spies were expected to be landed by parachute or on isolated beaches. A report to GHQ Home Forces of April 1941 (TNA WO 199/92: *The Landing of Enemy Agents*

from Small Craft, SF.64/2/6/B.2c) relates that 'reliable Secret Service sources' indicated that the German Intelligence Service had become discouraged from attempting to land agents by parachute and proposed to run them in using small boats. Since September 1940 enemy agents had been landed from sea planes and fishing cutters and further attempts might be expected by submarine. Their alarm had been reinforced by the number of small craft found washed up and left abandoned on beaches. The report continues:

But the value of ... coastal watchers in preventing or detecting landings made under cover of darkness is very limited. There appears to be unanimity of opinion among those who are in a position to judge upon such matters that there are innumerable

State of readiness	Action taken
Normal	Invasion unlikely in the immediate future but raids possible.
Stand to	Conditions particularly favourable for an invasion. Complete state of readiness to resist invasion for all regular troops and for such Home Guard as the Army Commander may decide.
Action Stations	Immediate threat of invasion. Complete state of readiness to resist invasion. Home Guard called out.

**Figure 3.15:** Army states of readiness

places on the coast where an agent would stand a good chance of getting ashore in a dinghy or small boat during the hours of darkness without being detected. It should be borne in mind that the inshore motor-boat patrol maintained by the Admiralty cannot operate in bad weather, and it is in such conditions that an agent would have the best prospect of success and would be most likely to make his attempt. Further, since the coast is not regularly patrolled, the evidence of a landing – eg, in abandoned craft – might not be discovered for several days, and in the interval the agent would probably have disappeared inland into a populated area, where his detection becomes an infinitely more difficult task.

The chances of finding an agent who had disappeared into an urban area through police controls or radio intercept by the Radio Security Service (see page 92) were considered to be small. The Secret Service requested GHQ Home Forces to provide military or Home Guard dawn patrols to search the shore in undefended areas for suspicious persons and signs of landing and to have plans for the capture of any suspected enemy agent. The main undefended areas thought to be at risk in Somerset were Glenthorpe, Porlock, Selworthy, Greenaleigh, St Audries, Lilstock, Brean Down and Portishead Point. It was recommended that personnel of the Auxiliary

Coastguard Service should be employed. On 21 January 1942 the Secret Service stated that it was also highly desirable for the eastern and southern coast of the UK and the Bristol Channel as far as Burnham-on-Sea on the south shore and Barry on the north to be patrolled daily by the military, Home Guard or Coastguards and those areas not covered were to be patrolled by Auxiliary Coastguards (TNA WO 199/92: Landing of enemy agents, HF/IB/120). The *Somerset and Bristol Sub Area Defence Scheme* (appendix C, 15 April 1943: TNA WO 166/10824) lists Coastguard stations and gives details of dawn patrols from Glenthorpe to Porlock Weir, Porlock Weir to 'limekilns' (presumably those near Bossington), Greenaleigh to Selworthy, Warren Point to Blue Anchor, Watchet to Blue Anchor, Kilve to Lilstock, Kilve to St Audries and Stert Point along Stert Flats. These patrols were organised by the District Officer of HM Coastguard, Croyde and consisted of a single man armed with a Sten gun who commenced his search half an hour before dawn. North of Burnham 'coast searchers' at Brean and Brean Down were to search Berrow Flats and Brean Down 'as and when they can, daily if possible.'

## Coastal defence troops

The best plans and defences are useless without trained, well-equipped and determined troops to man them. Detailed listings of 'troops to task' for coastal defences for August and December 1940 exist in the relevant editions of the *Somerset Coast Defence Scheme* and analysis of these documents shows that in August 1940

about 11,500 officers and men were available for coastal defence in Somerset. Of these 6800 (about 60%) were Home Guard; a force which had only been in existence since May that year but, based on the national average, some 30% of these men were probably experienced ex-soldiers (Mackenzie 1995, 37). Only half of Home Guardsmen had a weapon, initially with some ten rounds of ammunition, and Molotov Cocktails as anti-tank weapons. Despite the threat of chemical warfare, Home Guardsmen did not receive anti-gas clothing until late into the autumn of 1940 (Mackenzie 1995, 91; TNA WO 166/299).

Three new infantry battalions of the Somerset Light Infantry were formed from 1800 men above the age of 42. These battalions lacked unit training and had minimal communications and logistic support. The 9th Somerset LI were deployed to St Audries near Watchet and 50th Somerset LI to Weston-super-Mare. In addition, two ad hoc infantry 'battalions' were formed from instructors and trainees at the Infantry Training Centre in Sherford Camp, Taunton (over 700 men forming two battalions called K1 and K2) and, from the nearby 222 Searchlight Training Regiment at Norton Manor Camp, two battalions each of over 900 men (called Mod A and Mod B, it appears that 'Mod' may have been an abbreviation for mobile defence). Other troops came from students and staff of the School of Anti-Aircraft Defence (SAAD) at Doniford and the nearby AA practice camp at Liddymore. Despite these numbers, about one quarter did not have a weapon and, had a German invasion occurred in September 1940, a total of only 44 light machine guns (LMG) and 14 anti-tank rifles were available across the whole 65 miles (100km) of the coastal area. The use of so many trainees and students, who had never practised their defence role and would not have known the ground they were defending, would have been a severe disadvantage.

By December 1940, when the winter weather conditions reduced the threat of invasion, about 9200 troops were available but there

was still an overall shortage of weapons (about 22%) although adequate ammunition and 370 LMG were now available in the coastal area. About 5600 (60%) of the manpower was Home Guard and two thirds of Home Guard now had a weapon or hand grenades together with 240 LMG. It should be noted that Home Guard numbers depended only on those who volunteered and cannot be taken as a measure of military needs. No data is available after 1940.

The availability of Home Forces troops along the Somerset coast permanently assigned to coastal defence duties, who alone would have borne the brunt of a surprise airborne attack, were 23% of the total forces available in August 1940 and 20% in December 1940. These troops were not in organised field formations with armour, field or anti-tank artillery, or engineer support. They seriously lacked the firepower and support of a normal formation. For example, across Blue Anchor Bay only 360 men were instantly available while at Berrow the number was about 490. If an invasion was expected and the Alert Measure 'Stand To' had been ordered, troops from training establishments would then become available (see Figure 3.15 on the facing page). As previously mentioned, some six hours warning of a seaborne invasion was expected and this should have enabled these troops to move to their defence positions. The Home Guard became available for coastal defence (but only within about three miles (5km) of their homes) when an invasion was imminent and the Alert Measure 'Action Stations' had been ordered.

As the war went on, Home Guard battalion commanders took over responsibility from the Field Army for the defences of their areas against the current threats. The successful airborne attacks in Crete in May 1941 heightened British awareness of the *Luftwaffe* airborne capability and the Home Guard role included dealing with parachute landed troops. Even after Germany invaded Russia in June 1941, it was considered that, once they had conquered Russia, it would only take several months to regroup and prepare for an invasion

(Hinsley 1979, 482). Nevertheless, maintaining the interest and morale of the Home Guard was clearly an important political and social factor, particularly after Home Guard conscription was introduced in early 1942 (Mackenzie 1995, 7–8, 124–25).

## GHQ Auxiliary Units

The major threat in Blue Anchor Bay is also indicated by the establishment of six ‘operational bases’ of the GHQ Auxiliary Units (AU) Operational Branch in the area. The AU was part of what is often called the ‘British Resistance Organisation’ (BRO) although during the war the AU title deliberately gave no clue to the operational roles of the GHQ AU. The Operational Branch was recruited primarily from specially selected Home Guard members or others with excellent local knowledge, who were prepared to harry the Germans after the initial wave of an invasion. AU patrols were tasked to lie low in specially constructed hides during an invasion and to then surface and attack or sabotage the invaders’ supply and command systems. Patrols were equipped with a variety of weapons and explosives and were highly trained in sabotage and assassination and their bases were well stocked with rations to enable them to survive for several weeks. Blue Anchor Bay appears to be the only beach within the Somerset Coast Defences where nearby AU operational bases (OB) were established. Other OBs were sited in the area between the West Somerset coast and the Brendon Hills.

In addition to the Operational Branch, there was a completely separate organisation within the GHQ AU called the Special Duties Branch (SD). This was manned by specially selected and trained civilians who were to act as spies in any coastal areas which the German had occupied. These spies would report through a network of ‘dead letter’ drops and their reports would be collected by runners delivering to hidden wireless stations (Figure 3.16 on the next page). These civilian-manned ‘out-stations’ would transmit the reports to military-

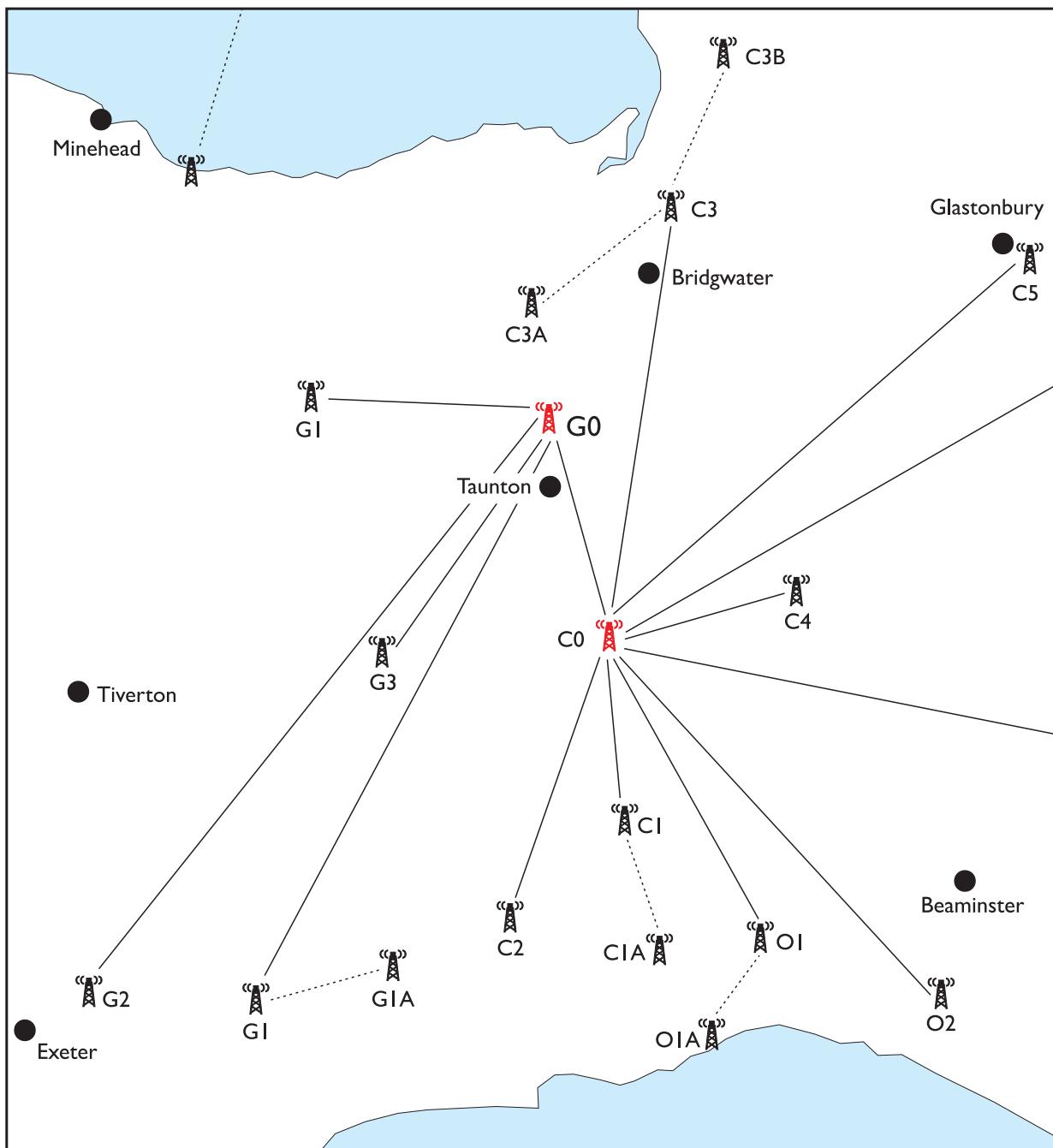
manned ‘in-stations’ which would then pass on to the appropriate Army HQ.

Ongoing research suggests that the spy networks were probably established in 1940 or 1941 but that the wireless networks were only rolled-out to east Devon and to west and central Somerset in mid 1942. Secret wireless ‘out-station’ sites have been identified at Dunball, Brent Knoll, Blue Anchor, Spaxton, Glastonbury, Puckington and Wiveliscombe. These were linked to military underground control stations (in-stations) at Castle Neroche (SHER 28026) on the eastern end of the Blackdown Hills, which was manned by Royal Signals or, in the case of Wiveliscombe, to Volis Hill on the south-eastern slopes of the Quantock Hills, which was manned by women of the ATS. The Blue Anchor station is believed to have had a link to the Blorenge mountain in south Wales or possibly Castle Neroche.

The AU (SD) network only covered the east Devon coast as far as the river Exe and there were no stations in south Devon, Cornwall or north Devon. The relatively high density of AU (SD) stations in Somerset and the distance that some of them were inland from the coast is indicative of the perceived threat to the Waist of the South West even in 1942. A major difficulty in researching the AU and, in particular, the SD is that documentation is almost non-existent and some of the few survivors still consider themselves bound by the Official Secrets Act and refuse to share their knowledge. The AU (SD) was stood down in July 1944 and the infrastructure of the control stations was ‘capped off’ or destroyed after all equipment had been removed (Tim Wray pers. comm.).

## Communications and logistics

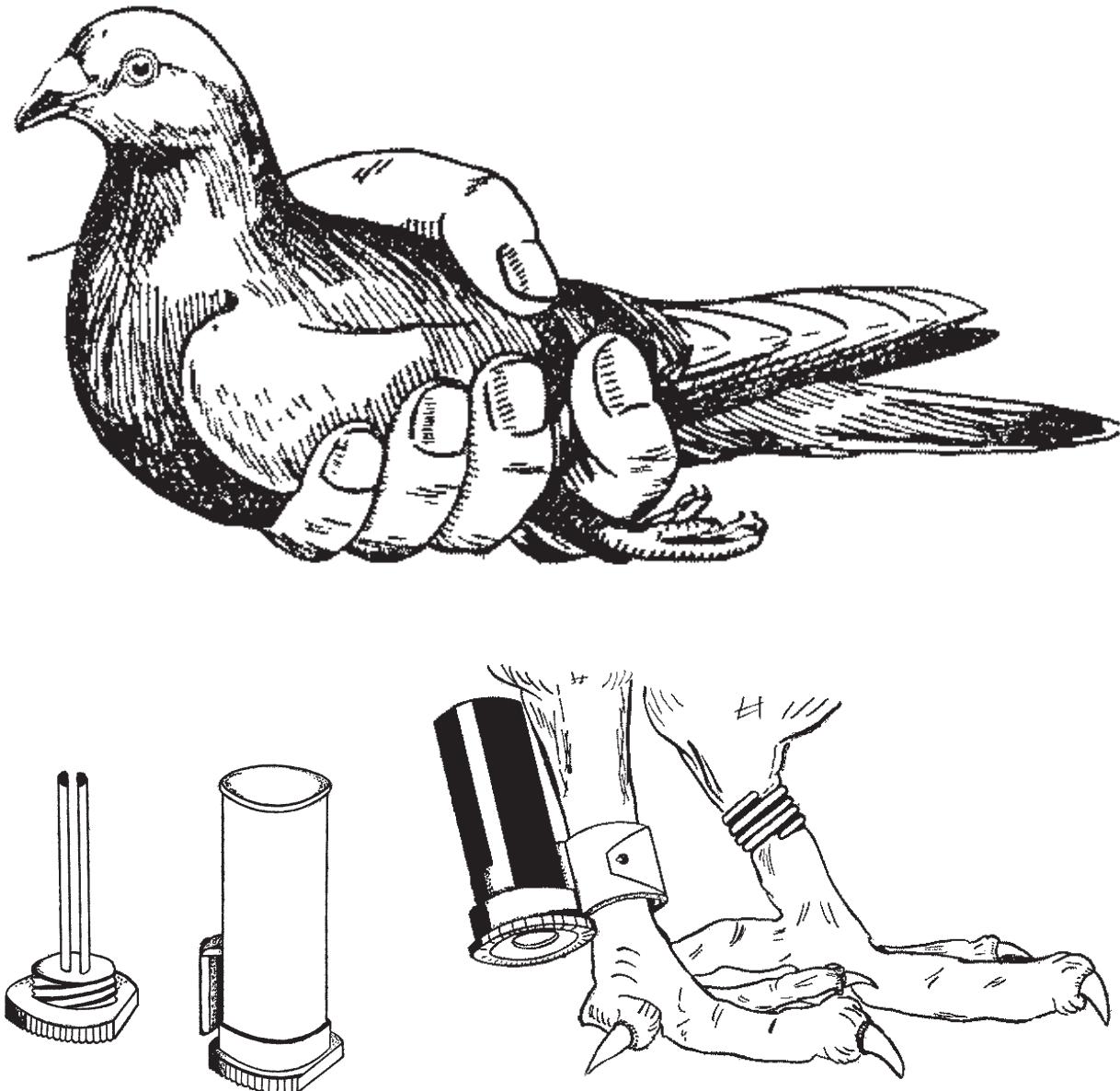
Command and control facilities in HQs, particularly communications, were basic. There was no wireless available within any infantry units in 1940 and the first wireless sets for linking battalion HQs to their companies were only then coming into production. Battalion internal communications were by



**Figure 3.16:** The GHQ Auxiliary Unit Special Duties Branch wireless networks in the Waist of the South West. The two networks, 'Chirnside' with its control station at Castle Neroche (C0) to the south of Taunton and 'Golding' with its control to the north (G0), served HQ South Western District in Taunton. The networks were developed between 1942 and 1944 and were the most westerly of the AU networks along the South Coast.

runner, motorcycle orderlies, semaphore or daylight signalling lamps with a few field telephones and limited cable (*Signal Training (All Arms)*, Section 147, 1938). The war-diary of 9 Battalion Somerset Light Infantry describes how improvised signalling lamps were used

(TNA WO 166/4660, 17 September 1940) but ad-hoc units and the Home Guard had nothing. Both the Observer Corps and searchlight sites had dedicated GPO (General Post Office) communications backed up by wireless at many searchlight sites and these were



**Figure 3.17:** Carrier pigeons: the correct way to hold a pigeon (top), the message carrier (bottom left) and the carrier attached to the pigeon's leg (bottom right) (War Office 1938).

used whenever possible. Maximum use was made of the GPO telephone network although this was particularly sparse and vulnerable in coastal areas. Dispatch riders, runners and even carrier pigeons were used. A regular pigeon service (Figure 3.17) was run between HQ Somerset Sub Area in Bridgwater and both HQ Southern Area in Sherborne and the Burnham-on-Sea Sector. On the Alert Measure 'Action Stations' the Dunster Sector was included in the system and six birds were sent from both Dunster and Burnham-on-

Sea to Bridgwater who dispatched the same number in return. After 48 hours fresh birds were sent out and the original birds released to fly back to their home loft before they became too acclimatised to their temporary surroundings (TNA WO 166/1317: *Somerset Sub Area Defence Scheme*, appendix S, 4 December 1940). According to the Royal Signals Museum, at distances over 50 miles (80km) pigeons were often faster than motorcycles though pigeons would not normally fly in the dark. The rudimentary communications of the Home Guard

were improved in March 1942 by the issue of four signalling lamps and 20 semaphore flags to each company but it was August before radio became available when four wireless sets (type WS18) were issued to each battalion (TNA WO 199/392).

An important tri-service system to ensure all formations and land-based units of the Navy, Army and RAF were immediately warned of invasion was the ‘Beetle Broadcast’ system. HQs and units were issued with civilian wireless receivers which were constantly monitored. A number of long wave transmitter stations were set up across Britain to flash the news to all units. The information came primarily from RAF sources including the Observer Corps. The ringing of church bells had been forbidden except as a warning to the Home Guard that an invasion was taking place. After the invasion alert codeword (Cromwell) had been issued on 8 September 1940 by GHQ Home Forces to bring Southern and Eastern Commands to a higher state of readiness as conditions were particularly favourable for invasion, some Home Guard units became aware of the alert and rang their local church bells assuming an invasion was in progress. Orders were later given that church bells were to be rung only if the local commander had personally seen a minimum of 25 parachutists descending. Rumours of parachutist landings and the ringing of other church bells were not to be acted on (Mackenzie 1995, 60, 63).

Rudimentary supply systems for ammunition included setting up ‘ammunition points’ at Crowcombe and Winscombe where units could replenish their ammunition. Fuel and rations were based on static supply depots at Bath for the Clevedon area and Norton Fitzwarren. Much of the transport was requisitioned civilian vehicles and in the event of invasion over 80 Western National buses were to be ready to move within one hour. The medical system relied on both civilian facilities and military establishments and instructions were issued on such subjects as casualty reporting, deaths and burials. Detailed orders

on varied subjects such as handling of prisoners of war, traffic control, salvage, repair and recovery, dealing with stragglers (soldiers cut off from their unit), crashed aircraft, bomb disposal and gas attacks were also issued.

## The end of the threat

In 1944 as the build up for D-Day commenced, the Home Guard was deployed to guard key points essential to the preparations and launch of the invasion. Home Guardsmen were made well aware that with the departure of the invasion forces to Normandy, the defence of Great Britain was in their hands (Mackenzie 1995, 149). On 6 September 1944, Home Guard service once again became voluntary. Finally on 22 September 1944, Southern Command advised that there was no longer any need for defence works to be maintained for anti-invasion or anti-raid purposes (TNA WO 199/1779: Home Defence file). By November 1944, when the Home Guard finally stood down, the strengths of the Somerset battalions with operational areas of responsibility along the coast exceeded 9500 all ranks. It must be pointed out that not all of these were in company areas adjacent to the shore and some battalion areas extended a considerable distance from the coast. For example, the Minehead (originally Dunster) Battalion area ran as far south as Wiveliscombe, which is some 10 miles (16km) south from the sea and only the Dunster and Porlock companies were responsible for coast defences. By this time the Home Guard was well trained, had an impressive array of weapons and was a significant force.

## Conclusion

It might be wondered why such elaborate defences were constructed in an area where the seaborne threat was obviously so small but contemporary documentation clearly shows the perceived threat from aircraft landings

both on the beaches, in the hills and on the high moors. The 1940 German attacks on Denmark, Norway, Belgium and the Netherlands made the airborne threat significant and the successful airborne invasion of Crete in May 1941 increased the perceived risk. The threat of a German invasion from Ireland was always present in the background but mentioned only once officially in regard to Somerset. It must also be pointed out that with the shortage of materials (particularly cement) and manpower in the construction industry all defence works were carefully controlled yet, despite this, significant defences were constructed, particularly in Blue Anchor Bay in 1941. These were not local initiatives and there is ample documentary evidence that the Commander 8 Corps and his staff reviewed the plans and visited these coastal defences (for example, TNA WO 166/1317: 30 March 1941) while the ongoing works were approved by both his HQ and Southern Command, who allocated the funding and cement.

Without local air superiority, any German airborne or seaborne landings would have been almost impossible and the air defence

system that protected the Bristol Channel, Somerset beaches and inland landing grounds will be discussed in Chapter 5. It is not possible to predict how effective the ground defences might have been but it is fair to say that the maximum was done, within the limited resources available, to prepare both the defences and the defenders against the perceived threats from both air and sea. While many may question the German threat to the west country as perceived by the British in 1940, it is worth noting that we now know that Hitler's Directive Number 16: *On preparation for a landing operation against England* issued on 16 July 1940 stated: 'The possible advantages of limited operations before the general crossing (eg the occupation of the Isle of Wight or the county of Cornwall) are to be considered from the point of view of each branch of the armed forces and the results reported to me. I reserve the decision to myself' (Trevor-Roper 1964, 75).

As Churchill wrote in his memoirs for July 1940, 'Nothing moves an Englishmen so much as the threat of invasion, the reality unknown for a thousand years ...' (Churchill 1949, 146).