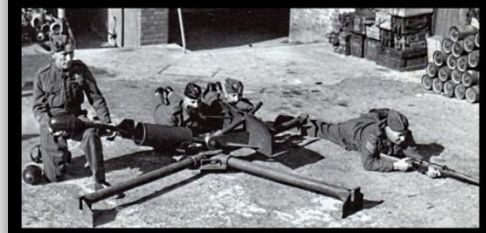
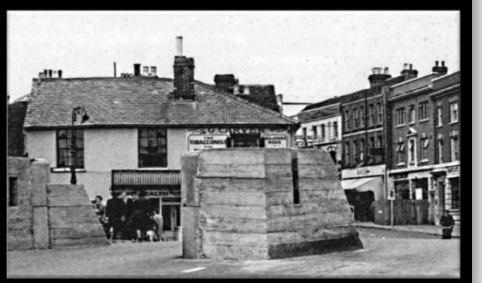
How a Kent market town prepared to confront a Nazi invasion during Britain's darkest hour

PAUL TRITTON





KAS KENT ARCHAEOLOGICAL SOCIETY

Contents

Foreword

Although the origins of the phrase 'total war' are disputed, there is no doubt that it was the Second World War that most clearly represents the concept. The vast scale of the forces deployed in that conflict required the mobilization of whole populations, not only to provide the military personnel, but also the logistical support on which they depended.

Added to this was an array of ancillary services - transport, medicine, intelligence, science, civil, agriculture, etc. - without which modern industrial warfare could not function.

They were organized and controlled by the state and correspondingly became targets for attack by an enemy that, thanks to air power, could strike more or less anywhere and at any time. For the first time, therefore, it was not only the territories of the combatants that had to be defended but their populations too.

Within the UK there was no more intensely militarised landscape than in Kent. Closest to the enemy, it was both a likely location of a German invasion and a departure point for the later Allied invasion of continental Europe, and its towns, villages and population were vulnerable to attack from airfields in France, just a short distance across the English Channel.

Many thousands of structures were built between 1939 and 1945 to defend Kent against invasion and bombing. Radar stations and observation posts provided information about enemy aircraft. Bunkers, pillboxes, gun emplacements and anti-tank defences stood ready to defend against invasion. Training camps, drill halls, hospitals and fire stations were constructed or adapted to fulfil a wartime role and air-raid shelters, ranging from the communal to the domestic, protected the population.

For five years these were fixtures in the Kent landscape and townscapes. When the war ended, most were demolished and today only a very small proportion survive. Those that do survive, however, are important as markers of a time when the very existence of the country, its liberties and traditions were at stake.

During the 2000s, Kent County Council attempted to record as many as possible of the surviving structures from the Second World War, to protect them from destruction, make information about them available via the Kent Historic Environment Record (www.kent.gov.uk/HER) and use them in education and research projects. We did this through an initiative called the Defence of Kent Project.

Although the main project has come to an end, a number of researchers have continued to study the surviving structures of the Second World War and show how they can be used to connect people with their past.

Paul Tritton's work in Tonbridge is an outstanding example of this. Tonbridge was a typical small town in Kent, and its experiences were like those of other communities across the UK. By linking careful study of the surviving buildings and structures with social history and local memories, he has been able to tell the story of a dramatic time in the town's recent past and, hopefully, contribute to the protection of Tonbridge's wartime heritage for future generations.

Paul Cuming
Historic Environment Record Manager
Kent County Council

Introduction

In the late spring and summer of 1940, when Britain lived in constant fear of a German invasion, Kent's serene coast and countryside and bustling market towns were being transformed into a battlefield-in-readiness, centred on strongholds whose defenders were under orders to hold out indefinitely and 'kill every German who succeeds in setting foot in this country'.

Tonbridge's main-line railway junction, River Medway crossings, navigable waterway to the Thames Estuary, and arterial roads to London and north Kent's military establishments and industrial towns, were obvious vital objectives for any Panzer units that succeeded in establishing beachheads 40 miles to the south and from there embarking on a *blitzkrieg* across the county and onwards to the capital.

Paul Tritton of the Kent Archaeological Society's Historic Defences Group tells how Tonbridge's defences were developed during Britain's 'darkest hour' and asks ...

Could Hitler have captured Tonbridge Fortress?

'I shall not shrink from war with Britain if it is necessary. Where Napoleon failed, I shall succeed. Today there is no such thing as an island. I shall land on the shores of Britain. I shall destroy her towns from the mainland. Britain does not yet know how vulnerable she is today'.

Adolf Hitler

Conversation with Hermann Rauschning, 1934

'We shall defend our island, whatever the cost may be. We shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender'.

Winston Churchill

House of Commons, 4 June 1940

Railway staff and volunteers who met 620 special trains at Tonbridge Station during the evacuation of Dunkirk in 1940. More than £1,000 was collected at the station to buy fruit, chocolates, cigarettes and postcards from local shops for about 5,000 soldiers every day, for four days. In the front row are station master E G Collard and Mrs Collard who organized the relief effort. (Tonbridge Free Press)

Soldiers rescued from the Dunkirk beaches receiving their first food for four days at Paddock Wood, near Tonbridge. (Tonbridge Free Press)

Chapter One: 'The Gathering Storm'

On Friday 25 August 1939, when all hope of preventing a war in Europe had been abandoned and the German army was preparing to invade Poland, the *Kent and Sussex Courier* reported: 'Yesterday everyone went quietly about their business without dread of any possible alarm. Everywhere one came across optimistic people displaying a calm characteristic of the Britisher'.

A week later, on the first day of the invasion, the newspaper again reassured its readers, with a report headlined: 'Tonbridge is largely normal'. The normality was short-lived; before most readers had even scanned the headlines, 'Operation Pied Piper' had started to evacuate thousands of school-age children, pregnant women and mothers with pre-school children from London – many of them destined for Tonbridge, where not everyone welcomed them. William Oliver (a bank official and special constable) and his wife Hilda of No. 15 Hadlow Road were told to expect to have several evacuees from Westminster School billeted on them.

Their daughter Jessica Havard, who was eight at the time, told the BBC's 'People's War' programme in 2005: 'My mother refused as she already had four permanent lodgers in the house. The officious Billeting Officer informed her that she could accommodate the boys on the floor in the entrance hall. Dad thought all the extra work the evacuees would entail would be too much for Mum to cope with; therefore, to overcome the problem, they decided to move to a smaller house'. They found one remarkably quickly, a house named 'Bethersden' in Barclay Avenue, two miles from the town centre.

On Tuesday 3 September, Britain declared war on Germany but for the next eight months, until France capitulated, a state of 'phoney war' existed, despite skirmishes with U-boats and other warships of the *Kriegsmarine* which preceded the full-scale Battle of the Atlantic. Then came Dunkirk. Most of the 338,226 members of the British Expeditionary Force and their allies who were evacuated began their journeys home from the Channel ports on 620 special trains that halted at Tonbridge Station, where volunteers plied them with cigarettes, tea, buns and sandwiches, and accepted letters and postcards to forward to their families.

Boys from 'the Free Grammar School of Sir Andrew Judde, Knight' (commonly known as Tonbridge School) helped-out, those who could speak French acting as interpreters for French soldiers.

By 4 June, when the last troops left Dunkirk, complacency on the home front had dispelled. An invasion of England by the world's most ruthless Army now seemed both imminent and inevitable. All efforts quickly turned to protecting the civilian population from the air-raids that were certain to precede and accompany seaborne onslaughts on Kent and Sussex's heavily barricaded beaches.

Measures to deal with alerts and emergencies had been planned and in some cases set in train a few years earlier, particularly after the ill-judged 30 September 1938 Munich Agreement, which soon turned out to be a cowardly act of appeasement. At about this time, Tonbridge started receiving its allocation from the 38 million gas-masks distributed nationally. The *Luftwaffe* had been carrying out reconnaissance flights over England since before the war and in November 1937, at Observer Corps Monitoring Post 19/R2, on Quarry Hill (National Grid Reference TQ587448), on the southern outskirts of the town, volunteer 'spotters' began to practise their aircraft recognition and plotting skills.

After the *Luftwaffe* ceased bombing the Dunkirk beaches it was certain to turn its attention to targets in southern England. No doubt with this in mind, the Observer Post's officer-in-charge, Colonel A Fitzgerald, sought a better vantage point for its post, and asked the Clerk of Tonbridge Urban District Council for permission to relocate to the top of Tonbridge Castle's 13th century gatehouse (NGR TQ589466), adjacent to the Norman motte-and-bailey fortress built by William the Conqueror's kinsman Richard Fitzgilbert to control the Medway crossing.

The Council considered this at its monthly meeting on 4 June 1940 (perhaps at the very moment Winston Churchill was delivering his stirring 'We shall fight on the beaches' speech in the House of Commons, 40 miles away) but churlishly resolved that 'the applicant be informed that there are other more suitable sites'. The Council objected because

The Gatehouse , Tonbridge Castle, in 2019.

the castle was already the headquarters of the Air-Raid Precautions (ARP) Report and Control Centre – an opportunity, one would have thought, to facilitate closer liaison between the two services.

Exactly where the 'more suitable' sites were to be found was not specified but the Observer Corps' application soon prevailed and by July they had moved to the gatehouse, after damaged stonework had been repaired with reinforced concrete. Each of its twin towers had room on its summit for one observer equipped with field-glasses, whilst the flat roof above the gate's archway provided ample space for staff operating their state-of-the-art RB Pullin P1 pantograph and pointer and Micklethwait height corrector. Air-raid sirens were installed here and on Comono House, complemented by the siren at the fire station in Castle Street and the steam whistle that in normal circumstances summoned workers to a local brickyard every morning.

A Second World War Observer Corps post.(® ROCA Heritage Team)

The local factories kept working after general air-aid warnings were sounded but the observers had an alarm switch with which to alert them when they were in danger of imminent enemy attack. The observers conducted training exercises with the RAF and with the 4th Battery of the 1st Regiment of the Royal Artillery, whose HQ was in what is now Sackville School, Hildenborough and whose troops, based at Gaza Barracks in Scabharbour Road, operated six searchlight sites in what was known as the West Malling Nightfighter Box.

Among the first enemy aircraft spotted from the observers' new lookout were bombers dropping propaganda leaflets on 3 August, the 25th day of the Battle of Britain. They bore an English translation of Hitler's sabre-rattling speech *A Last Appeal to Reason,* delivered to the Reichstag on 19 July: 'In this hour I feel it to be my duty before my own conscience to appeal once more to reason and common sense, in Great Britain as much as elsewhere. I consider myself in a position to make this appeal since I am not the vanquished begging favours, but the victor speaking in the name of reason. I can see no reason why this war must go on. Possibly Mr Churchill will again brush aside this statement of mine by saying that it is merely of fear and doubt in our final victory. In that case, I shall have relieved my conscience in regards to the things to come'.

The reaction of those who found the leaflets was, 'Who do you think you are kidding, Mr Hitler?' In *Tales of Old Tonbridge* (Froglets Publications, 1995) Frank Richardson recalled hurrying to recover a bundle at Postern Sewage Farm, Capel. Thousands more were collected in and around Tonbridge and sold for a few pence each to raise money for the local Spitfire Fund, part of a national campaign that raised about £13 million (approximately £650 million in modern values, according to Greig Watson of the BBC News website). It cost about £12,000 to build a Spitfire in 1940.

In letters to his family, Frank reported all of the air-raids suffered by Tonbridge during the Battle of Britain: 'Bombs and guns, and our windows shook' (16 August); 'empty cartridge cases rattled on roof like shrapnel' (25 August); '[air raid] 9.15pm to 4.30am' (26 August); 'air battle overhead ... till 4am waves of planes over to London' (30 August);'terrific air battles ... AA [anti-aircraft] gunfire and bombs' (1 September); 'Tonbridge bombed at last [sic], one dropped in Dr Tucket's garden in Yardley Park and upset his house a bit' (5th September); 'dog-fights right overhead, high in the clouds' (9 September); '2.30 – 3.55pm. We counted more than 100 go over and from Chatham all the way over shells were bursting all around them. Then our planes came over and what an air fight ...they brought a lot down and chased the others off ...it was grand' (27 September); 'heard 16 bombs during the day and they tried to get the railway, waterworks and gasworks but they failed. 7 dropped on Tonbridge' (4 October). A purpose-built air-raid shelter can be seen to this day, a five-second dash from the back door of 2 Yardley Park Road. After nearly 80 years it is in remarkably good condition, its roof, walls, entrance, internal blast wall, air bricks and emergency exit intact.

Below: Air-raid shelter at 2 Yardley Park Road pictured in 2019. Below right: a shelter of similar design after an air-raid c.*1941*. (®Lincolnshire Archives)

The leaflet drops and bombing raids were intended to 'soften up' the civilian population in advance of an invasion; but stoicism prevailed. Tonbridge kept calm and carried on, although later, in preparation for what today would be called a 'worst-case scenario', posters were distributed in the town and other threatened areas to help civilian resistance fighters distinguish between enemy and British armoured fighting vehicles (AFVs). 'Smash 'em up, but *theirs* not ours', the poster warned (referring to vehicles captured at Dunkirk), 'don't fall for Nazi tricks'.

A LAST APPEAL TO REASON

BY

ADOLF HITLER

Speech before the Reichstag, 19th July, 1940

I have summoned you to this meeting in the midst of our tremendous struggle for the freedom and the future of the German nation. I have done so, firstly, because I considered it imperative to give our own people an insight into the events, unique in history, that lie behind us, secondly, because I wished to express my gratitude to our magnificent soldiers, and thirdly, with the intention of appealing, once more and for the last time, to common sense in general.

If we compare the causes which prompted this historic struggle with the magnitude and the far-reaching effects of military events, we are forced to the conclusion that its general course and the sacrifices it has entailed are out of all proportion to the alleged reasons for its outbreak — unless they were nothing but a pretext for underlying intentions.

The programme of the National-Socialist Movement, in so far as it affected the future development of the Reich's relations with the rest of the world, was simply an attempt to bring about a definitive revision of the Treaty of Versailles, though as far as at all possible, this was to be accomplished by peaceful means.

This revision was absolutely essential. The conditions imposed at Versailles were intolerable, not only because of their humiliating discrimination and because the disarmament which they ensured deprived the German nation of all its rights, but far more so because of the consequential destruction of the material existence of one of the great civilized nations in the world and the proposed annihilation of its future, the utterly senseless accumulation of immense tracts of territory under the domination of a number of States, the theft of all the irreplaceable foundations of life and indispensable vital necessities from a conquered nation. While this diktat was being drawn up, men of insight even among our foes were utterly warnings about the terrible consequences which the ruthless application of its terms nevertheless would entail — a proof that even among them the conviction predominated that such a dictate could not possibly be upheld in days to come. Their objections and protests were actuated by the assurance that the statutes of the newly-created League of Nations provided for a revision of these conditions; in fact, the League was supposed to be the competent authority. The hope of revision was then at the time regarded as presumptuous, but as something rational. Unfortunately, the Geneva institution, as those responsible for Versailles had intended, never looked upon itself as a body competent to undertake any sensible revision, but from the very outset as nothing more than the guarantor of the reflekt-enforcement and maintainer of the conditions imposed at Versailles.

All attempts made by democratic Germany to obtain equality for the German people by a revision of the Treaty proved unavailing.

World War Enemies Unscrupulous Victors

It is always in the interests of a conqueror to represent circumstances that are to his advantage as necessary, while the instinct of self-preservation in the vanquished leads him to recognize the reasonable human rights that he has lost. For him the dictate of an overbearing conqueror had all the less legal force, since in fact never being unconditionally conquered. Owing to a rare moderation, the German Empire, between 1914 and 1918, lacked great leadership. To this and to the as yet unenlightened faith and trust placed by the German people in the words of democratic statesmen was due what was due.

Hence the Franco-British claim that the Diktat of Versailles was a sort of international, or even a supreme, code of laws, appeared to be nothing more than a piece of unbelievable arrogance to every honest German, the assumption, however, that British or French statesmen should actually claim to be the guardians of justice, and even of human culture, as these stood effrontery. A piece of effrontery that is thrown into a sufficiently glaring light by their own extremely negligible achievements in this direction. For seldom have any countries in the world been ruled with a lesser degree of wisdom, morality and culture than those which are at the moment exposed to the ragings of certain democratic statesmen.

The programme of the National-Socialist Movement, besides freeing the Reich from the lamentable fetters of a result unbecoming of Jewish-capitalistic and plute-democratic profiteers, proclaimed to the world our resolution to shake off the shackles of the Versailles Diktat.

Germany's demands for this revision were a vital necessity and essential to the existence and honour of every great nation. They will probably one day be regarded by posterity as extremely reasonable. In practice, all these demands had to be carried through contrary to the will of the Franco-British rulers. We all regarded it as a sure sign of successful leadership in the Third Reich that for years we were able to effect this revision without a war. Not that — as the British and French democracies described — we were at that time incapable of fighting. When, thanks to growing common sense, it finally appeared as though international co-operation might lead to a peaceful solution of the remaining problems, the Agreement to this end signed in Munich on September 29, 1938, by the four leading interested States, was not only not welcomed in London and Paris, but was actually condemned as a sign of abominable weakness. Now that peaceful revision threatened to be crowned with success, the Jewish capitalist war-mongers, their hands stained with blood, saw their longlife prospects, for realizing their diabolical plans vanish into thin air. Once again we witnessed a conspiracy by cast-iron corruptible political creatures and money-grubbing financial magnates, for whom war was a welcome means of furthering their business ends. The poison scattered by the Jews throughout the nations began to exercise its disintegrating influence on world opinion, since Schlabbers concentrated upon decrying Satan-men, who wanted peace, as weaklings and traitors, and upon denouncing the anti-Semitic parties as the Fifth Column, thus breaking all internal resistance to their criminal war-policy. Jews and Freemasons, armaments manufacturers and war profiteers, international businessmen and Stock Exchange jobbers united upon political hirelings of the desperado and Bolshevists type, who described war as something infinitely desirable.

It was the work of these criminal persons that spurred the Polish State on to adopt an attitude that was out of all proportion to Germany's demands and still less to the attendant consequences.

In its dealings with Poland, the German Reich has pre-eminently exercised extreme self-restraint since the National-Socialist regime came into power. One of the most desirable and foolish operations of the Versailles Diktat, namely, the severance of an old German province from the Reich, was revising our stand for revision. Yet what were my requests?

I arrive myself in this connection, because no other statesman might have dared to propose a solution such as mine to the German nation. A mutual implied the return of Danzig — an ancient purely German city — to the Reich, and the creation of a means of communication between the Reich and its severed province. Even this was to be decided by a plebiscite subject to the control of an international body. If Mr Churchill and the rest of the war-mongers had felt a fraction of the responsibility towards Europe which inspired me, they could never have begun their infamous game.

It was only due to these and other Europeans and non-European parties and their war interests, that Poland rejected my proposals, which in no way affected either her honour or her existence, and in their stead had recourse to terror and to the sword. In this case we have more abused, mishandled and truly unfortunate self-control. Scorn for months, deeply murderous attacks on minority Germans, and even despite the slaughter of tens of thousands of our German fellow-countrymen, we still sought an understanding for peaceful means.

What was the situation?

One of the most senseless creations of the Diktat of Versailles, a puppet-State got up with political and military props, inside another State for plainly no end and therefore to great to be tenable, to right battles on the outskirts of Berlin, to hack the German armies to pieces, to extend its frontiers to the Oder to the Elbe, and so forth. Meanwhile, the native State, Germany, withdrew this remark in patient silence, although a single movement of her arm would have sufficed to prick this bubble inflated with folly and hatred.

On September 2, the conflict might still have been averted — Mussolini proposed a plan for the immediate cessation of all hostilities and for peaceful negotiations. Though Germany won her armies storming to victory, I nevertheless accepted his proposal. It was only the Franco-British war-mongers who desired war, not peace. More than that, as Mr Chamberlain said, they needed a long war, because they had now invested their capital in armaments shares, had purchased machinery and required time for the development of their business interests and the amortization of their investments. For, after all, what do these "citizens of the world" care about Poles, Czechs or such-like peoples?

On June 19, 1940, a German soldier found a curious document when searching some railway trucks standing in the station of La Charité. As the document bore a distinctive inscription, he immediately handed it over to his commanding officer. It was then passed on to other quarters, where it was soon realized that we had fighted on an important discovery. The station was subjected to another, more thorough going search.

Thus it was that the German High Command gained possession of a collection of documents of unique historical significance. They were the secret documents of the Allied Supreme War Council, and included the minutes of every meeting held by this illustrious body. This time Mr. Churchill will not succeed in contriving or lying about the veracity of these documents, as he tried to do when documents were discovered in Warsaw.

These documents bear marginal notes inscribed by Messieurs Gamelin, Daladier, Weygand, etc. They can thus at any time be examined or refuted by these very gentlemen. They further yield remarkable evidence of the machinations of the war-mongers and war-extenders. Above all, they show that these many-hearted politicians regarded all the small nations as a means to their ends; that they had attempted to use Finland in their own interests; that they had determined to force Norway and Sweden into a theatre of war; that they had planned to fan a conflagration in the Balkans in order to gain the assistance of a hundred divisions from these countries; that they had planned a bombardment of Batum and Baku by a ruthless and unscrupulous interpretation of Turkey's neutrality, who was not unfavourable to them; that they had inveigled Belgium and the Netherlands more and more completely, until they finally entrapped them into binding General Staff agreements, and so on, ad infinitum.

The documents further give a picture of the diabolical methods by which these political war-mongers tried to quench the blaze which they had lighted, of their democratic militarism, which is in part to blame for the appalling fate that they have inflicted on hundreds of thousands, even millions of their own soldiers, of their barbarous unscrupulousness which caused them callously to force mass evacuation on their peoples, which brought them no military advantages, though the effects on the population were outrageously cruel.

These same criminals are responsible for having driven Poland into war.

Eighteen days later this campaign was, to all intents and purposes, at an end.

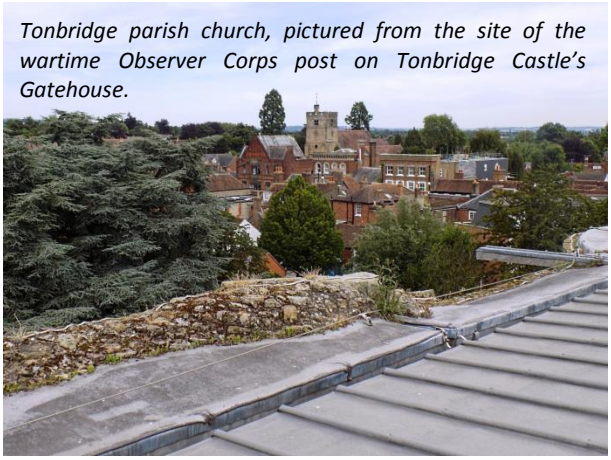
Britain and France Considered Understanding a Crime

On October 6, 1939, I addressed the German nation for the second time during this war of this very place. I was able to inform them of our glorious military victory over the Polish State. At the same time I appealed to the insight of the responsible men in the enemy States and to the nations themselves. I warned them not to continue this war, the consequences of which could only be devastating. I particularly warned the French of embarking on a war which would forcibly cut its way across the frontier and which, irrespective of its outcome, would have appalling consequences. At the same time, I addressed this appeal to the rest of the world, although I feared — as I expressly said — that my words would not be heard, but would more than ever arouse the fury of the bitterated war-mongers. Everything happened as I predicted. The responsible elements in Britain and France scented in my appeal a dangerous attack on their war profits. They therefore immediately began to declare that every thought of conciliation was out of the question, was even a crime; that the war had to be pursued in the name of civilization, of humanity, of happiness, of progress, and — to leave no stone unturned — in the name of religion itself. For this purpose, negroes and bushmen were to be mobilized. Victory, they then said, would come of its own accord, it was, in fact, within their easy reach, as I myself must know very well and have known for a long time now, or I should not have broadcast my appeal for peace throughout the world. For if I had had any justification for

Thousands of these leaflets were dropped around Tonbridge and elsewhere, only to be ridiculed by those who found them.

'*Beware! Don't fall for Nazi tricks'. A warning to resistance fighters.* (®Tonbridge Historical Society)

Three-hundred yards north-east of the Observer Corps' post, the tower of St Peter and St Paul's, Tonbridge's parish church (NGR TQ591467) afforded similar panoramic views for a Home Guard and firewatchers' observation post. During the five years of the war, 2,619 alerts and incidents were recorded, and 4,600 incendiary bombs and 971 high-explosive bombs of various categories fell on the town and its rural district.



Tonbridge parish church, pictured from the site of the wartime Observer Corps post on Tonbridge Castle's Gatehouse.

The next item on the Council's 4 June agenda could not be challenged. The Clerk read a letter from the Principal Officer of No 12 (South Eastern) Civil Defence Region, whose headquarters were in Tunbridge Wells, which stated that powers existed under the Defence Regulations 'by which Local Authorities may be required to undertake works of a military nature'. These were rapidly taking shape all over southern England.

Stables in the Council yard in The Slade were converted into a decontamination centre for the ARP, whose Wardens' Posts around the town were managed from an office at 214 High Street. The ARP was established in April 1938, by when Leslie A Le May (chief warden) and 22 head wardens for the whole of urban Tonbridge had completed Home Office training courses. Other public-spirited bodies such as the Women's Voluntary Service (WVS), Red Cross, Special Constables, Auxiliary Fire Service (AFS) were training new recruits; members of the British Legion signed-up to be stretcher-bearers, and there was an enthusiastic response to War Secretary Anthony Eden's broadcast on 15 May, appealing for men to join the Local Defence Volunteer Force (LDV) and prepare to attack Nazi parachutists.

Left: Tonbridge's wartime firefighters' HQ in Castle Street, now a restaurant and, above, the site of the town's Civil Defence Control Centre near the castle. Pictured in 2018.

To comply with government instructions, all direction and destination signs and place-name indicators outside the town's built-up area were removed.

At Tonbridge Castle the steep bank on the east side of the inner bailey's curtain wall was cut away to create a level surface on which to build a Civil Defence Control Centre. This comprised two standard street air-raid shelters accessed from the High Street, with brick walls and a flat reinforced concrete roof; entry was through a 'light-lock', to comply with black-out regulations. Communal shelters of this and other configurations were built at 145 and 153 High Street, the Pavilion Cinema, Bradford Street and St Stephen's Street, capable of accommodating 1,440 people, eight per cent of the town's 18,000 population.

Residents were encouraged to erect indoor steel-mesh 'Morrison' shelters and outdoor corrugated-iron 'Anderson' shelters, using materials supplied free-of-charge by the Council to those unable to pay. Wire-netting and timber were offered for protecting windows. Digging back-garden 'bolt holes', 2ft wide and 3ft

deep trenches, was also encouraged, subject to care being taken not to fracture buried drainpipes! ARP wardens travelled around the town distributing Home Office advice on how to carry out these measures. The Oliver family, which had moved to Barclay Avenue within two days of being told to accommodate several evacuees in their house in Hadlow Road, was one of the first to attempt to build a shelter. Jessica Havard recalled: 'The day after war was declared Dad and his neighbours started to dig air-raid shelters at the bottom of their gardens. That night it rained, so next morning when he saw that the hole had filled with water, he gave it all up as a bad job. So did his neighbours!'

Underground shelters were constructed at Slade Junior Boys' Council School. Later, when the town's anti-invasion defence works took shape, it found itself unnervingly close to a road-block and a formidable cluster of tank-traps. At Tonbridge School a plan to build a single air-raid shelter under the 'Upper Hundred' sports ground for all its pupils was scornfully dismissed by Ferdie Eames, housemaster of Hill Side House. Instead the Works Staff was instructed to build separate shelters for each house. One of these, near the north end of Havelock Road and Lodge Road, was also used by local residents.

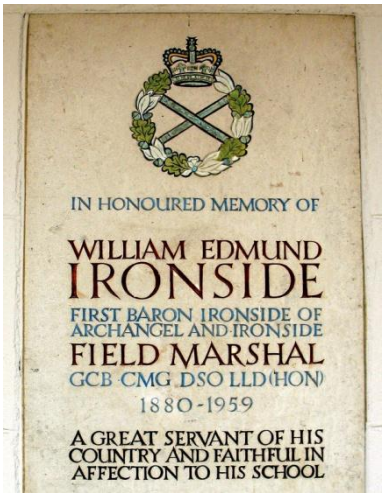
To obstruct landings by gliders carrying infantry troops, obstacles were erected on Tonbridge School's 150-acre playing fields and Tonbridge Council scattered scrapped heavy machinery and vehicles, and steel drums filled with earth, around its sports ground, formerly a racecourse. Many other open spaces were similarly barricaded, including Poult Wood Gold Course, Higham Lane. In the midst of hop-farming country, hop-poles and their steel cables were readily available for improvised ways and means of protecting potential landing zones.

The *Wehrmacht*'s VII Army Corps, ('*VII Armeekorps*'), stationed in northern France, was assigned to occupy and control the Tonbridge area. Somewhere in the Third Reich archives in Freiburg/Breisgau are said to be papers asserting that had a German invasion succeeded, Tonbridge School would have become Hitler's Upper Medway Regional Headquarters, in which case the playing fields would have been a convenient landing ground for Storch light aircraft ferrying high-ranking Nazi officials. The RAF base at West Malling, 12 miles away, would have been commandeered for offensive air operations against regions of Britain yet to be conquered.

Clockwise from top left: (1) Tonbridge School's vast playing fields. (®Tonbridge School) *(2) Artist's impression of Tonbridge School in Nazi occupation.* (©Steve Sullivan, www.blighty-at-war.net).*(3) Escape hatch at Slade School's air-raid shelter, revealed in 2007.* (©Nick Catford, Subterranea Britannica) *(4) Slade School in 2019.*

Chapter Two: 'Cometh the hour, cometh the man'

After Dunkirk, the British Army was neither equipped nor fit to fight a war on its own territory. More than 68,000 of its soldiers had been killed, wounded or captured. Most of the BEF's motor transport was abandoned in France, along with more than 600 tanks and nearly 2,000 artillery pieces. Only one battalion (the 2nd Hants) returned with all its small arms (rifles, pistols and light machine-guns). The Home Forces, who had remained in Britain, relied heavily on the raw recruits of the LDV (renamed the Home Guard on 22 July 1940) to man beach defences within range of the enemy's amphibious fleets and patrol zones where paratroops were likely to land.



A desperate situation demanded imagination and improvisation, to make the best use of limited manpower and shortages of heavy weapons. Responsibility for Britain's first anti-invasion defence plan was entrusted to William Edmund Ironside, who had gained his first taste of military life 46 years earlier, when at the age of 14 he became a pupil at Tonbridge School and joined its Volunteer Corps.

After nine terms at Tonbridge he went to the Royal Military College at Woolwich where, being six feet four inches tall and weighing seventeen stone, he was inevitably nicknamed 'Tiny'. In June 1899 he was commissioned into the Royal Artillery, serving with distinction in the Second Boer War, when his adventures as an intelligence officer are said to have inspired John Buchan to create the character of Richard Hannay in *The Thirty-nine Steps*.

In and after the First World War he pursued his career as a professional soldier, returning from time to time to Tonbridge to visit his old school, delivering a lecture in 1921, attending the dedication of the First World War memorial in 1925, and inspecting the school's Cadet Force on several occasions. His visits probably became quite frequent from 1938 until 1940 when his only son, Edmund Oslac, was a 'Tonbridgian'; together they attended Sunday morning chapel, father in 'mufti', son in school uniform. In his memoirs, bookseller Tim Waterstone recalled what was probably Ironside's last visit to the school before he died in 1959, aged 79. He judged the annual literary prize, which Waterstone won. At Speech Day in June 1957, Ironside presented him with his prize, a cloth-bound volume of Somerset Maugham's collected short stories. 'You're a bit young for this, aren't you?' he muttered.

* * *

In 1939, by now a General, he was appointed Chief of the Imperial General Staff (CIGS), the most senior post in the British Army. He was none too pleased and wrote in his diary: 'I am bitterly disappointed that I am not to command an Army in the field ... I am not suited in temperament to such a job as CIGS but my whole life has been based on doing what I'm told, and there it is'.

Before Dunkirk, Ironside had liaised with the BEF and the French Army during their futile attempt to halt the German advance, returning to London to hand over the post of CIGS to General Sir John Dill and become Commander-in-Chief, Home Forces.

Top of page: Ironside, and his memorial in the Library Cloister at Tonbridge School. Left: Ironside inspecting Tonbridge School's Cadet Force in 1925 and a Home Forces unit, c. 1940. (®Tonbridge School)

His predecessor, General Sir Walter Mervyn St George Kirke, had initiated a degree of anti-invasion planning but believed the threat of a German invasion was being exaggerated. Ironside dissented and wrote: 'When one considers how the Germans have worked out their plans for the conquest of other countries, they must have considered how to get at us. Parachutists, troop-carrying aeroplanes, tanks in flat-bottomed boats and the like. The essence of the problem is information and instant action. Delay is fatal'.

He feared Germany might attempt to bring Britain to its knees by aerial bombardment alone – a strategy that Reichsmarschall Hermann Göring, head of the *Luftwaffe*, told Hitler was entirely feasible and would preclude the need for an invasion involving land battles.

On Friday 10 May, four days after his 60th birthday and on the day Churchill became Prime Minister (and the Nazis invaded France and the Low Countries), Ironside was instructed to preside over a new Home Defence Executive. He noted in his diary: 'I was told I had to take over the Command in England and organize that. I am to be made a Field Marshal later ... an honour for me and a new and most important job. One much more to my liking than CIGS in every way. The next few months may show whether we can stand in England by ourselves. All a matter of the Air Force. If we can keep that in being, all is well'.

He was told the RAF expected 4,800 tons of bombs a day could be unleashed on Britain and wrote, 'the Bosches [sic] have sufficient aircraft to transport 9,750 lightly-armed men in one flight. The number of flights will vary from 1½ per day for East Anglia to three [a total of 29,250 men] for Kent ... seaplanes and gliders may add to these numbers. Such airborne expeditions will be followed by seaborne expeditions pushed forward with the utmost brutality ... the Germans will make a determined landing the minute they are able to do so ... it will be no amateur affair. It will be well and carefully prepared'.

The Air Staff in London estimated that 5,000 parachutists could seize the RAF's 'vitals' and effectively ground Fighter Command. Heavy bombing raids would create such a diversion that more transport 'planes could land reinforcements, and if the Germans tried to bring 20,000 men and tanks across the English Channel, the Royal Navy would be powerless to stop them.

On Sunday 26 May, when resistance at Dunkirk was increasingly doomed to failure, Ironside attended Sunday Chapel at Tonbridge School. Prayers were offered for the deliverance of the BEF but he told his son's housemaster, 'Hoffy' Arnold, that there was little hope of saving it. He was concerned at the ease with which the *Wehrmacht* had advanced across the Continent because of the absence there of defences of the kind he would soon recommend for England. Next day, 27 May, his appointment as CIC Home Forces was made public, although by then he or the War Office had already started planning the anti-invasion defences that even today are evident in the most unexpected places. On 27 and 28 May he visited Sir Auckland Geddes, Commissioner for Civil Defence for the South-East Region, at Tunbridge Wells; inspected work-in-progress on coastal defences, and met the 50 members of the Home Defence Committee, afterward swiftly cutting through the red tape to reduce this unwieldy body to four.

Over dinner next day, Churchill told him: 'We all depend upon you because [during the last few months] you have shown that you don't lose your head in a crisis', and repeated his promise to make him a Field Marshal ('in a few days').

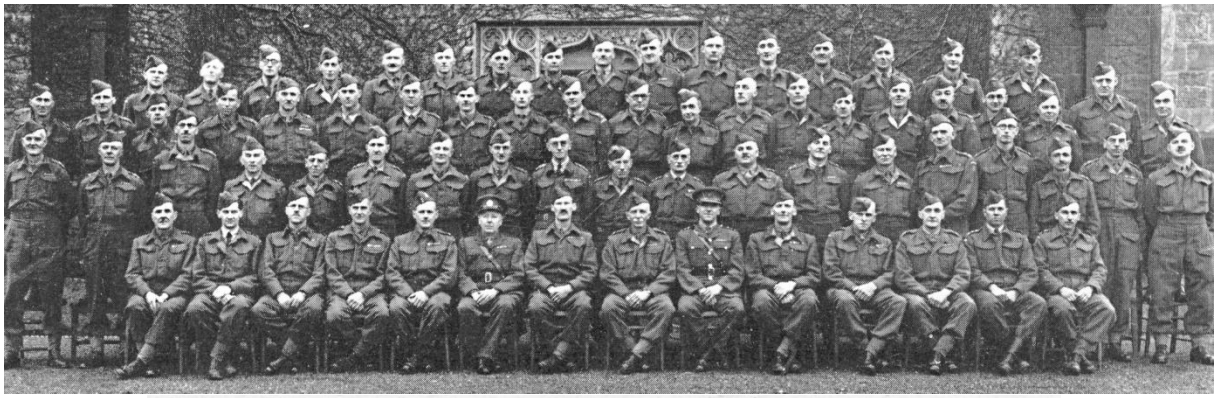
In May and June 1940 the depleted Regular Army relied heavily on the Home Guard to keep watch from 'static' defences on the coast for seaborne invaders, and on the skies for parachutists. Anthony Eden's appeal had within 24 hours brought forth 250,000 volunteers (equal in number to all the men in the peacetime Regular Army), many of whom were still queuing to register at midnight, the response in Kent (dubbed 'invasion corner') being particularly strong. By the end of June more than 1.4 million men had joined, exceeding the spontaneous wave of patriotic fervour of August and September 1914 when half a million men joined Lord Kitchener's New Armies.

After February 1942, when all men aged 18 to 51 were obliged to join the Home Guard and attend up to 48 hours of training a month, the force's numbers peaked at 1.7 million. Norman Longmate, a private in the 3rd Sussex Battalion, wrote in his book *The Real Home Guard*: '[It] was an enormous bargain, the cheapest army of its size and firepower any nation had ever possessed'. This was because its members were unpaid,

lived at home and did not require a permanent supporting 'army' of cooks, drivers, telephonists and so forth. The annual cost to the country for each member was about £9 compared with £360 for a Regular soldier. The Home Guard's national budget was only £16.6 million a year, roughly equivalent to a single day's expenditure on the war.

Tonbridge was under the protection of more than 1,000 members of the 21st Battalion of the Kent Home Guard, commanded by Col H H Bateson, whose drill hall was in Avebury Avenue. They shared a depot with the Royal Army Ordnance Corps at Horns Lodge, off Shipbourne Road. The RAOC was responsible for weapons, armoured vehicles, ammunition and other essentials and had another depot in the former Crystalate gramophone record factory at Town Works, Cannon Lane.

Above: The Tonbridge Home Guard battalion marching through the town in 1944, led by James Stredder, a teacher at Tonbridge School. (®Tonbridge School) *The photograph below of the battalion's officers was probably taken to mark the official disbanding of the Home Guard on 31 December 1945, a year after being ordered to 'stand down'.*



Back row: Lt. L. Johnson, Lt. N. A. Nicholls, 2/Lt. H. H. Mills, Lt. R. L. Amas, 2/Lt. T. K. Blackmore, Lt. H. B. Sercombe, 2/Lt. H. Annison, Lt. L. V. Foster, Lt. W. J. Moore, 2/Lt. A. J. Gurr, 2/Lt. J. N. McNeill, Lt. C H. Harverson, Lt. E. J. Aplin, Lt. S. J. Dougan, Lt. H. F. Solman and Lt. W. G. Honey.
Third row: Lt. R. G. F. Dunton, Lt. J. H. Brooker, M.C., 2/Lt. H. F. Berdinner, 2/Lt. F. J. Bridges, Lt. J. F. White, Lt. A. T. Bishop, 2/Lt. J. K. Haynes, 2/Lt. B. S. Bryant, 2/Lt. D. M. Rahilly, Lt. J. R. Young, 2/Lt. O. D. Rasmussen, 2/Lt. C. J. Cavaliero, 2/Lt. E. E. Weekes, 2/Lt. W. Thompson, Lt. J. W. Shanahan, 2/Lt. L. F. Hitchcock, Lt. J. E. W. Lucas, Lt. D. A. F. Warner, 2/Lt. E. S. W. Plummer, Lt. W. J. Felton and 2/Lt. S. C. D'Arcy.
Second row: Lt. C. T. Allen, Lt. R. S. Children, Lt. G. H. S. Ward, 2/Lt. L. A. D'A. D'Engelbronner, Lt. R. H. Phillips, Capt. G. Whitehead, Capt. C. H. Waterhouse, Capt. G. H. Horn, Capt. H. Wilsdon, Capt. H. Livesey, Capt. G. Alderman, Capt. T. H. Gage, Lt. B. W. Poile, Lt. H. T. Taylor, Lt. W. J. Cowan, 2/Lt. G. J. Boyden, Lt. N. L. Heathorn, Lt. H. Q. Foord and Lt. W. C. C. Harding.
Front row: Capt. H. H. M. Spink, Major L. H. Davies, Major W. G. Stewart, Capt. W. R. Nottidge, Major M. D. Vint (Bn. M.O.), Capt. F. C. Hibberd (The Rifle Brigade—Adjt.), Col. E. K. B. Peck, M.C. (C.O.), Major E. R. Wood (Second-in-Command), Capt. A. E. Miller (Hampshire Regt.—Q.M.), Major L. S. Townsend, M.M., Major A. Latham, D.S.O., Major S. N. Friend, Capt. H. Veall and Lt. K. H. Baker.

Judging how to make the best use of his limited assets, Ironside created a 'coastal crust' to confine invaders to the beaches and their hinterland. It included infantry and artillery posts, minefields, anti-tank obstacles and road-side 'flame fougasse' ambushes of drums of tar, to be exploded in the path of the advancing *Wehrmacht.*

Another type would flood the road with petrol, ignited at the right moment with a carefully aimed hand-grenade.

Above: tar barrels at a road-block on the outskirts of Tonbridge, c. *1940.* (®Tonbridge Historical Society*)*

On 30 May Ironside, who had fewer than 200 mobile anti-tank guns at his disposal, wrote: 'If the Germans ever attempt a landing here they will put the utmost energy into establishing a bridgehead. All our energies must be put into stopping this. No waiting for more troops to come up. Our mobile forces must attack at once regardless of losses and nip the landing in the bud'.

To hinder invaders breaking through the 'coastal crust' and establishing inland salients, and to counter-attack aerial landings, Ironside proposed forming mobile groups, each operating three motor cars equipped with Bren light machine-guns and to be known as 'the Ironsides'. Six-pounder and 12-pounder field guns mounted on lorries were also part of his plan. 'They may not be tanks', he wrote (only 963 were available in the whole of the British Isles), 'but they may get a shot and knock the gentleman out. Our people must act just as the Germans do and go straight in and attack. Gradually perhaps I shall get some tanks'.

For anything less than a full-scale invasion, he hoped enough armoured cars would become available to molest motorboat landings and that buses requisitioned from the East Kent Road Car Company, Maidstone and District Motor Services and other operators would transport infantrymen around the countryside to round-up paratroops. A similar idea occurred to Major-General Bernard Law Montgomery, then a rising star in the military firmament, who immediately after Dunkirk was posted to Sussex to head Southern Command's 3rd Infantry Division (known variously as the 'Iron Division', the 3rd [Iron] Division' and 'Monty's Iron Sides'). On 2 July 1940 Montgomery met Churchill for the first time and complained that his combat-ready troops were dug-in at static positions on the coast and should be replaced and held as a mobile reserve.

'Why was I left immobile?', wrote 'Monty' in his *Memoirs*, 'there were thousands of buses in England. Give me some and release me ... so that I could practise a mobile counter-attack role ... the Prime Minister thought this was the cat's whiskers ... I got my buses'.

Two weeks after meeting Churchill, Montgomery was promoted to command 5 Corps. 'From this time', he wrote later, 'begins my real influence on the training of the Army in England ... the corps gave a lead in these matters which had repercussions far beyond the corps' area of Hampshire and Dorset'.

With his 'coastal crust' plan resolved, Ironside identified, while touring Kent (his most vulnerable sector), a perfect role for the Home Guard: 'static defence in every village by [road] blocks ... thousands of Molotov Cocktails thrown down from the windows of houses ... that might well settle tank columns'.

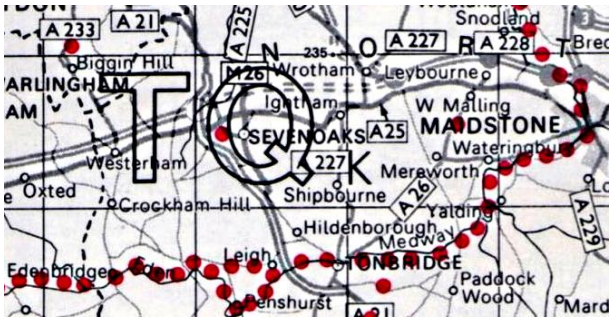
He subsequently formalized a strategy, approved by the Chiefs of Staff and the War Cabinet on 25 June, for waging war against columns that succeeded in overpowering mobile reserves that had failed to block breaches in the coastal crust. This was a final position and last resort stop-line of pillboxes, road-blocks, tank-traps and anti-tank ditches, officially called the GHQ Line but commonly known as 'The Ironside Line'. It ran almost due east from Bristol, then veered south towards Basingstoke and on to Maidstone, thus covering the southern approaches to London. From Maidstone the line ran north to the Thames and from Essex to Cambridge and The Wash.

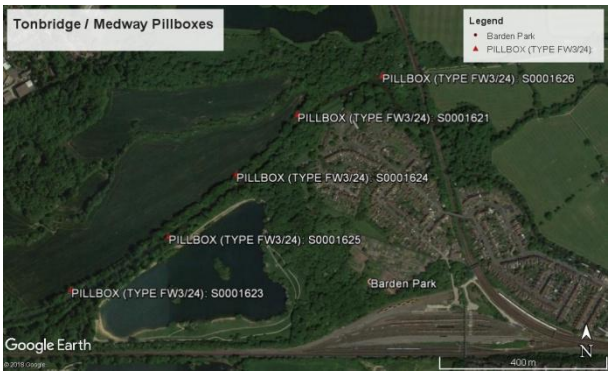
Subsidiary stop-lines, called Command Lines and Corps Lines, were built behind anti-tank ditches in the hinterland between the 'coastal crust' and the GHQ Line; there were also defensive grid-lines, devoid of ditches and instead lined with obstacles. The hundreds of miles of anti-tank ditches were by far the greatest system of defensive earthworks ever built in Britain.

Montgomery was decidedly underwhelmed by all this. ‘When I asked what troops were available to man the stop-lines’, he wrote, ‘I could get no clear answer. There were no troops’.

Wherever possible the lines exploited natural obstructions in the landscape. In Kent’s case the River Medway, spanning the entire county, and its western tributary, the Eden, became, when reconfigured where necessary to military specifications, an expedient anti-tank ditch, with on their north banks massive reinforced concrete emplacements for 2-pounder and 6-pounder tank-buster guns, and smaller pillboxes for rifles and machine-guns.

‘I am very lacking in gun power’, wrote Ironside, ‘and I can see no immediate prospect of reinforcement. I have called into being every available gun I can find’.





The GHQ Line’s pillboxes along the rivers Medway and Eden, mapped in the 1970s for Pillboxes (Henry Wills, Cooper/Secker & Warburg 1985). *Right: sites of surviving pillboxes west of Tonbridge, plotted by Clive Holden using War Office map references.*

Encountered today, Ironside’s pillboxes pose the question, ‘how effective would they have been against a Panzer attack?’ The answer is that they would not have fought alone but would have been in the midst of an array of thoroughly camouflaged fire trenches, barbed wire fences, mobile anti-tank guns, ‘flame fougasse’ batteries (of which there was at least one near Tonbridge), machine-gun nests, weapon pits, minefields and all kinds of barriers and obstacles - exemplified by concrete tank-traps of various shapes and sizes.

Precisely which pillboxes on the GHQ Line were armed, and for how long, cannot be confirmed, although it is known that the Royal Engineers installed 16 6-pounder guns between Tonbridge and Rochester during one hectic week in mid-summer 1940, and many others elsewhere during the next few months. Hadlow Park, three miles from Tonbridge, became the HQ for 922 Defence Battery, which maintained the guns at major river crossings in the Tonbridge district; but for most of the war the GHQ Line’s fortifications were unmanned or at best only lightly patrolled, mainly by the Home Guard, pending an invasion - ‘Cromwell’ being the codeword for ‘invasion probable within 12 hours’. In December 1940, 922 Battery’s guns were moved to a stop line running from Dover to Seasalter. Had the ‘coastal crust’ been overpowered, infantry reserves, tanks and mobile artillery would have hastened to the stop-lines, behind which first-aid posts, ambulance depots, ammunition dumps, field kitchens and all the other military accoutrements of war would have been set up. The ensuing battles would have resembled those which became only too familiar four years later when the German Army tried to stem the allied advance from the Normandy beachheads and when the US Army’s 101st Airborne Division was besieged in Bastogne.

Chapter Three: 'Defended village and river lines in all directions'

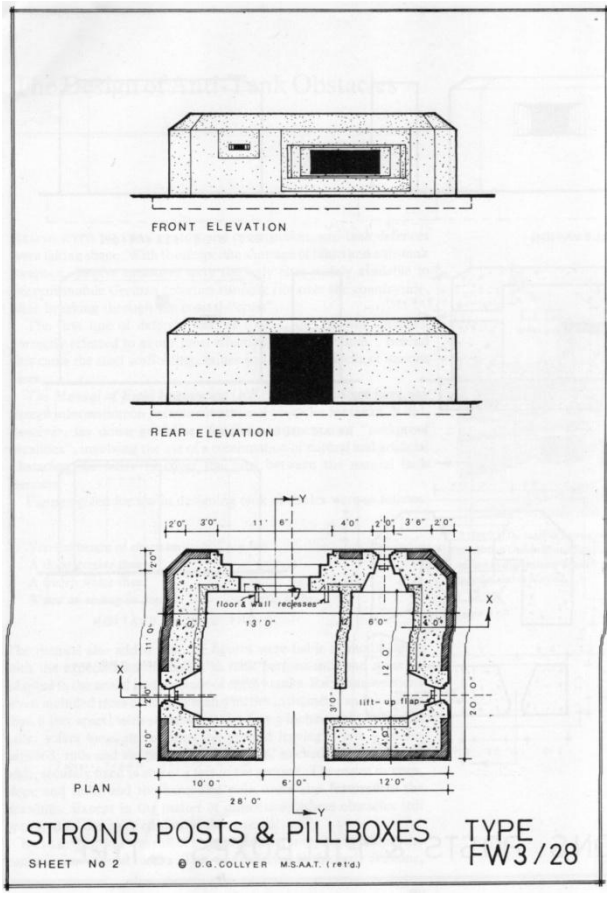
No records now exist to establish how many pillboxes and other 'hardened' field fortifications (tank-traps, road-blocks and so forth) were built during preparations for a German invasion, but estimates for the pillboxes range from 10,000 (WW2 Forums http://ww2f.com) to 28,000 (Pillbox Study Group http://www.pillbox-study-group.org.uk/). About 6,500 survive, according to the Council for British Archaeology's *Review of The Defence of Britain Project* (http://archaeologydataservice.ac.uk). Given that Ironside's scheme was approved on 25 June 1940, and that the GHQ Line alone would extend over nearly 500 miles, it is astonishing that most of the structures were completed in the remaining months of 1940 and the rest by February 1942. Much preliminary work on designing the pillboxes and planning their positions must surely have been carried out under General Kirke *before* Ironside's appointment as CIC Home Forces was announced on 27 May. In his seminal book *Pillboxes. A Study of the UK Defences 1940* (Cooper/Secker & Warburg 1985), Henry Wills noted that by 12 June, England had already been 'divided into lines of defence, with defended village and river lines in all directions'.

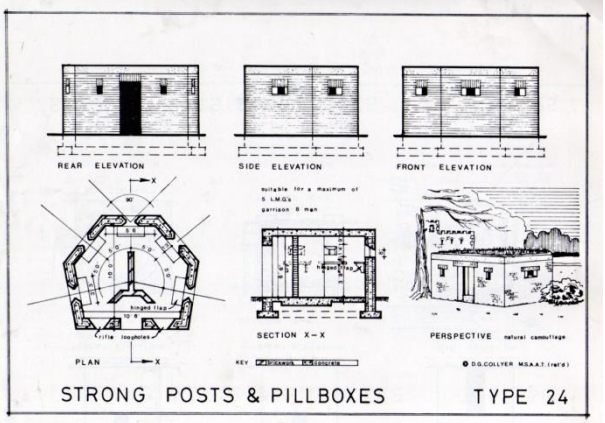
'Pillboxes' in the military sense date back to the blockhouses of the battlefields of ancient Greece. Their first manifestations in modern warfare were the blockhouses built by the British during the South African Wars and the German army's concrete strongholds along the First World War's Western Front. Similar structures, including circular concrete gun emplacements, were erected around and near England's southern and eastern coasts, when the prospect of an invasion by the Kaiser's army was being taken very seriously. Soldiers called these circular objects 'pillboxes' because their shape superficially resembled the small cardboard boxes in which Carter's Little Liver Pills and other patent medicines were dispensed. By the Second World War the term was being used in official military communications and everyday language to describe small battlefield fortifications, regardless of their shape.

The pillboxes for England's anti-invasion defences were designed by Branch FW3 of the War Office's Directorate of Fortifications and Works; consequently they are known by their drawing numbers, which range from FW3/22 to FW3/28. They were designed to be constructed quickly and to be capable of withstanding bullet and shell fire.

Along the Medway at Tonbridge, and elsewhere on the GHQ Line and its subsidiary stop-lines, the most common type was the FW3/24 hexagonal pillbox, designed to house infantrymen armed with rifles and/or Bren light machine-guns (LMGs). This had five 8ft-long faces, with a weapon embrasure (*aka* 'loophole', though few if any were loop-shaped) in each one, and a 13ft-long rear face with a 2ft-wide entrance and two embrasures. There were several variants of the FW3/24, including one with walls 15 inches thick with built-in rifle embrasures, and another with 24 inch walls embodying preformed embrasures for machine-guns.

The behemoth of the range was the formidable rectangular FW3/28 (*aka* 'gun-box'), facing river bridges and other strategic positions where Panzer divisions could be expected to direct their main thrust en route to London. The FW3/28 also came in several configurations, housing a 2-pounder or 6-pounder Hotchkiss anti-tank gun aimed through a low, wide embrasure. Their overall dimensions were





a minimum of 20ft wide x 19ft x 7ft 6in. high, with walls and roofs 42 inches and 12 inches thick respectively. Some versions accommodated two anti-tank guns or had an additional firing chamber for infantry weapons.

There were two anti-tank gun emplacements (evidently FW3/28s) at Tonbridge Castle (NGR TQ590465 and TQ589465). These were its first new fortifications for nearly 700 years and were the most important of all the defences along the Tonbridge sector of the Medway, with the town's Big Bridge (*aka* Great Bridge) only yards away. Each emplacement comprised 60 cubic yards (about 110 tonnes) of reinforced concrete and stood on the sites of the 13th century Water Tower and, to its west, the Stafford Tower. They faced the river from the corners of the inner bailey's south curtain wall, into whose surviving core and ashlar masonry they were integrated. This work resulted in the complete disappearance of the curved western corner of the wall shown on early Ordnance Survey maps; the Water Tower had been plundered for its stonework in the 18th century.

Tonbridge's two other Medway crossings - Cannon Bridge (NGR TQ597465) on Cannon Lane, half a mile east of the town centre and, a similar distance to the west, over the main-line railway to London (NGR TQ580466) - were also guarded by FW3/28s. Both bridges would have afforded AFVs swift access into the town if Big Bridge withstood attack or had been deliberately blown-up by its retreating defenders.

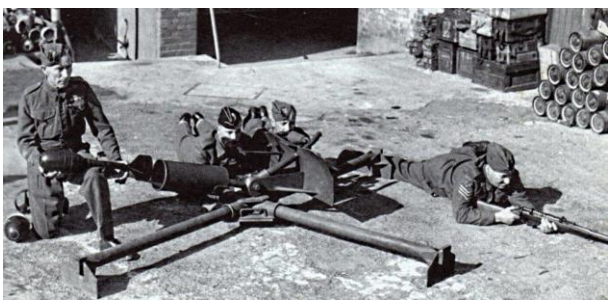
The curtain wall at Tonbridge Castle. A Type FW3/28 pillbox stood above both corners of the wall, positioned to attack tanks approaching the town from the south. The River Medway (foreground) formed a ready-made anti-tank ditch.

At least one of the castle's FW3/28s was completed by 3 September 1940, since on that date Tonbridge Council resolved to 'draw the attention of the appropriate military authorities to the practice of the troops now on duty at the emplacement [in the castle grounds] approaching the position by way of the rockery on the wall, instead of by the pathway, and thereby causing unnecessary damage'. The troops preferred to scramble up the rockery (probably after visiting the nearby Chequers pub in the High Street) to avoid the two minute walk involved when using the path. They should of course have been aware that, even though there was a war on, by-laws must be obeyed! In due course 20 soldiers were in charge of the castle's defences. *Below left: the rockery, beneath the site of the castle's eastern FW3/28 pillbox, in 2018. Below right: the faint 'footprint' of part of the pillbox.*

Above: foundations of the eastern FW3/28 pillbox at the top of the rockery. (©Clive Holden) *Right: site of the gunnery observation post on the curtain wall, with the Big Bridge in the background.*

Midway between the castle's FW3/28 pillboxes stood a 10 ft 6in x 10 ft 6in x 6ft 6in. brick and concrete gunnery observation post. Below it, in Riverside Gardens (NGR TQ589465), close to Tonbridge School's Boer War Memorial, there was a sandbagged revetted weapon pit housing a 'Blacker Bombard', also known as the 29mm Spigot Mortar, an anti-tank weapon devised by Lieutenant-Colonel Stewart Blacker. Issued to the Home Guard in 1941, it was capable of lobbing 20-pound armour piercing anti-tank shells on to targets up to 400 yards away; the Big Bridge was well within range. The memorial was dismantled and its plinth and pillar placed flat on the ground to give the gunners an unobstructed field of fire. Shallow weapon pits were also excavated on top of the curtain wall.

It is possible that explosives were concealed under Big Bridge to enable it to be blown up by remote control if all efforts to prevent the enemy capturing it failed. Before August 1940, key bridges along the GHQ Line were equipped to be demolished in this way; subsequently, this policy was not applied to bridges whose steel and concrete obstacles were considered to be as capable of delaying the enemy as blowing them up. As will be seen in the next chapter, Big Bridge had formidable defences. In some districts, plans were made to flood water meadows in dire circumstances, to make them impassable to AFVs. The many sluices and locks along the Medway around Tonbridge would have facilitated this.



Above left: the spigot mortar weapon pit and the dismantled Tonbridge School Boer War Memorial in Riverside Gardens in 1948. (©The Francis Frith Collection) *Above: the site today. Left: a Home Guard unit practising with a 'Black Bombard' spigot mortar.*

All that remains today of Tonbridge Castle's Second World War defences are concrete fragments of the FW3/28 pillbox whose squaddies displeased the Council, and the 'footprint' of the observation post. An impressive concrete-faced FW3/28 containing an extra chamber for a machine-gun survives eleven miles downstream from the castle, alongside the A26 at Teston (NGR TQ710536), opposite the entrance to Barham Court. It dominates Teston Bridge and the Medway Valley railway and was one of a cluster of pillboxes that supported a nodal point at Wateringbury.

Among the FW3/28s still to be seen in the pillbox-rich country upstream from Tonbridge Castle is one overlooking the bridge that carries the Tonbridge to Redhill railway over the Medway at Little Britain Farm, and another at Ensfield Bridge which spans the Medway near Leigh (NGR TQ547454). Some years ago an attempt was made to blow-up this one, resulting only in external damage to one of its embrasures - proof that pillboxes were capable of withstanding serious assaults.

Above: FW3/28A pillbox at Ensfield Bridge, Leigh, showing embrasures for an anti-tank gun and (right) an infantry weapon. (©Susan Featherstone) *Above right: FW3/28 pillbox at Teston, showing embrasures for anti-tank gun (left) and infantry weapon. (©Clive Holden)*

Chapter Four: Town's wartime battle front, then and now

Top picture: massive reinforced concrete road-blocks on the Big Bridge. A soldier, perhaps walking home from Tonbridge Station looking forward to a few days' leave, makes his way past a stack of rails that would have been fixed in slots in the road to hinder AFVs approaching the blocks, between which horizontal barricades would have been secured to form additional obstructions. The picture was taken by the Tonbridge Free Press *on 9 June 1944 – three days after D-Day, by when the slots had been filled and the barricades removed because the danger of invasion had long since passed. Above: the bridge in 2019, with iron bollards protecting pedestrians from passing traffic.*

Concrete pyramids (aka 'dragons' teeth' or 'pimples') with steel spikes were erected outside the Rose & Crown *alongside road-blocks and on other pavements elsewhere to hinder infantry soldiers rampaging up the High Street, although they did not deer housewives on shopping trips!* (®Tonbridge Historical Society) *Right: the* Rose & Crown *in 2019.*

In 1940 it was feared that paratroops would attack inland towns ahead of an invasion by armoured columns and infantry units. Barbed wire barricades like this one at the north end of Tonbridge High Street (top picture) were erected to hamper their progress, with a few small gaps to allow pedestrians (and stray dogs!) to cross the road. (Tonbridge Free Press) *Above: the street in 2019.*

Pillboxes and weapon pits proliferated within Tonbridge, including one in Swanmead Allotment Gardens, Garden Road (NGR approx TQ596468), measuring 20ft x 17ft 6in. x 7ft 6in. and comprising 70 cubic yards of solid concrete; and two in Lower Castle Field (*aka* Lower Playing Field), in 5 ft deep revetted pits, one 16ft x 10ft, the other 10ft x 6ft, each composed of up to 20 cubic yards of solid concrete. One of these may have been on the site now occupied by Tonbridge's miniature railway (NGR TQ587466). A hexagonal pillbox, measuring about 20ft x 17ft 6in., was built 'on the footpath to the open air swimming pool at the north-west corner of the castle'. To establish the precise positions of Tonbridge's abundant 'gunnery' and tank-traps would require systematic archaeology; with few exceptions, all the evidence lies under the ground.

Out of town, pillboxes ran in both directions along the GHQ Line, following the Medway. The first one still to be found downstream from Tonbridge is beside a footbridge (NGR TQ605471) a mile from Cannon Bridge. In the opposite direction, even now there are at least five, spaced about 300 yards apart on the southern channel of the Medway. The channel is a man-made 18th century 'cut' intended to be part of a canal from Tonbridge to Edenbridge that was never completed. The original channel, the 'Medway proper', flows to the north. The two channels encompass the site of Tonbridge Racecourse which since the 1920s has been a 69-acre sports ground whose suitability as a landing zone for enemy gliders or paratroops would not have escaped 1940's anti-invasion planners. The aforementioned riverside pillboxes were links in a chain that intersected a subsidiary stop-line that ran northwards from the River Eden at Penshurst.

Other pillboxes can be found some distance from the GHQ Line, including one, brick-faced, about two miles east of Tonbridge Station in a chestnut coppice at Tudeley (NGR approx. TQ615457), overlooking the main line railway from the Channel Ports to London. Tudeley was one of eight 'Defended Villages' in the Kent defence plan. Another pillbox (at NGR TQ591470) was revealed only recently (2017) at Ironside's old school, during the construction of a new science centre adjacent to Dry Hill House. It had been veiled by trees and undergrowth for most of the post-war years and was part of a defence complex at the High Street's junction with London Road and Shipbourne Road.

Below and on next page: the pillbox at Tonbridge School , as revealed in 2017.

In 2018 another pillbox was seen concealed in a shrubbery at 44 Stocks Green Road, Hildenborough, two miles north-west of Tonbridge. Fully revealed during 2019, it was found to be in remarkably good condition. This and the Tonbridge School pillbox are discussed in detail in the Appendix.

Above: entrance to the pillbox at 44 Stocks Green Road, Hildenborough, in February 2018. (© Gary Coppins MRICS)
Right: the pillbox, as revealed in May 2019, showing two of its embrasures. (©Susan Featherstone)

Road-blocks and associated tank-traps were set up all over town, often supplemented with railway sleepers, derelict farm machinery, wrecked cars and other makeshift obstacles. Contemporary records, residents' memories, press pictures and RAF aerial photographs taken in October 1947 indicate that among the places where these were located were the Big Bridge; Shipbourne Road and Hadlow Road; the High Street (at the Rose & Crown and Westminster Bank), Portman Park and The Slade. This Victorian and Edwardian suburb, named after the road that borders two sides of the castle's outer bailey (now known as Upper Castle Field), is a little knot of 14 narrow streets and is bisected by the only substantial surviving section of the medieval Fosse, an earthen rampart built when Tonbridge first became a fortified town. Now only about 12 ft high, it had a road-block at its southern end (NGR TQ589467) in Stafford Road which was part of a urban stop-line to be held if enemy land forces overwhelmed the GHQ Line's riverside defences or landed airborne troops in the fields. The line ran from a row of 176 pyramidal tank-traps ranged along Hilden Brook (NGR TQ588466), past Tonbridge electricity generating station and Slade School, along part of Stafford Road and up Havelock Road to Lansdowne Road. Another stop-line, including 5ft cubic tank-traps placed at the Castle Street and Slade entrances to the castle grounds, ran eastwards from the Stafford Road road-block to the High Street.

On the east side of the town, a stop-line of about 20 cylindrical concrete tank-traps ran due north from the Medway near Town Lock (NGR TQ592464) to Lyons Crescent and possibly from there to East Street.

(The various stop-lines are explored in more detail in Chapter Ten: Tracing town's forgotten battle lines.)

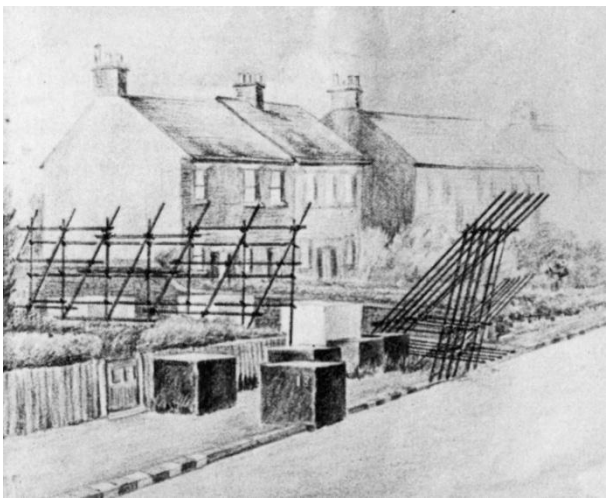
* * *

'Putting tank-traps everywhere was all the rage', recalled Jessica Havard. 'We even had three in our back garden. There were supposed to be four but after the workmen had measured and marked out the four positions with stakes and gone home, Mum and Dad re-measured and re-positioned the stakes so that there were just three! If there had been four, they were so big that it would have been impossible to squeeze a wheelbarrow or lawn mower between them. Some workmen returned next day with a concrete mixer and built the three (!) six-foot monstrosities, without comment. They stayed there until the end of the war'.

The garden in question was at 'Arnos', 23 Hadlow Road. The Olivers bought the house on 14 June 1940 (the day Germany occupied Paris) to be closer to William's office in the town.

George Fry, who lived with his parents, Jack and Kate, at 143 Shipbourne Road during the war, recollected in 2018 that a road-block was set up outside their house, with one of its concrete cubes, about 7ft high x 4ft x 4 ft, in their front garden (NGR TQ592478), intruding on to the pavement. Another was placed on the opposite side of the road, near the entrance to Tonbridge Boys' Club. Sockets were cut in the intervening carriageway to accept supports for a scaffold barrier that would have been erected during an emergency.

This was a strange choice of location because a few yards to the north there was, and is still, a wide grass verge with ample space for-road blocks. Air Raid Wardens' Post No. 1 was built there *c*. 1940; there were other posts at Cemetery Lodge, Bordyke, Higham Lane, Barden, No. 3 High Street, Pembury Road, Priory Road and Ashby's Garage, Quarry Hill (close to one of the town's several First Aid Posts).



Above: tank-traps in the grounds of Red Roses, Portman Park. (®Tonbridge Historical Society*) Right: anti-tank defences were often erected in front gardens, as seen in this sketch of a road-block made by a Norfolk resident in 1943. From* Pillboxes: A Study of UK Defences *by Henry Wills (Cooper/Secker & Warburg 1985).*

As a wartime pupil at Bank Street Infants' School and Slade School, George remembers playing among many of these wartime obstructions including, in Upper Castle Field opposite Slade School, six tank-traps and a V-shaped anti-tank ditch with poles (perhaps hop-poles) fixed into its base. In 2012 another of the school's wartime pupils, Dick Millis, recalled similar adventures among tank-traps behind Hawden Road and in Upper Castle Field. After the war George Fry witnessed the demolition, by an iron wrecking-ball swinging from a crane, of a row of tank-traps arranged along the Cattle Market wall in Stafford Road. Forty-five years later, George played a small part in protecting one of the town's defence relics; as head gardener at Tonbridge School for 36 years, until 2001, he planted shrubs to cover the aforementioned pillbox at the Dry Hill House, sealing its entrance with a steel grille to exclude vandals but leaving room for hedgehogs and bats to enter. Previously, one of the school's teachers had kept rabbits in hutches placed in the embrasures.

During the war another Fry family lived in The Slade at 21 Havelock Road. Reminiscing for the authors of the Slade Area Residents' Association's *History of The Slade* , published in 2012, Donald Fry recalled that on Monday 4 September 1939, the day after war was declared, he and all the other pupils at Slade School were told not to attend that day because their teachers were helping to distribute gas-masks and ration books.

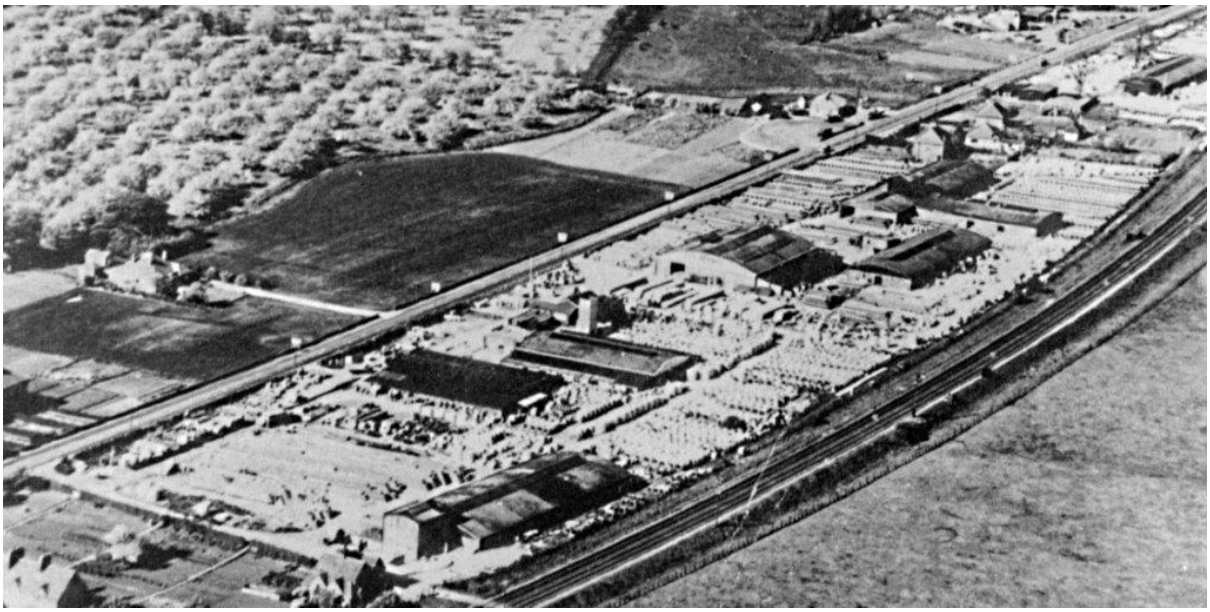
Donald remembered that the tank-traps in Stafford Road were about 5ft 6in. high, and that barbed wire barricades extended along the east side of Havelock Road, from the junction of Lodge Road and Stafford Road, as far as Ebenezer Cottage (11 Havelock Road), and from there on the west side to No 21, at the far north end of the road. Gaps in the barricade, providing access to the various houses, could be closed quickly in an emergency.

Tank-traps similar to those in Stafford Road were built in the gardens of Nos 20 and 21 Havelock Road. The Fry family was dismayed to be warned that in the event of an invasion they would be evacuated so that a machine-gun post could be set up in Donald's bedroom, which overlooked playing fields and farmland across which tanks and infantry could fight their way into the town's western outskirts. According to Donald Fry, trenches in which to conceal an ambush of land-mines were created in some roads, including Havelock Road, near Ebenezer Cottage and the corner of The Avenue.

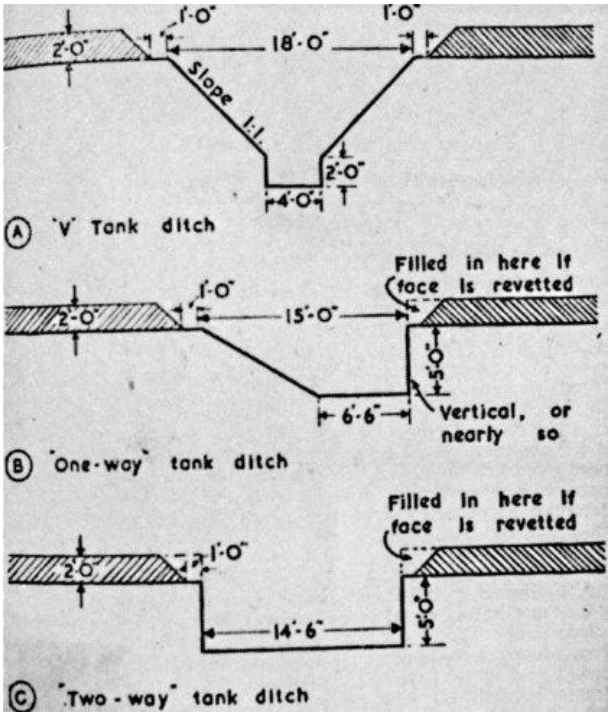
Inexplicably, the Home Guard stored 'Molotov Cocktails' in an air-raid shelter in Lansdowne Road, on the north-east outskirts of The Slade, regardless of the obvious hazard this would impose during an air-raid. In fact, the store was destroyed not by enemy action but by a suspected local vandal; two fire appliances were called to extinguish the blaze.

All the aforementioned works were designed to defend the town street-by-street in the event of incursions by AFVs and infantry forces. During, or soon after, the construction of the GHQ Line and associated structures, much of north Tonbridge became surrounded by a continual heavily defended outer perimeter, comprising a combination of anti-tank ditches, barbed wire barricades and concrete tank-traps. These were made in various sizes and shapes, including cylinders (called 'buoys', which could be rolled into position); cubes; blocks (*aka* 'coffins') and flat-topped pyramids (*aka* 'dragons' teeth' or 'pimples'). Within the perimeter there were stop-lines and massive concrete road-blocks, between which steel girders and rails were placed (for example, on Big Bridge). Like 21 Havelock Road, many houses along the perimeter were assigned to become 'defended buildings,' concealing machine-gun posts.

Most of the concrete obstacles were cast on site but the cylinders were apparently fabricated from 'spun -concrete', the nearest manufacturer being William Griffiths and Company's South Coast Pre-Cast Works, whose 15-acre site flanking the Ashford - Thanet railway at Milton, near Canterbury, stocked nearly 20 miles of spun-concrete pipes of various diameters and lengths – enough for 30,000 tank-traps 3ft high. The pipes were converted into tank-traps simply by placing them upright where required and filling them with concrete or rubble.



The South Coast Pre-Cast Works, source of concrete pipes for cylindrical tank-traps. (®Derek Butler). *Below: anti-tank ditch configurations. From* Pillboxes. A Study of UK Defences *by Henry Wills (Cooper/Secker & Warburg 1985).*



The outer perimeter was essential because although an invasion was most likely to come from the south, towards the GHQ Line, attempts to capture Tonbridge from other directions could not be ruled out - for example by a 'pincer manoeuvre' or following an unexpected full-scale invasion from north Kent. The perimeter ran mainly through gardens and other open spaces, with road-blocks at intervening main roads. Its construction would have demanded a large labour force, using excavators, 'bulldozers', dump-trucks, mobile cranes and other earth-moving machinery from Army depots or hired from quarrying companies and others equipped to move large volumes of soil.

Much of the perimeter can be traced on the post-war RAF aerial photographs kept at the Kent Archives in Maidstone and accessible on-line on the Kent County Council's Kent Heritage Maps website. Although most of the defence works had been demolished by 1947, some of the photographs show what appears to be a weapons pit in the garden of No. 23 Hadlow Road, the Oliver family's home; and the zigzagging course of the anti-tank ditch and clusters of its tank-traps yet to be removed. In many cases demolition costs were avoided simply by bulldozing them into the adjacent anti-tank ditch and covering them with earth removed when it was dug.

Today, recognizable traces of the perimeter on accessible land are hard to find, although a short length of anti-tank ditch on Tonbridge School's playing field north of North Path is revealed as a 'parch mark' in the turf in dry summers. (A bonfire was lit in the ditch during the school's VE-Day celebrations.) Post-war commercial estates off Cannon Lane, and residential estates in the Portman Park neighbourhood and elsewhere, have been the principal obliterators of evidence of where, if the worse came to the worst, desperate battles would have been fought and many lives lost.

Chapter Five: Manpower and materials

Adequate recognition has yet to be given (and it is probably too late now) to the amazing achievement of the builders, surveyors and military engineers who, in a few desperate months, planned and constructed the tens of thousands of pillboxes along the GHQ Line, its subsidiaries and Ironside's 'coastal crust' – and the anti-tank ditches, road-blocks and tank-traps that went with them. This was accomplished at the same time as other pillboxes plus 'ack-ack' batteries and bomb shelters were hastily built at munitions and aircraft factories, harbours, docks, airfields and military bases all over much of the UK, as well as civil defence bunkers and communal air-raid shelters in dozens of towns and cities within range of *Luftwaffe* bases in occupied Europe.

The sheer volume of materials procured and delivered to the construction sites is incalculable; nor will the number of men employed there ever be conclusively established. By the third week of June 1940, according to research by Ian Todd of Subterranea Britannica (http://www.subbrit.org.uk), 150,000 civilians, in addition to soldiers, were engaged in building the defences, seven days a week, from dawn to dusk. The troops included members of the Pioneer Corps and Royal Engineers.

Shortages of materials and manpower were inevitable but one factor was in the project's favour. Since the 1920s, 4.3 million new houses had been built in Britain (including 700,000 in London and thousands more in urban Kent). The boom came to an abrupt halt in the summer of 1939, putting many building workers on the dole. A positive consequence was that an efficient building industry, whose suppliers had for many years been delivering substantial quantities of such basic necessities as sand, gravel, cement, bricks, metal products and fabricated timber, was ready to accept orders for defence works – and skilled workers and labourers were readily available in the building trade, and on Labour Exchange registers.

Kent's pillboxes were built by numerous contractors, under Army supervision. One of the first contracts was placed on 24 June (the day *before* the Chiefs of Staff and War Cabinet approved Ironside's home defence strategy). Under Regulation 50 of the 1939 Emergency Powers (Defence) Act, landowners were obliged to permit defence works to be built anywhere on their property and were compensated for any loss of income incurred - for example, diminution of crop yields. In the case of the GHQ Line through Tonbridge, Regulation 50 applied mostly to owners of grazing land in the Medway flood plain and compensation payments were probably modest; elsewhere in the town, the defence works arose on Council-owned land at and near the castle.

To erect a pillbox typical of those around Tonbridge, up to 70 cubic yards of concrete had to be mixed on site for its solid concrete floor slab (*aka* raft), reinforced concrete roof and walls, and the central column supporting the roof, in a ratio by volume of one part cement, 2-3½ parts sand and 4-8 parts aggregate (gravel or crushed stone). Kent's pillbox builders were fortunate in that the county had abundant resources of sand and gravel in the alluvial deposits in the Medway and Stour valleys, and on Romney Marsh. Sand was required not only as an ingredient for concrete and mortar but to fill the hundreds of thousands of sand-bags needed to provide additional protection for the pillboxes, enclose weapon pits, make blast-walls for street shelters and public buildings, and offer to householders for their air-raid shelters and trenches.

Before the war, sand and gravel quarrying on an industrial scale was being pioneered in the Stour valley at Canterbury by Robert Brett and Sons Ltd and at Lydd, on Romney Marsh, by Ace Sand and Gravel. Both companies were supplying defence contractors in east and south Kent; even if they had sufficient production capacity to fulfil orders from Tonbridge as well - and enough lorries to deliver them - petrol usage (rationed since September 1939 and typically 1s.9d a gallon) and haulage costs would have been prohibitive. Each delivery trip of up to 50 miles would have taken two hours or more and the lorries would then have returned empty to collect another load.

To obviate relying on faraway quarries, it is likely that 'borrow pits' (temporary sand and gravel excavations) were opened in the Medway water meadows close to where the pillboxes were being built. Conveyors, lorries or perhaps barges carried the gravel from pit to site.

Tonbridge's quarrying industry did not expand until after the war, when vast pits were opened at Haysden and Postern, but in 1940 sand and gravel merchant G E Farrant Ltd of High Brooms no doubt had some local sources to help meet defence contract demands. Haulage contractor H J Goodman and Sons of

Avebury Avenue owned a fleet of steam and motor lorries and had road-rollers for hire, and was likely to have delivered aggregates and other heavy loads to the GHQ Line, and rolled tarmacadam or bituminous surfaces on roads serving military sites.

Kent was also rich in the raw materials required to make cement – chalk, quarried in the North Downs and clay, dredged from the Thames and Medway estuaries. 'Portland' cement (thus named due to its resemblance to Portland stone) was being mass-produced on Thamesside and in the Lower Medway Valley at the time war was declared. APCM's 'Blue Circle' works at Holborough was about 15 miles from Tonbridge by road and rail; delivery by barge along the Medway Navigation would also have been an option.

Mixing and placing concrete was labour-intensive and time-consuming, even with mechanical mixers which produced batches of about 120-litres (0.15 cubic yard) at a rate of one every 5-10 minutes. One batch equalled two wheelbarrow loads. To build a pillbox's walls and central supporting column, the loads had to be emptied into a bucket-hoist, lifted to heights of up to ten feet and poured into temporary shuttering (usually planks or corrugated iron) built around helical bars or other forms of steel reinforcement, shortages of which were sometimes overcome by using iron railings (officially purloined from parks and gardens to be forged into weapons of war) or even Slumberland bed springs!

Left: Concrete reinforcement and an embrasure revealed during the demolition of a FW3/24 pillbox after the war. From Pillboxes. A Study of the UK Defences 1940 (Cooper/Secker & Warburg 1985). *Above: FW3/24 pillbox on the Medway upstream from Tonbridge. (*©Clive Holden)

The concrete embrasures in the walls were cast on site in timber patterns, or pre-cast at Southern Railway's factory at Ashford where in peacetime fencing, footbridge components, gradient indicators, lamp posts, lineside gangers' huts, mile-posts, platform slabs, station name boards and much else were made for the region's railways. The factory was well placed to despatch embrasures to Tonbridge and other places where railways ran close to the GHQ Line.

Up to 500 batches (1,000 wheelbarrow loads) of concrete had to be made for each pillbox. Today, nine ready-mixed concrete trucks could deliver and pour 70 cubic yards (sufficient, say, for one of Tonbridge Castle's FW3/28 pillboxes) in a few hours.

Concrete reaches maximum strength after 28 days but it would have been safe to remove its shuttering after only a few days for use elsewhere. The horizontal strata still evident on the outer and inner faces of some of the pillboxes upstream from Tonbridge Castle were imprinted by the edges of the shuttering and reveal the number of successive 'pours' required to build the walls up to the required height. Where shortages of timber and corrugated iron shuttering occurred, permanent brick external shuttering was substituted, the bricks being laid as a single 'skin'. Nearly 80 years later some of the brickwork is in surprisingly good condition, considering the haste at which it was built.

Bricks were readily available in Tonbridge, whose seams of brickearth and Wealden Clay had been plundered by brick makers since the 19th century. Punnett and Sons' works off Woodfield Road (which had a capacity of 300,000 bricks a year as early as 1858) and at Quarry Hill (capable of making 100,000+ a week) would surely have met the needs of long sectors of the GHQ Line.

The efficiency of the whole pillbox project depended on the site supervisors, who as well as overseeing the work had to ensure the serviceability of cement mixers and the constant availability of equipment and consumables, including metal rod benders and cutters; petrol and lubricating oil; paint (for camouflage); shuttering; baulks of timber (for temporary access roads across soft ground); nails, screws, wire, nuts, bolts and washers; tarpaulins; hand-pumps; buckets; small hand-tools, picks, shovels, spades and saws; padlocks and keys (for site huts), water trolleys ... the list is almost endless.

And the cost? About £150 - £400 per pillbox, or £9,300 - £25,000 today (this and subsequent cost comparisons are based on historical inflation rates published on http://inflation.iamkate.com and www.thisismoney.co.uk).

Chapter Six: Ironside attacked and sacked

Despite Churchill's endorsement of his 'stop-lines' concept and encouraging comments over probably several brandies after their dinner on 29 May, Ironside was soon being criticised by the Chiefs of Staff and other senior officers. He was said to be encouraging a 'Maginot mentality', recalling France's formidable bunkered fortifications along its western borders that Germany had recently circumvented simply by invading through the Low Countries. He was told that any invasion battle should be fought and won on the coast, and that his GHQ Line was so far from the beaches that too much of Kent and Sussex would be sacrificed while retreating to it.

Ironside argued that the line was a final fall-back position, not one to which to retreat as soon as the 'coastal crust' was penetrated. He appreciated the importance of mobile forces but emphasized that those presently available were still untrained and inadequately armed, and could not be relied upon to halt advances across the hinterland. Hence his stop-lines.

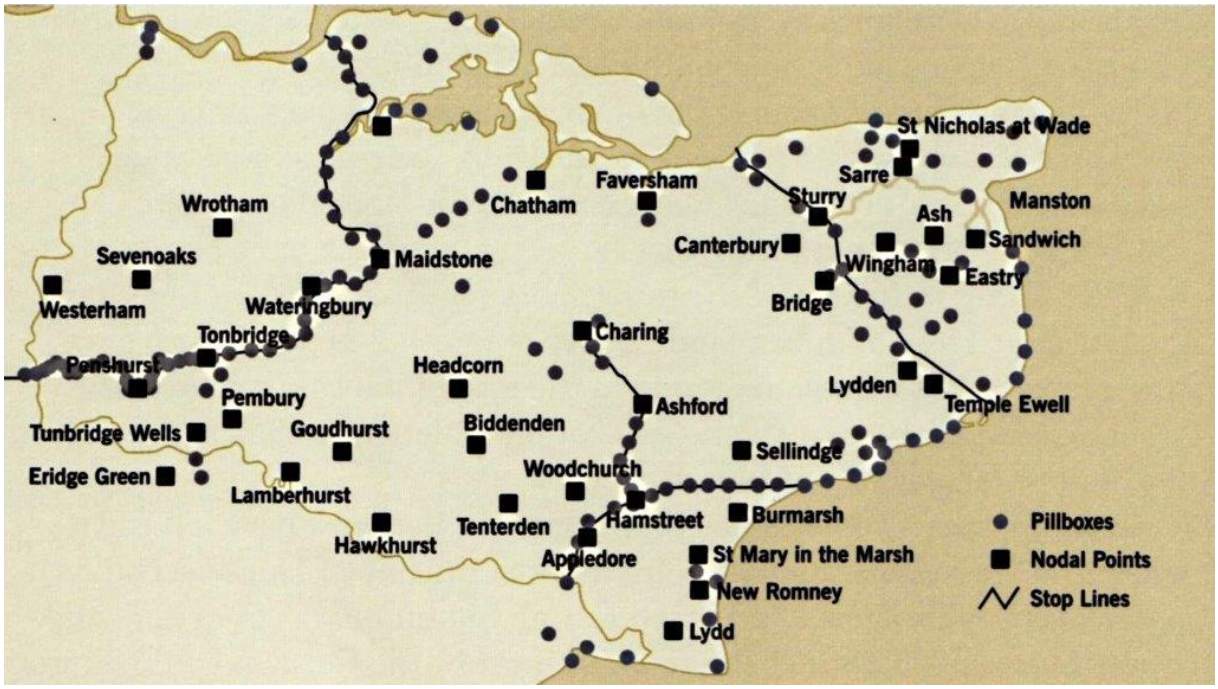
Among Ironside's fiercest critics were Lieutenant-General Alan Brooke, who on 26 June 1940 was appointed Southern Command's General Officer Commanding-in-Chief. Brooke begrudged the time and effort expended on 'static defences' (pillboxes and stop-lines) and instead demanded stronger investment in mobile reserves; he was particularly distrustful of road-blocks, considering them as likely to impede his own forces during a counter-offensive as much as they would hamper the enemy.

He was supported by Montgomery, who would play an increasingly imperative role in anti-invasion defence before embarking on his offensive campaigns in North Africa. He wrote, 'my whole soul revolted against allowing troops to get into trenches and become "Maginot minded" and incapable of offensive action'.

Montgomery argued his case with Churchill, who heard the same from Brooke while visiting Southern Command on 17 July. On 19 July Ironside was summoned to meet Anthony Eden, Secretary of State for War, who told him he was to be replaced as C-in-C Home Forces by Brooke, who had greater battlefield experience. Ironside retired after more than 40 years' military service with the rank of Field Marshal and was ennobled as '1st Baron Ironside of Archangel and of Ironside in the County of Aberdeen'. He left GHQ after only 54 days in office, his stop-lines incomplete but his place in the annals of home defence assured, although history has not treated him kindly; static defences were about all he could advocate at during his time at GHQ.

Brooke cleared his desk at Southern Command HQ on 20 July and embarked on inspections of the defences he had inherited. In a post-war addendum to his 1939-1945 war diaries he wrote, 'much work and energy was being expended on an extensive system of rear defence, comprising anti-tank ditches and pillboxes, running roughly parallel to the coast and situated well inland. This static rear defence did not fall in with my conception of the defence of the country. To my mind our defence should be of a far more mobile and offensive nature ... a light defence along the beaches, to hamper and delay landings to the maximum, and in the rear highly mobile forces trained to immediate aggressive action to concentrate and attack any landings before they had time to become too well established'. He added that he had every intention of spraying mustard-gas along the beaches.

He partially halted the construction of stop-lines in favour of 'nodal point' defences (*aka* 'anti-tank islands') at towns and villages on critical road and rail junctions; an invading army would be forced to capture these before it could advance. Tonbridge and Maidstone, on the GHQ Line, and Ashford, Canterbury, Dover and Folkestone, on or close to subsidiary lines, were selected as 'Category A' nodal points, to be defended to the last man and the last round.



Kent's strategic anti-invasion defences in 1940/41. (©Victor Smith, 2001)

The supplanting of Ironside's policy for Brooke's came at the beginning of the Battle of Britain. These were dangerous times in which to build pillboxes in remote countryside, far from any air-raid shelters. German civil aircraft carrying spy cameras had started photographing war targets in Britain in 1936 and by the summer of 1940 the *Luftwaffe* had 1:10,000 scale maps on which were marked hundreds of pillboxes and other positions; their pilots were well aware of the defences being erected in the fields below their flight-paths and had many opportunities to strafe and bomb them.

On 16 July, Hitler indulged in another bout of sabre-rattling in his *Führer Directive No. 16*, declaring: 'As England, in spite of her hopeless military situation, still shows no willingness to come to terms, I have decided to prepare and if necessary to carry out, a landing operation against her. The aim of this operation is to eliminate the English mother country as a base from which the war against Germany can be continued and, if it should be necessary, to occupy it completely'.

His *Operation Seelöwe* (Operation Sea Lion) envisaged an invasion along the Kent and Sussex coast. On 7 September, from their eyrie on the gatehouse, Tonbridge's Observer Corps counted 200 German aircraft heading north-west; they were part of a force of 350 bombers and their fighter escorts that became engaged in a tremendous dog-fight in which the RAF shot down 88 enemy 'planes and lost 22. It was the first day of the London Blitz.

William Oliver was one of the observers. 'His duties were between 6pm and 6am', his daughter Jessica recalled. 'There always had to be two men on duty together but owing to a shortage of trained volunteers sometimes each man had to complete a double duty. Some of this training involved me, because he often asked me to help him by holding up recognition cards showing the silhouettes of British and German aircraft'.

The 7 September raid prompted the Home Guard to issue the 'Cromwell' alert and, as a pre-arranged warning, church bells were rung all over England. Nevertheless 'Cromwell' proved to be a false alarm. On 17 September, realising he would be unable to defeat Britain in the air, Hitler postponed *Operation Sea Lion*, finally abandoning it in June 1941 to embark on *Operation Barbarossa;* what Churchill called 'Britain's darkest hour' (the 12 months following Dunkirk) had passed.

'It was a new phase of the war', wrote Brooke. 'As long as the Germans were engaged in the invasion of Russia there was no possibility of an invasion of these islands. It would now depend on how long Russia could last and what resistance she would be able to put up. My own opinion at the time and shared by most people was that Russia would not last long, possibly 3 or 4 months. It certainly looked as if Germany would be

unable to launch an invasion of England until October [1941] and by then the weather and winter would be against any such enterprise. It therefore looked as if we should be safe from invasion during 1941'.

Nonetheless, invasion defence planning continued apace, since the progress of the war was unpredictable and if Hitler conquered Russia he would likely have revived *Operation Sea Lion*. By the end of 1940 the Home Guard was a strong, efficient force – the comical capers of the likes of Captain Mainwaring's platoon were now just amusing memories – and capable of accepting more responsibilities at home, while Brook devoted his energies to converting his professional forces into armies capable of attacking the Germans in territories they occupied in Europe and North Africa.

Chapter Seven: 'Monty' takes command of invasion defence

In June 1940 Eastern Command's 12 Corps became responsible for defending Kent and Sussex, establishing its headquarters in requisitioned houses at 2, 10, 16, 21 and 32 Broadwater Down, a residential street on the edge of Hargate Forest, Tunbridge Wells. The corps' first General Officer Commanding (GOC) was Lt-Gen. Augustus Francis Andrew Nicol Thorne and its badge *(pictured left)* was tenuously linked to his name, featuring an oak, ash and thorn, evoking the chorus from Rudyard Kipling's *A Tree Song* - 'Of all the trees that grow so fair/Old England to adorn/Greater are none beneath the Sun/Than Oak, and Ash, and Thorn'. The fact that Tunbridge Wells is close to Kipling's 'Puck of Pook's Hill' country may also have inspired the badge's designer. While at 12 Corps, Thorne formed the '12 Corps Observation Unit', the prototype for the 'Auxiliary Units' guerrilla organization, prosaically called 203 GHQ (Reserved) Battalion, Home Guard. Shortly after he arrived at Broadwater Down, Thorne asked members of Lt-Gen. Andrew McNaughton's 1st Canadian Division to camouflage and fortify his HQ. Later, specialists in anti-tank warfare arrived to select sites for artillery and infantry positions for what eventually became part of the Tunbridge Wells nodal point.

Initially, post-Dunkirk, 12 Corps comprised the 1st London Infantry Division (later renamed 56th [London] Infantry Division) and, until October 1940, the 45th Division, but within a few months the corps' Order of Battle (its units and formations) also consisted of the 44th (Home Counties) Division; the 43rd Division, the 44th Division (withdrawn in April 1942 and replaced by the 53rd [Welsh] Division); and the Royal Artillery's 60th (North Midland) Army Field Regiment, 88th (2nd West Lancashire) Army Field Regiment and 74th Medium Regiment. As the war progressed, the Canadian Corps became attached to 12 Corps, as did the 1st New Zealand Division for a short time in 1940.

The 1st London had four brigades with three battalions from the Queen's Royal (West Surrey) Regiment, two from the Royal Fusiliers (City of London) Regiment and one each from the Oxfordshire and Buckinghamshire Light Infantry, the London Scottish Regiment, the London Irish Rifles, the Royal Berkshire Regiment, the Welch Regiment, the Coldstream Guards and the Grenadier Guards.

The 43rd Wessex Division had one brigade, the 128th Infantry, whose units were the 1/4th, 2/4th and 5th Battalion of the Hampshire Regiment and the 128th Infantry Brigade Anti-Tank Company.

The 44th Home Counties, transferred from Northern Command's 1 Corps, marshalled regiments from the home and southern counties into three brigades among which were three battalions of the Queen's Royal West Kent Regiment, three battalions of the Royal Sussex Regiment, two battalions of the Queen's Royal Regiment and one battalion of The Buffs (Royal East Kent Regiment).

Together the three divisions could muster about 50,000 troops to provide professional support for the rapidly expanding Home Guard battalions, which at full strength each averaged 800 men. Major-General Claude F Liardet's '56th London' and Major-General Robert Pollok's '43rd Wessex' were front-line forces, to attack along the corps' right (west) and left (east) flanks respectively, and had HQs at Leigh Green (two miles south of Tenterden) and Wye. The '44th Home Counties', based at Stede Court, Harrietsham, was held in reserve under the command of Major-General Brian Gwynne Horrocks, later chiefly remembered as the commander of XXX Corps in *Operation Market Garden*.

Billets and buildings were acquired all over Kent for Army living accommodation and offices, augmented by increasing numbers of Nissen hut camps when, from 1943, more and more troops arrived as the training policy switched from preparing to defeat Germany in southern England to invading occupied Europe. In Tonbridge, Fossian Hall in the High Street, Yardley Lodge in Yardley Park Road and houses in London Road were among the properties requisitioned.

In February 1941 changes in the Army's structure led to the formation of South-Eastern Command to take over Eastern Command's territory south of the Thames - Kent, Sussex, Surrey, Hampshire and Berkshire. At about this time, 12 Corps handed over responsibility for defending Sussex to 4 Corps. In April, Thorne was succeeded at 12 Corps by Montgomery, now a Temporary Lieutenant-General, whose personal quarters were at 69 Warwick Park, half a mile from Corps HQ.

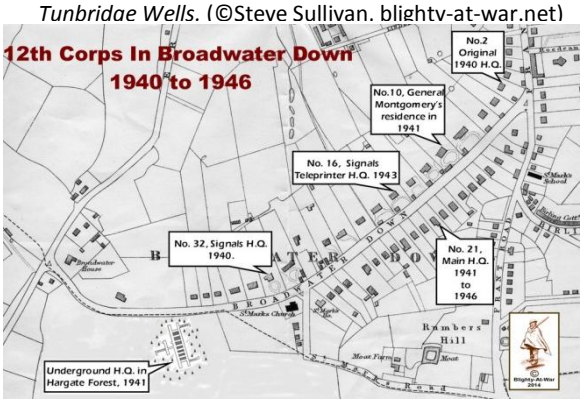
On 7 May he wrote to his friend Major Christopher ('Kit') Dawnay, saying: 'I rather fancy I burst into Kent like a 15in. shell!' Evidently he was none too impressed by Thorne's command of the corps.

From Broadwater Down, Montgomery imposed the same rigorous physical fitness and training regime he had enforced at 5 Corps – 'hard and tough', he wrote in his *Memoirs*, 'carried out in all conditions of weather and climate; in rain, snow, ice, mud, fair weather or foul, at any hour of the day or night – we must be able to do our stuff better than the Germans. Commanders and staff officers at any level who couldn't stand the strain were weeded out. Total war demanded total fitness from the highest to the lowest'.

In one of his first directives to his senior officers Montgomery wrote: 'They [their troops] will be made to understand that the only thing that is certain in battle will be uncertain. They will be taught to grasp rapidly the essentials of a military situation and do something about it quickly. They will be taught to act on verbal orders'.

Montgomery's military enclave at Broadwater Down was only yards from a complex of tunnels and underground chambers built for 12 Corps nearly 100 feet below Hargate Forest. The corps' activities, and the excitement of a visit by King George V1 on 13 June 1941, were the subject of much gossip in the town. After the war it was rumoured that the tunnels, in a part of the forest known locally as 'The Wilderness' (NGR TQ575375), led to a secret bunker, intended to be Montgomery's D-Day HQ.

Right: 21 Broadwater Down, the corps' main HQ, pictured in 2018. Next page: 12 Corps' premises in Tunbridge Wells. (©Steve Sullivan, blighty-at-war.net)



In 1969 the local *Courier* newspaper reported that a builder had discovered an entrance to the tunnels. This prompted readers with long but not necessarily reliable memories to 'reveal' their secret purpose. Asked by the *Courier* if he knew what the bunker was built for, Montgomery replied: 'I know nothing whatever of the underground D-Day HQ. It was not built for me and I never gave any orders for it to be built. I do not believe in such a Headquarters, they are wrong and bad for morale'.

Also in 1969, Mrs Hilary Finch, who lived at 10 Broadwater Down, wrote to Montgomery asking him to confirm that he had used her house during the war. He answered: 'I did indeed have my Corps HQ at No. 10 Broadwater Down in 1941, from 12th April to 17th November. On return from Dunkirk ... I was given command of 5 Corps, commanding all the troops in Hampshire and Dorset. That was in 1940. Then in 1941 the War Office became alarmed about a possible German invasion in Kent, so I was transferred to command 12 Corps and had under my command all the troops in Kent, which was then known as Invasion Corner'.

Research by Steve Sullivan, published on www.blighty-at-war.net in October 2018, finally disclosed the 'secrets' of the bunker, 77 years after it was built. Montgomery had been economical with the truth in 1969 (mid-way through the Cold War) when he spoke to the *Courier*. Perhaps he assumed the bunker was still subject to the Official Secrets Act and the less said about it, the better, but the War Diaries of the Royal Engineers' 172nd Tunnelling Company recorded on 11 May: 'No.1 Section proceeded to Tunbridge Wells as advance party (approx. 30 men from Aldershot)'; on 19 May: 'The work on the 12th Corps dug-out at Tunbridge Wells was officially taken over by 172nd Tunnelling Company'; and on 19 July: 'Tunnelling operations on the 12th Corps shelter at Broadwater Down is now completed'.

In September 1941 the company moved to Sarre, on the Isle of Thanet, to construct underground headquarters for a Canadian Army brigade assigned to South-Eastern Command. The fitting-out of the Broadwater Down bunker was completed by 12 Corps and occupied by its Signals Division in 1942.

Montgomery was CO of 12 Corps for eight months (from April to December 1941) and it is inconceivable that he was not aware of the bunker. It was an element in Lt-Gen. Brook's new strategy for the defence of southern England, in which Montgomery had a vital role, and would have been essential to the corps' operations had the enemy succeeded in advancing this far inland, only eight miles south of the GHQ Line. The bunker was in a clearing directly alongside the road (guarded, no doubt, by the Military Police) and its entrances and spoil heaps would have been camouflaged to prevent detection from the air.

Right: Generals Brook and Montgomery with Winston Churchill.(®IWM)

There was probably a large Army camp within the forest, unless the sappers were billeted in nearby houses. Up to 120 men worked in the tunnels at any one time, while vehicles hauling machinery and carrying heavy construction materials - cement, aggregates, bricks, steelwork, timber props - were continually turning off the arterial roads skirting Hargate Forest (the A26 Eridge Road and A267 Frant Road) and passing Montgomery's HQ. He and his officers would have had meetings with their Royal Engineers opposite numbers, possibly entertaining them in their mess at 10 Broadwater Down, and the other ranks would surely have socialised at the local pub! The tunnels are not the only legacy of the Army's occupation of Broadwater Down. As recently as April 2019 a cache of hand-grenades, Home Guard, for the use of, was found in a nearby garden. The Royal Logistic Corps disposed of them in a controlled explosion.

Top of page: one of the three blockhouses that defended the entrances to 12 Corps' bunker. Left: top of the stairs leading from the blockhouse into the bunker. Above: the flooded main tunnel in 2002.
(© Nick Catford, Subterranea Britannica)

* * *

Chapter Eight: Tonbridge becomes a 'fortress town'

Montgomery's immediate superior was Lt-Gen. Bernard Paget, General Officer Commanding-in-Chief (GOC-in-C) of South-Eastern Command, who on 13 October 1941 issued his *South-Eastern Command Appreciation for the Spring of 1942* to his corps commanders - Montgomery; Lt.-Gen Francis Nosworthy (4 Corps) and Lt.-Gen Andrew McNaughton (Canadian Corps). Germany's armoured divisions were now four months into their invasion of Russia and advancing rapidly on Moscow. Brooke's view that Russia would be defeated in 3-4 months still prevailed, so he and his commanders revised their plans, in which in a subtle change of emphasis the troops were told their duty was to 'counter-attack' in the face of an invasion; the accent now was on 'offence' instead of 'defence'. The words 'defend' and 'retreat' were seldom mentioned by Paget and Montgomery.

Paget's stated objective was to prevent the enemy establishing a bridgehead through which its main attack could be supplied and reinforced; and if that failed, to break up its main thrusts towards London and counter-attack to recapture the bridgehead.

Several 'nodal point' towns under Paget's command had already been developed into 'fully tank-proof localities'. He now announced that Tonbridge and Maidstone would be similarly upgraded as 'fortress towns', with augmented defences within perimeters defined by tank-traps and anti-tank ditches. 'The object of the nodal point system', Paget wrote, 'is to delay the enemy's advance, if he should obtain a temporary success, until our reserve formations can be brought into action ... *there will be no withdrawal in any circumstances and all ranks must be determined that every German who succeeds in setting foot in this country shall be killed'.*

Tonbridge Council was briefed on the town's role in this scheme, resolving that because its inhabitants would not be allowed to leave the nodal point during 'military operations' it was imperative to provide them with shelters. It was further decided, rather unnecessarily it would seem, that 'within the nodal point, protection must be provided for 100% of the civil population without any regard to their financial position'.

On 4 January 1942 estimates were published for completing defences already approved and augmenting them with others in order to create 'Tonbridge Fortress, with the castle as garrison HQ. The new works were marked out on a 25-inches to the mile plan, dated December 1941, showing where they were to be positioned along and within the town's defended perimeter.

The total cost, excluding work to be done by Army labour, was estimated at £16,000 (about £768,000 today). The allocation for the perimeter covered 150 anti-tank concrete cubes (£3,000); four more pillboxes (£1,600); modifications to three existing pillboxes (£150); 13 road-blocks (£650), and tree-felling (£200). The anti-tank ditch was to be extended by 1,200 yards, and 500 yards of the river deepened.

Additions to 'The Keep' (aka castle) were itemised as 100 concrete cubes (£2,000); two pillboxes (£800); nine road-blocks (£450); modifications to two pillboxes (£100), and a 'tunnelled HQ at Command Post' (£300). Anti-tank obstructions were to be enhanced by digging a 140 yard ditch and deepening 90 yards of the river (doubtless the stretch south of the castle).

'Spurs' to the defences consisted of 150 more cubes (£3,000); 11 road-blocks (£550) and three 'minor' blocks (£150), while east of the town provision was made for one road-block (£50) and a 750-yard anti-tank ditch.

The total number of road-blocks in the estimates came to 39. A year earlier, 14 had already been set up; Tonbridge Council noted on 2 January 1941 that the cost of lighting them with 101 hurricane lamps amounted 'to no less than £8 a week'.

One of the contractors for the 1942 works was Chittenden and Simmons Ltd, who on 3 February asked Tonbridge Council for permission to operate concrete mixing depots on parts of the carriageway in Portman Park, in north-east Tonbridge, and The Crescent, in The Slade area north of the castle; and to erect two small offices for their foreman and clerk in the castle grounds opposite The Slade School. Permission was granted, 'subject to arrangements being made to the surveyor's satisfaction, the contractors making good any damage, lighting any obstructions during the hours of darkness and the site being cleared at any time upon

demand by the Council'. The depots' purpose was clearly to produce concrete for tank-traps and road-blocks. A demand by the Council to 'clear the site on demand' would surely have been met by a frosty refusal from the CIC Home Forces!

Chittenden and Simmons, whose head office was in Maidstone, was founded by Edmund Barrow Chittenden and Percy A. Simmons and carried out large road-building contracts for Kent County Council and London County Council.

Not all the defences in Paget's 'appreciation' went ahead. In December 1941, the very month in which it was being drafted, Brooke succeeded Field Marshal Sir John Dill as Chief of the Imperial General Staff and Paget became Commander-in-Chief Home Forces. A few weeks later, In February 1942, Brooke ordered that pillbox construction should cease, affecting most, probably all, of those in the 4 January estimates for Tonbridge Fortress. However, post-war aerial photographs show that the anti-tank ditch along the perimeter was completed, in most respects following the lines marked on the plan.

Any pillboxes completed for 12 Corps along the Medway and elsewhere before Brooke issued his order had to meet a higher specification than their predecessors by having walls at least 3ft 6in. thick, capable of withstanding onslaughts by 37mm anti-tank guns. Selected anti-tank pillboxes had 8ft thick walls; existing pillboxes were brought up to standard by having a 3ft 6in. wall built on their most vulnerable side.

In December 1941, Montgomery succeeded Paget as CO of South-Eastern Command, which to evoke a more aggressive intent than 'command' was renamed (with his enthusiastic approval and possibly on his initiative) the 'South-Eastern Army' and was responsible for Kent, Surrey and Sussex. Contrary to what he told Mrs Finch in 1969 ('at no time ... did I ever have an HQ underground') his centre of operations occupied a network of tunnels under Reigate Hill, as well as houses in Underhill Park Road and Beech Road; Montgomery would certainly have known about this complex and visited it regularly in the early months of the war and when it was extensively enlarged in the winter of 1940.

The proposed 'tunnelled HQ at Command Post' at Tonbridge Fortress would have been needed only in the most dire circumstances imaginable, with 12 Corps' HQ at Broadwater Down and other forward positions under enemy attack or even control, and Tonbridge's garrison of professional and Home Guard soldiers desperately following orders to hold out to the last man and the last bullet.

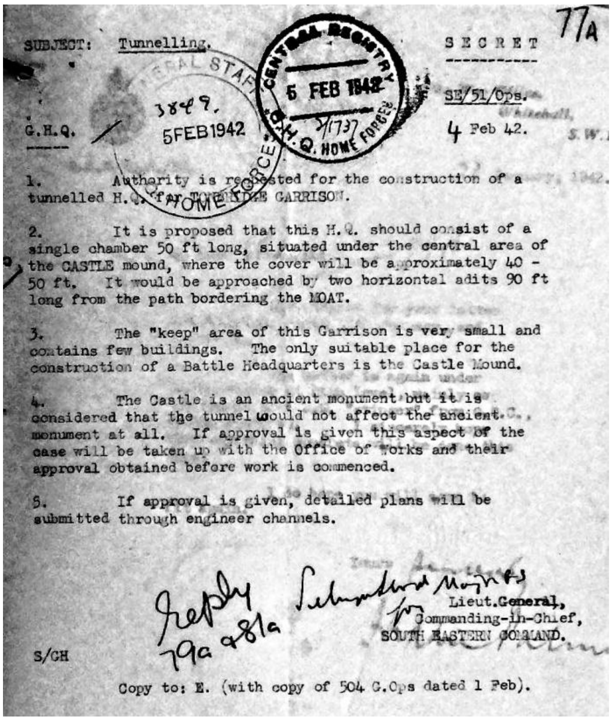
In a memo to GHQ dated 4 February 1942, requesting permission to build the HQ, Montgomery said: 'It is proposed that this should consist of a single chamber 50ft long, situated under the central area of the castle mound [the Norman 'motte'], where the cover will be approximately 40-50 ft. It would be approached by two horizontal slits 90ft long from the path bordering the Moat.

'The Keep area of this Garrison is very small and contains few buildings. The only suitable place for the construction of a Battle Headquarters is the Castle Mound. The castle is an ancient monument but it is considered that the tunnel would not affect [it] at all. If approval is given, this aspect of the case will be taken up with the Office of Works [the government department that requisitioned property for wartime use] and their approval obtained before work is commenced'.

This is a surprising proposition, considering Montgomery's opposition to tunnels, but the mound was not violated.

Tonbridge Castle's Norman mound, where Montgomery proposed to build a tunnelled HQ.

Montgomery's successor as CO of 12 Corps was Lt-Gen. James Gammell, whose divisions and various subsidiary units were training for offensive operations overseas but nonetheless, like the Army everywhere, had strategies in place in case Hitler sprang a surprise in 1942 by reviving *Operation Sea Lion*. On 26 March 1942 Gammell issued his *12 Corps' Plan to Defeat Invasion*, emphasizing that east Kent was 'the most attractive area' for an invasion. Offensive action was to be taken against any penetration of beach defences or airborne landings. In the event of infiltration inland, six vital 'fortresses' [the strengthened 'nodal points' or 'anti-tank islands'] were to 'hold firm indefinitely', acting as 'hinges or pivots of manoeuvre' for forces engaging in counter-offensives.



77A

SUBJECT: Tunnelling.

SECRET

G.H.Q.

SE/51/Ops.

4 Feb 42.

1. Authority is requested for the construction of a tunnelled H.Q. for TONBRIDGE GARRISON.

2. It is proposed that this H.Q. should consist of a single chamber 50 ft long, situated under the central area of the CASTLE mound, where the cover will be approximately 40 - 50 ft. It would be approached by two horizontal adits 90 ft long from the path bordering the MOAT.

3. The "keep" area of this Garrison is very small and contains few buildings. The only suitable place for the construction of a Battle Headquarters is the Castle Mound.

4. The Castle is an ancient monument but it is considered that the tunnel would not affect the ancient monument at all. If approval is given this aspect of the case will be taken up with the Office of Works and their approval obtained before work is commenced.

5. If approval is given, detailed plans will be submitted through engineer channels.

Lieut.General,
Commanding-in-Chief,
SOUTH EASTERN COMMAND.

S/GH

Copy to: E. (with copy of 504 G.Ops dated 1 Feb).

Folkestone and Dover, the coastal fortresses, were to be held by an infantry brigade, Tonbridge and the three other inland fortresses by 'special garrisons'.

The Home Guard was assigned a vital role in the plan and would restrict enemy movement by defending its own towns and villages throughout Kent; setting up observation posts and small scouting parties to report air landings, and assembling a pool of 'expert local guides' at every village post office for the Regular Army.

Gammell stressed: 'These plans will not be called Defence Schemes since this is liable to induce a defensive mentality. They will be called "Plans to Defeat Invasion"'.

Left: Montgomery's proposed 'tunnelled HQ.

Left: What-might-have-been. An imaginary enactment of a guard on duty at the entrance to Montgomery's proposed tunnelled HQ beneath Tonbridge Castle's Norman motte. Staged at New Tavern Fort, Gravesend, by Home Guard re-enactor Bill Simmons. (©Victor Smith)

By January 1941 Tonbridge was within 12 Corps' Maidstone Sub-Area, whose subordinate units and Home Guard battalions received on 13 April 1942 a 52-page manual, headed *Maidstone Sub-Area Plan to Defeat Invasion*, to guide them when preparing their own defence plans for their sectors. Many of the tasks demanded would have been carried out by the Home Guard, while behind enemy lines their compatriots in Churchill's secret Auxiliary Units were conducting acts of sabotage and guerrilla warfare against enemy-occupied territory.

In his preface, the area's brigade major wrote: 'The enemy cannot hope to succeed in subduing this country until he has established a large and secure bridgehead covering a short and well-protected sea crossing. Enemy action on invasion is likely to include parachute or airborne landings, probably at night, with the object of ... capturing aerodromes ... attacking coast batteries from the rear ...securing landing grounds ... attacking HQs; and heavy attacks by armoured and infantry formations landed by sea and directed on London'. The primary role of the area's troops were:

- To hold the Fortresses, Nodal Points, Defended Localities and Defended Villages.
- To protect vulnerable points.
- To maintain aerodromes intact.
- To deny resources likely to be of use to the enemy, and
- To locate, contain and destroy airborne troops.

'All ranks must be imbued with the offensive spirit and trained to regard the defences as:

- A means of inflicting heavy losses upon the enemy in his first rush.
- A means of denying to the enemy avenues of approach through which he must NOT pass.
- Pivots round which reserves can manoeuvre to exploit enemy failures and temporary disorganisation.

The underlying principle will be that every German who sets foot in the Maidstone Sub-Area will be destroyed. There will be NO WITHDRAWAL AND NO SURRENDER'.

The battle stations throughout the sub-area (redesignated 'Maidstone Sub-District on 15 May 1943) were defined, those within the Tonbridge Home Guard battalion's district being:

- Kent Fortress 2 (Tonbridge), commanded by Lt-Colonel H R Phipps and manned by Regulars and 380 Home Guards.
- Kent Nodal Point 8 (Pembury), a 'strongly defended locality' capable of withstanding isolation for 3-6 days.
- DL 39 (Southborough), a 'Defended Locality' less important and less strongly held than Nodal Point 8.
- Eight 'Defended Villages'. where a small Home Guard force would be ordered to delay the enemy. The villages and their HG strength were: Ashurst (16), Bidborough (23), Burrswood and Groombridge (28), Five Oak Green (51), Fordcombe (26), Langton Green (27), Speldhurst (28) and Tudeley (33).

A Triumvirate of Army, Police and Tonbridge Council leaders was ready to direct emergency precautions in Tonbridge and Pembury when enemy forces were reported to be advancing, and was authorized to commandeer premises and control essential services and supplies. Tonbridge's new Telephone Exchange in Avebury Avenue, opened in 1939, was identified as a category VP4 (Vital Premises) property, to be protected by the Home Guard from sabotage and airborne attack.

The railway through the town would be both an asset and a liability in an invasion, enabling reserve forces and munitions to be moved quickly across the county but, if captured. allowing the enemy to do likewise. Armoured trains allocated to the 43rd Wessex and 56th London divisions would be sent to places where airborne troops had landed, with orders to attack them before could form organized bodies. An assault along Tonbridge's railway lines would have been opposed by the 56th London's trains, based at Ashford.

Despite Gammell's order that there should be '*NO WITHDRAWAL AND NO SURRENDER',* contingency plans allowed for a tactical withdrawal if enemy columns captured the town's southern approaches, across which run railway lines from the Channel ports, the Sussex coast and Surrey.

The plan, appropriately code-named 'Action Stations', made 'L' Company of the 1st (Southern Railway) Battalion of Kent Home Guard, based at 232 Shipbourne Road, responsible for closing and protecting Tonbridge Station. All its locomotives were to be evacuated or immobilised, to prevent them falling into enemy hands, rolling stock to remain in place since without engines they would be of no value. Beyond the station, rail-blocks would be erected to prevent tanks making detours around road-blocks and advancing along the railway tracks. The defending troops were under orders to be ready at not more than one hour's notice to man the rail-blocks, which would be closed only in the 'immediate face' of the enemy or when local commanders received instructions from 12 Corps, the guard of the last train or the driver of the last locomotive on the line having handed a 'Last Train' order to the rail-block's commander, who would then notify the sub-area's HQ that the line was closed.

The railway was Tonbridge's last line of defence south of the GHQ Line and the invaders would have faced heavy opposition from field guns positioned on bridges, cuttings and embankments. Had they captured the road bridge alongside Tonbridge Station and pressed on up the High Street towards Tonbridge Fortress, 600 yards away, the battle would have been fought from barricades, barbed wire entanglements and improvised infantry positions in adjacent properties. Heavy armoured vehicles would have been confined to the main street; the contiguous twisting, narrow side roads, unsuitable for tank warfare, would have become the scene of infantry incursions and desperate street-by-street resistance. Weapon embrasures cut into the walls of buildings for this purpose can still be found in some towns in southern England, but not Tonbridge.

If in the final moments of Tonbridge Fortress's defiance the Big Bridge could no longer be defended it would have been blown-up.

Tonbridge Station in 2019: in 1940 the railway tracks would have been a last line of defence south of the GHQ Line.

Exercise 'CASTLE'

The long awaited Second Front demanded by Stalin to divert German forces from the Eastern Front was launched by an Allied assault on the Fortress of Europe in July 1943.

'General risings of the civil population in occupied countries coincided with this attack and by the end of June the Axis situation had become such that a diversion to relieve the pressure of the main Allied thrust was essential.

'On 6 July intelligence reports indicated that the German High Command had decided to strike at SE England with the object of disrupting communications, destroying port facilities, airfields and ships, in an attempt to strangle the Allied effort at its source.

'On 10 July a large proportion of the remaining *Luftwaffe* reserves were committed and a heavy and sustained air attack on SE England occurred. Considerable damage to road and railway communications between London and SE Coast resulted.

'During the night of 13/14 July enemy raids on a large scale were attempted in SE England. About one Division, largely mechanised, landed between HASTINGS and RYE and a similar force effected a landing in WHITSTABLE BAY.

'Small numbers of paratroops were dropped at the same time at scattered inland points in KENT and at first light on 14 July numbers of Junkers bombers, Messerschmitts (323) and towed troop-carrying gliders were intercepted crossing the KENT coast.

'In spite of heavy casualties the airborne attack was pressed home and landings in force were effected in areas WINGHAM (6,875), ASHFORD (4,461), MAIDSTONE (1,862), PADDOCK WOOD (1,063) and EDENBRIDGE (8, 865). At 1000 hrs on 14 July, Triumvirates in KENT assumed their invasion plans on orders of the Regional Commissioner and at 1630 hrs on 14 July the MSD authorised closing of road blocks and disruption of petrol in TONBRDIGE and elsewhere at discretion of local commanders'.

* * *

The above extract from the War Diaries of 12 Corps' Maidstone Sub-District (MSD) set the scene for Exercise 'Castle,' held at Tonbridge from 8 – 11 pm on Thursday 15 July 1943 to test the ability of the town's Triumvirate to respond to an imminent invasion. MSD officers controlled the exercise and appointed Directing Staff and Umpires, who held a planning conference in Tonbridge on 2 July.

The exercise indicates that even after the tide of war had turned against Germany, invasion precautions remained in place in southern England – in this case, to resist a counter-attack against forces mustered there to support an assault on occupied Europe.

The Triumvirate's Army, Police and Council representatives ran the exercise from the Council Chamber at Tonbridge Castle, liaising with military commanders at Tonbridge Fortress HQ and its outposts, and with Police HQ in Bradford Street, Civil Defence HQ's Control Room in the High Street, and National Fire Service control rooms at Castle Street and Quarry Hill.

All incidents, irrespective of the Service involved, were coordinated by Fortress HQ and initiated either verbally or by messages by the Military, Police, CD or NFS member of the Directing Staff, according to the Service affected. Military incidents were instigated both at Fortress HQ and its outposts.

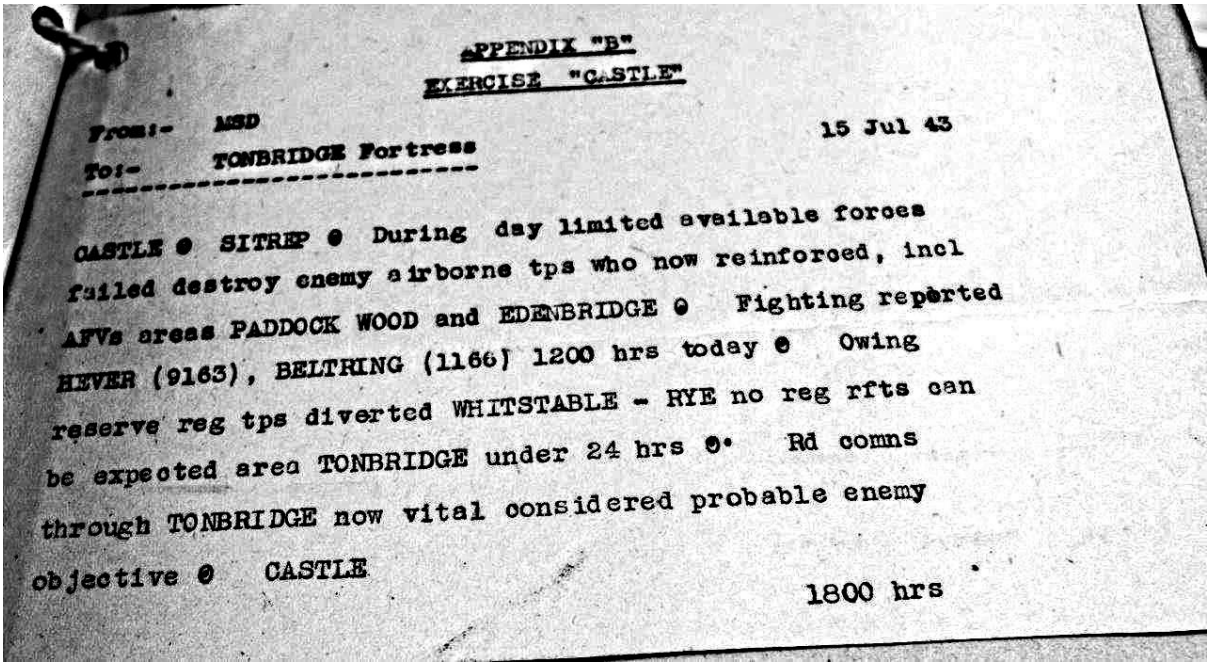
Police incidents were initiated 'as and when required'; others requiring Police action 'arose during the course of Military events' and were dealt with through 'normal channels'.

CD incidents were also initiated 'as and where' required, whilst NFS incidents were initiated at the service's HQ.

The following instruction was issued to all participants: *'To avoid unreality, the incidents produced will be such as might occur during an isolated period of three hours under Invasion conditions and NO attempt will be made to achieve a "happy ending".*

No such attempt was made. More than 23,000 airborne troops were assumed to have landed across the county. The exercise's final communiqué, issued at 6pm on 15 July, stated that they had been reinforced by AFVs that had penetrated as far inland as Paddock Wood and Edenbridge. Battles were being fought at

Hever and Beltring and because the Regular Army's reserve troops had been diverted to the coast, none could be expected in Tonbridge in under 24 hours. The town was now considered to be a vital enemy objective.



APPENDIX "B"
EXERCISE "CASTLE"

From:- MSD
To:- TONBRIDGE Fortress

15 Jul 43

CASTLE ● SITREP ● During day limited available forces failed destroy enemy airborne tps who now reinforced, incl AFVs areas PADDOCK WOOD and EDENBRIDGE ● Fighting reported HEVER (9163), BELTRING (1166) 1200 hrs today ● Owing reserve reg tps diverted WHITSTABLE - RYE no reg rfts can be expected area TONBRIDGE under 24 hrs ●. Rd comns through TONBRIDGE now vital considered probable enemy objective ● CASTLE

1800 hrs

Exercise Castle: the final communiqué. (Maidstone Sub-District War Diary)

*****The 'disruption of petrol in TONBRIDGE' ordered during Exercise 'Castle' applied to Tonbridge sector's fuel depot at Hall Place, Leigh and 12 Corps' Command Petrol Depot (CPD). The latter was in Somerhill Park (NGR TQ608451), the extensive grounds of Somerhill, a Jacobean mansion 1½ miles south-east of Tonbridge. The Army occupied the park from 1940 until 1949, for part of which time it was a prisoner of war camp for German and Italian interns as well as a petrol depot.

Exercise 'Castle' confirms that even while plans to invade occupied Europe were reaching an advanced stage (and would be implemented within a year), a strategy had to be in place to confront a German counter-invasion of our shores. In pursuit of this, on 18 January 1944 (less than five months before D-Day), staff officers of Maidstone Sub-District issued a Defence Plan for the CPD.

Its purpose was 'effectively to protect the whole area' and 'clearly to lay down the action to be taken in emergency by its personnel'.

The 'type of enemy action to be expected' was defined as 'an attack in strength with the object of capturing the CPD intact and only likely in the event of full-scale invasion', and 'local limited attack by air troops to destroy stocks of POL [petrol and oil liquids]'.

The CPD was to 'continue to function during operations. It will be defended and kept working until the enemy has been defeated'. Stocks of POL will NOT be destroyed except in the circumstances set out in Operational Instruction No. 18, issued on 20 October 1943' [a revision of the 13 April 1942 *Maidstone Sub-area Plan to Defeat Invasion*].

Warning of an attack was to be passed by word of mouth, and three 'states of readiness' were described:

- 'NORMAL – Invasion unlikely but raids or sabotage always possible.
- 'STAND TO' – Conditions favourable and invasion considered imminent. Complete state of readiness for all Reg tps [Regular troops] and certain HG [Home Guard]. All troops will be at half an hour's notice. Leave personnel will NOT be recalled but further leave will NOT be granted. Battle HQ will be established in the Dep [depot] office and will be manned at all times, maintaining 24hr phone watch. Unfinished defence works will be completed ... all troops will carry, or have immediately available, steel helmets ... rifles ... and respirators'.

- ‘ACTION STAS’ – Ordered when there is an immediate threat of invasion. Complete state of readiness for all Services. Action on receipt of warnings: as for STAND TO with the addition of OPS [observation posts] and Def [defence] posts will be manned continuously ... fire-fighting party will stand by and deal with any outbreak of fire within the depot. The normal working of the depot will continue and POL will be issued on demand in the usual way.

In the event of an invasion, ‘Air-troops landing in the CPD or in the immediate vicinity will be destroyed by the depot mobile reserve before they are able to reorganize. If their strength is too large to enable this operation to be undertaken, they will be contained by fire until such time as a relief column can be send to destroy them. Enemy approach to the CPD will be denied by fire. If destruction of stocks takes place, remaining personnel will move to TONBRIDGE and come under Fortress Command’.

Eighty years later, no traces of Somerhill’s wartime past survive. In 1945 some of the Army huts were taken over by squatters, until the estate was reclaimed by its pre-war owners, the d'Avigdor-Goldsmid family; John Betjeman, Hugh Casson, David Niven and Enoch Powell were among their distinguished house guests. The mansion and grounds are now occupied by three schools, known as ‘The Schools of Somerhill’.

Chapter Nine: 'Scorched earth' plan for

Maidstone Sub-Area's *Plan to Defeat Invasion* included detailed instructions for 'Denial of Assets to the Enemy', a schedule of disruption, destruction or evacuation intended to prevent advancing invaders acquiring essential supplies abandoned by the defenders; these 'scorched earth' commands were somewhat at odds with Paget's instruction 'there will be no withdrawal in any circumstances'.

Petrol and oil were a priority, the aforementioned petrol and fuel depots being especially vulnerable if the enemy seemed likely to capture the GHQ Line. In this case, full 'Jerrycans' were to be evacuated, 'time permitting', otherwise 'destroyed by burning'; Army and commercial petrol pumps to be disabled and the pipes from the storage tanks beneath them sealed with concrete and lead wool; manhole covers to be locked (and their keys hidden); and the sludge-cocks on overhead tanks to be opened, allowing their contents to be drained to waste, 'special care' being taken to avoid contaminating water supplies.

Tonbridge South Suburban Gas Company's gas works at Old Cannon Wharf were to maintain production unless damaged, in which case all surface tanks of gas oil motor fuel, one of its by-products, were to be burned in-situ or discharged into a bund or pit and set ablaze. Underground tanks were to be blown up. Gas works also stored Benzol motor fuel, known to be used by German AFVs, so this was to be mixed with tar and thus rendered unusable. Farmers were to drain their surface tanks of Ferosence tractor fuel to waste and seal their underground tanks.

Road tankers should be operated 'until the last possible moment' and then immobilised, drained and either overturned or punctured. One of Kent's largest fleets of tankers was operated by South-Eastern Tar Distillers ('SETAR') of Vale Road, Tonbridge, and Broad Oak Road, Canterbury. The firm bought crude tar from gas works in Kent, Sussex and Surrey and converted it into road tar, creosote and hop fumigant.

Rail tankers of motor spirit were to be overturned (after opening their filling hatches) by raising their sides by '2ft 5in' [sic], using 'manpower or block-and-tackle'. Alternatively they could be emptied to waste through their drain-cocks or punctured 'in about 15 minutes with a cold chisel and hammer', although 'the simplest method' would be to 'throw a sticky-bomb grenade at its end-plate'.

Top picture: a 'SETAR' road tanker, photographed in 1938. (®Brett Group) *The Gas Works (right) were to be blown up if damaged by enemy action. The Telephone Exchange (left) was to be protected from sabotage and airborne attack.*

Tonbridge Council's electricity generating station at The Slade, housing three steam-powered generators and a 100kW diesel generator, was to be 'denied' if damaged by enemy action or 'for other reasons [was] no longer capable of serving the civilian population'. Wood, wool, straw, 'tar torches' and other flammable materials were stored there, to start fires in its buildings.

Below: Tonbridge electricity generating station's engine room, built in 1901 and decommissioned in 1951.

The town's river craft, which ranged from rowing boats to 90-ton seaworthy barges, were to remain moored at specified collecting points, ready to be scuttled if likely to be appropriated by the invaders to make pontoon bridges or to ferry troops along the Medway. Vessels needed to carry goods, passengers, soldiers and emergency service personnel were exempt. Although not mentioned in this plan, at the last resort Town Lock – the highest on the Medway Navigation from the Thames Estuary – would surely have been destroyed, to prevent it being seized by the enemy as site for a temporary bridge if its infantry and AFVs had been unable to capture Big Bridge and Cannon Bridge, respectively upstream and downstream from the lock.

Town Lock, collecting point for river craft to be denied to the enemy at all costs, pictured in 2019.

All troops including the Home Guard in the sub-area were under orders to defend the localities in which they were quartered against parachute and airborne troops. By day, the aggressors were to be located and destroyed quickly, before they had time to become an organized force; at night they should be located, contained 'and destroyed at first light'.

Primary road-blocks (those at Tonbridge Fortress and nodal points) and Secondary road-blocks (at the less important Defended Localities and Defended Villages) would be manned by at least one NCO and four men. Demolition parties were given precise instructions as to when and how bridges should be demolished.

A chilling appendix to the directive covered evacuation procedures to be implemented in places faced with imminent enemy occupation: 'It is impracticable to clear the entire civil population from all areas where fighting may take place. Pre-evacuation schemes are therefore confined to areas which are most likely to be beaten by the fire of our own and the enemy's weapons, such as ... certain nodal points'.

One of these was, of course, Tonbridge, newly upgraded to Fortress status, where the civilian population was to 'stand firm, even when operations are in progress and an emergency organization has already been set up to allow civilian life to continue in some form under these conditions. When bombing or fires make it impossible for the population to remain in their homes any longer they will be directed by the civil police to the nearest available Rest Centre and absorbed locally'.

At Tonbridge a 'bolt' (exclusion zone) 200 – 500 yards deep would be formed around a defended position defined by the local military commander, from which civilians would be evacuated to other parts of the town. Those made homeless by the battle 'will be shepherded by the civil police to the nearest rest centre' [of which there were more than 300 in 12 Corps' area] 'where food, shelter and sanitary facilities will be available ... homeless civilians will if possible be billeted or otherwise absorbed in the vicinity.

'The object of these plans is to help homeless civilians on the ground by providing the necessities of life and to prevent them from getting on the roads and becoming refugees.

'*Under no circumstances will local arrangements be made for the evacuation of refugees or for refugee routes'.*

Clearly, the authorities were anxious to prevent refugees from fleeing in the face of the enemy, as had been the case in Holland and Belgium two years earlier.

* * *

These plans were impressive in scope and detail but some of the 'denial of assets' aspects would have been derided by General Montgomery, who wrote in his *Memoirs*: 'I rebelled against the "scorched earth" policy which had advocates in Whitehall; their reasoning was that as the Germans advanced inland towards London,

so we would burn and destroy the countryside as we retreated. I said we would *not* retreat, nor would the Germans advance inland. Thus our confidence in our ability to defeat the Germans was built up, at any rate in the area under my command'.

The brigade major who issued the 'scorched earth' plan to Maidstone Sub-Area was the chief of staff of one of the 12 Corps' brigades, whose CO reported to General Gammell, commander of 12 Corps – and Gammell's immediate superior was General Montgomery at South-Eastern Army HQ. So despite 'Monty's 'rebellious' opposition to 'burn and destroy', it became a contingency against failure to prevent the Germans advancing inland.

In April, when the plan was conceived, 'Monty' was preoccupied with scheduling the following month's Exercise 'TIGER' (not to be confused with the 1944 D-Day rehearsal of that name), a programme of protracted anti-invasion manoeuvres in which 100,000 troops were involved. This, perhaps, is why he did not take time to veto the plan. In any case, it became obsolescent almost as soon as it was created, as did the estimates for reinforcing Tonbridge's defences and Montgomery's proposed tunnelled HQ at the castle. In December 1941 America had declared war on Germany; by the time General Gammell and his commanders issued their plans to defeat invasion, thousands of US troops had already arrived in England to prepare to invade occupied Europe.

Soon their numbers would reach 1.5 million. Fears of an invasion of England were further dispelled later in 1942 when Hitler, fighting on two fronts and abandoning all thoughts of invading England, launched his ill-fated onslaught on Stalingrad and was defeated by Montgomery's 'Desert Rats' at the Second Battle of El-Alamein - a victory described by Churchill as 'a glorious and decisive victory ... not the end ... not even the beginning of the end ... but perhaps the end of the beginning'.

For more than two years England's church bells had been silent, to be pealed only when invasion was deemed imminent, but on 15 November 1942 the ban was lifted. The bell-ringers at St Peter and St Paul's and thousands of other parish churches celebrated the victory from belfries in the very towers from which the Home Guard had kept watch for parachutists, day and night, in all seasons and weather conditions.

Preparations for the invasion of Europe now succeeded those for defying invasion, one consequence being the demise of Tonbridge's Angel Sports Ground, a popular venue for club and county cricket since 1869. It was requisitioned for use as a military motor transport compound and although the Army's lorries were occasionally moved to make way for cricket matches, these had to be abandoned after German bombers began to jettison bombs over the town. After the war it was deemed too expensive to restore the ground and eventually the Pavilion Shopping Centre took its place.

As for the town's various reinforced concrete defence works, a schedule *(pictured below)* has survived showing that 13 close to the town centre were demolished by Tonbridge Council soon after the war at a cost of more than £4,000 (probably about £168,000 in today's values). From 1951, further pillboxes owned by the Council were demolished, using explosives where pneumatic drills proved inadequate.

Other defence works, such as some of the tank-traps along or near the outer perimeter's anti-tank ditch, survived for a few years after the war (and, in Lyons Crescent, until the year 2000) but were eventually removed to make way for residential and industrial developments. In some places (Tonbridge School's playing fields, maybe) the cost of breaking them up and removing tons of rubble was probably avoided simply by pushing them into the ditch and covering them with the earth that had been excavated to create the ditch.

Sydney Simmons, who as the Council's senior engineer and surveyor for 23 years until 1982 was in charge of the post-war restoration of Tonbridge Castle, argued unsuccessfully for the preservation of one of the pillboxes on the curtain wall .

Today it would be a fascinating feature among the castle's older fortifications but in the post-war years public opinion favoured the removal of such 'blots on the landscape' to help expunge memories of a grim era in the town's history.

TONBRIDGE URBAN DISTRICT COUNCIL.

Engineer & Surveyor's Department.

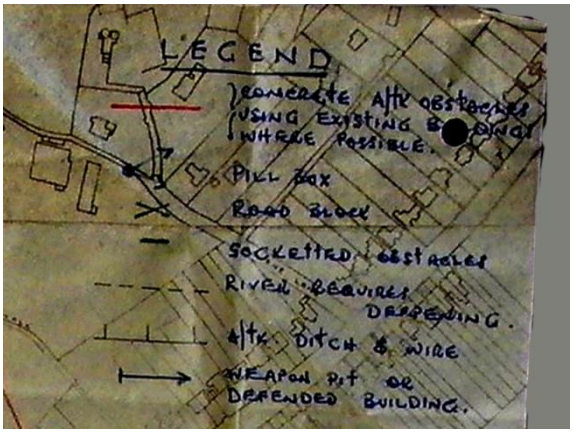
Schedule of R.C. Defence Works for Demolition and Disposal.

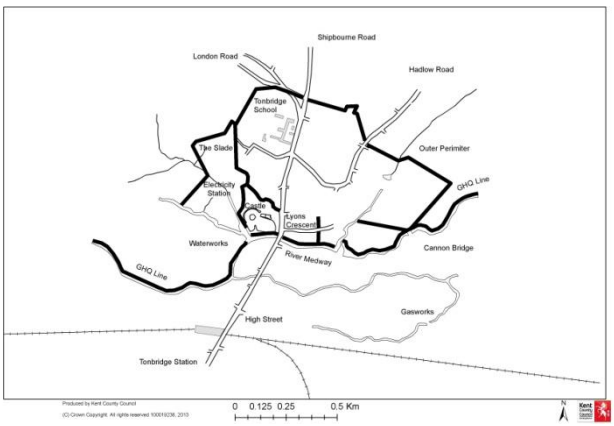
Item.	Situation.	Type of Defence Works	£.	s.	d.
1.	Tonbridge Castle Grounds. Adjoining Water Gate.	R.C. Anti-Tank Gun Emplacement approximate 20' x 20' x 7'.6" Solid Content Approx 60 cu. yds.	180	-	-
2.	At junction of River Medway and Hilden Brook.	As above item Solid Contents approx 60 cu. yds.	280	-	-
3.	Swimming Pool Footpath.	R.C. M.G. Emplacement six sided approximate 20' x 17'.6" x 7'.6" Solid Contents approx 70 cu. yds.	280	-	-
4.	Hayesden Village Shallows Camping Ground.	As above item, but partially submerged in River Medway. Price to include for demolition and complete removal from river to satisfaction of Kent Rivers Board Engineer. Solid Contents approx 70 cu. yds.	1500	-	-
5.	As above.	As for item 3, but on edge of bank and partially undermined by river. Solid Contents approx. 70 cu. yds.	560	-	-
6.	In Woodland adjoining camping ground.	As for item 3. Solid Contents approx. 70 cu. yds.	490	-	-
7.	Garden Road Swanmead Allotment Gardens.	As for item 3. Solid Contents approx. 70 cu. yds.	210	-	-
8.	Tonbridges Castle Grounds. Castle Wall overlooking River Medway.	Brick and R.C. Observation Post. approx. 10' 6" x 7' 6" x 6' 6". Solid Contents approx. 20 cu. yds.	40	-	-
9.	Tonbridge Castle Castle Street entrance and Slade entrance.	12 R.C. Anti-Tank Cubes approximate 5' x 5' x 6' Solid Contents approx 96. cu. yds.	192	-	-
10.	Tonbridge Castle East Bank of Hilden Brook adjoining Lily Pond.	176 Concrete pyramid Anti-Tank obstacles. Solid Contents approx. 200 cu. yds.	300	-	-
		Carried Forward - £	4032	-	-

Item.	Situation.	Type of Defence Works	£.	s.	d.
		Brought Forward	4,032	-	-
11.	Tonbridge Castle Lower Playing Field.	Concrete revetted Weapon Pit, approximate 16' x 10' x 5' deep built mainly above ground level. Solid Contents approx. 20 cu. yds.	40	-	-
12.	Tonbridge Castle Lower Playing Field.	Similar to above item but approximate 10' x 6' x 5' Solid Contents approx. 10 cu. yds.	20	-	-
13.	Tonbridge Castle Upper Playing Field.	Excavate to depth of 2' 0" around partially buried Anti-Tank Cubes and break out sufficient concrete from the cube to allow approximate 2' 0" thickness of earth cover to be placed over the bulk of cube which will remain. Demolish and remove approx. 12 cu. yds. + 6 . £18.0.0.	36	-	-
		Total Carried to Summary	£4128	-	-

Above: demolishing 'dragons' teeth' tank-traps outside the Westminster Bank on the corner of Castle Street and High Street on 10 November 1944, in 'pre-Health and Safety' days! (®Kent Photo Archive) *Below: the corner today.*

Chapter Ten: Tracing town's forgotten battle lines



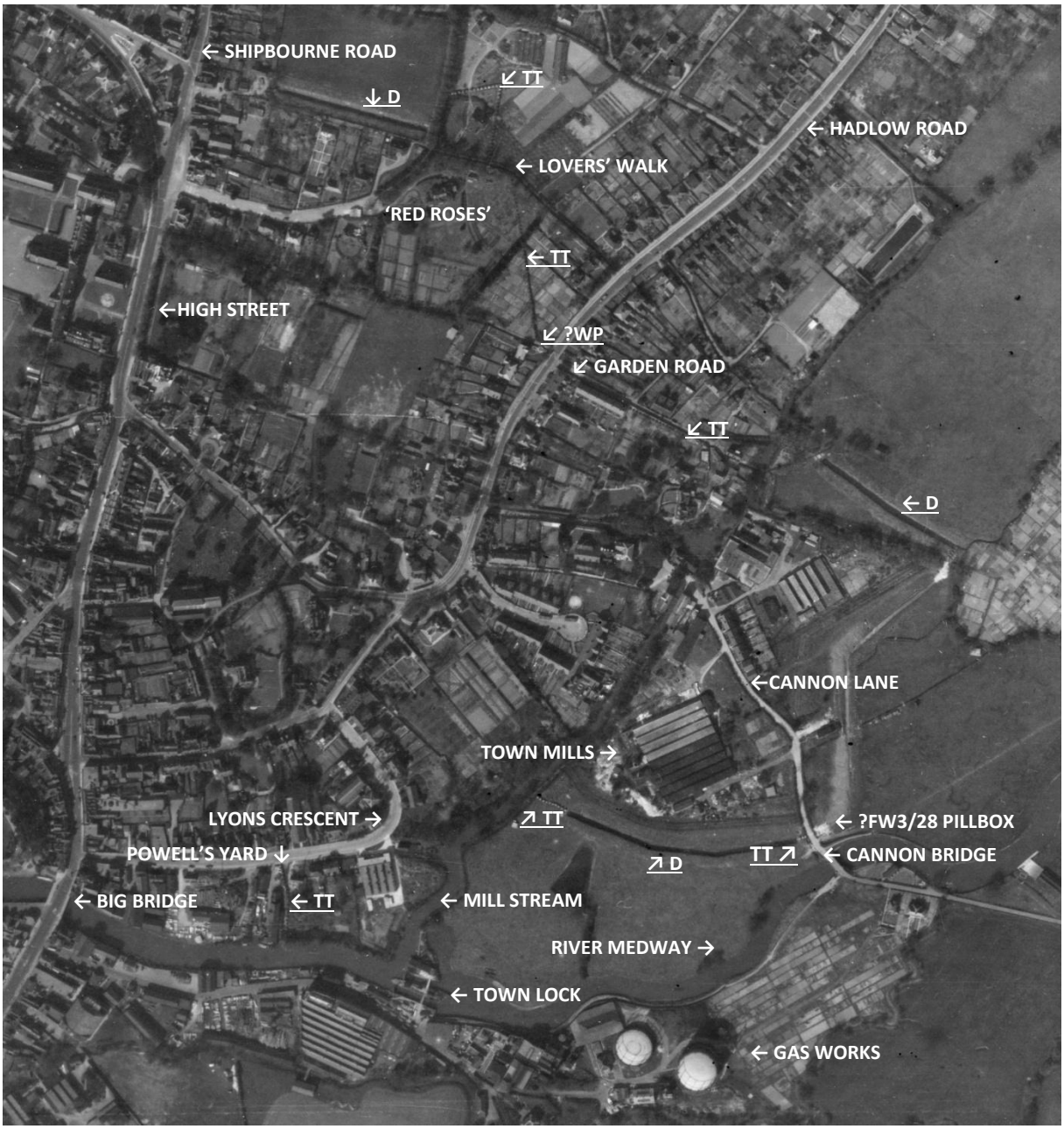


Above and above left: proposed layout of Tonbridge Fortress, December 1941. (War Office Archives). *Above right: simplified map of Tonbridge Fortress defences, showing the outer perimeter, stop-lines within the perimeter, and the GHQ Line along north bank of River Medway.*

With hindsight we know that by the end of 1941 there was no longer any prospect of a German invasion, even though at that time South-Eastern Command was proceeding to develop Tonbridge into a Fortress Town, as shown on the above 'secret' proposal for additional defence works. Not all of them were completed but

nevertheless many of these now forgotten 'battle lines', constructed between June 1940 and February 1942, can be traced when walking around the town today and are shown on the RAF aerial photographs taken in October 1947.

Anti-tank defences east of Tonbridge High Street
(from Mill Stream to Shipbourne Road)



Legend: *TT = Tank-Traps D = Anti-tank ditch ?WP = Weapon Pit at 23 Hadlow Road.*

The town's outer perimeter enveloped much of north Tonbridge and comprised anti-tank ditches up to 18ft wide, rows of tank-traps, and barbed wire barricades. Royal Armoured Corps troops, machine-gunners and mobile artillery would have counter-attacked invaders from positions behind the ditches. Properties along the perimeter were designated to become supplementary anti-tank obstacles and infantry posts as required.

The perimeter can be seen running from the Mill Stream (NGR TQ594465), south of Town Mills, to Cannon Bridge, Cannon Lane. Tank traps are visible west of the bridge and, on the opposite side, what may be a partially demolished FW3/28 pillbox. The defence line crosses the Medway flood plain, then runs NE through

Swanmead Allotments and along the south side of Garden Road. Here the last in a long row of tank-traps stood only a few feet from the gable wall of 12 Garden Road, the end cottage in a terrace of 12. This and the shop on the corner of Hadlow Road would themselves have been commandeered to obstruct advancing tanks and provide improvised defended positions for infantry and artillery troops. By this time it is likely that many of Tonbridge's residents would have fled, despite instructions to the civilian population to stay-put to prevent the roads leading out of the town becoming congested with refugees who would hinder the arrival of British Army reserves.

From the junction of Garden Road and Hadlow Road the perimeter ran NNW, through the aforementioned garden of No. 23 Hadlow Road (NGR 594469). The curious circular structure seen here may be a weapon pit or other defence work. There may also have been a pillbox hereabouts, identical to the one at Tonbridge School and demolished when the Castle Court retirement complex at 25-29 Hadlow Road was built in 2004/2005, but this cannot be verified. From Hadlow Road the perimeter ran through other gardens to Lovers' Walk (NRG TQ594470); then along the boundary of the grounds of Red Roses in Portman Park; up Lovers' Walk again for about 100 yards; then due north to form two sides of a rectangle (NRG TQ594471) containing about 40 tank-traps. It next veered south, past ten tank-traps, to the south-east corner of Elm Lane playing field (NRG TQ593471) and from there to the south-west corner of the playing field (NRG TQ 592471), where there was a weapon pit or defended building. The nearby junction of High Street, Shipbourne Road and London Road (NRG TQ591471) would have been one of the most heavily 'defended in north Tonbridge; covering fire from road-blocks, defended buildings and the pillbox in the grounds of Tonbridge School's Dry Hill House would have been directed against columns heading north after capturing Big Bridge, or advancing from other directions.

The junction of London Road (left) and Shipbourne Road (ahead), pictured here from the High Street in 2019, would have been secured by road-blocks, defended buildings on the outer perimeter, and the pillbox at Dry Hill House.

Above: Garden Road, looking north–west towards Hadlow Road. Tank-traps on Tonbridge's outer perimeter defences ran from this corner, through where there are now a front garden and outbuildings, to No 12 Garden Road (the gabled house in the mid-distance). Above right: Nos 1 (foreground) - 12 Garden Road. These buildings would have been defended by machine-gunners and infantry troops if invaders attacked the perimeter at the south-east end of the road. Right: the south-east end of Garden Road, looking towards Cannon Lane. The lamppost and trees are on the site of the tank-traps.

The stop-line from the Medway to East Street

Because the perimeter could not be construed as invincible, contingency measures were taken to impede any attempt to capture 'The 'Keep', at the heart of Tonbridge Fortress, whose defenders were under orders to 'hold firm indefinitely'. These measures included a stop-line of tank-traps running due north from the Medway at Powell's Yard (NGR TQ592464), beside or close to the site of the town's medieval wall, The Fosse, to Lyons Crescent, and from there through private gardens to East Street, possibly joining another series of tank-traps or defended buildings extending to High Street in one direction and, in the other, to the perimeter at the junction of Hadlow Road and Garden Road.

Until sold for redevelopment in early 2019, Powell's Yard (named after one of its first owners) was the last survivor of the many light industrial premises established along Tonbridge waterfront in the late 19th and early 20th centuries. Among it premises were a boat shed, forge, livery stable, and workshops for wheelwrights, carpenters, bicycle repairers, various engineering specialists and, finally, Duncan Welch's motor engineering business in the former stable.

These buildings and others in Lyons Crescent and East Street would have provided cover for forces manning the stop-line. The above December 1941 proposal shows a weapon pit or defended building between East Street and Lyons Crescent, a road-block outside Powell's Yard and a pillbox downstream from the southern end of the stop-line, from where it could concentrate formidable firepower along the riverbank and across the river at Town Lock, Baltic Saw Mills and other wharfs and warehouses on the opposite bank.

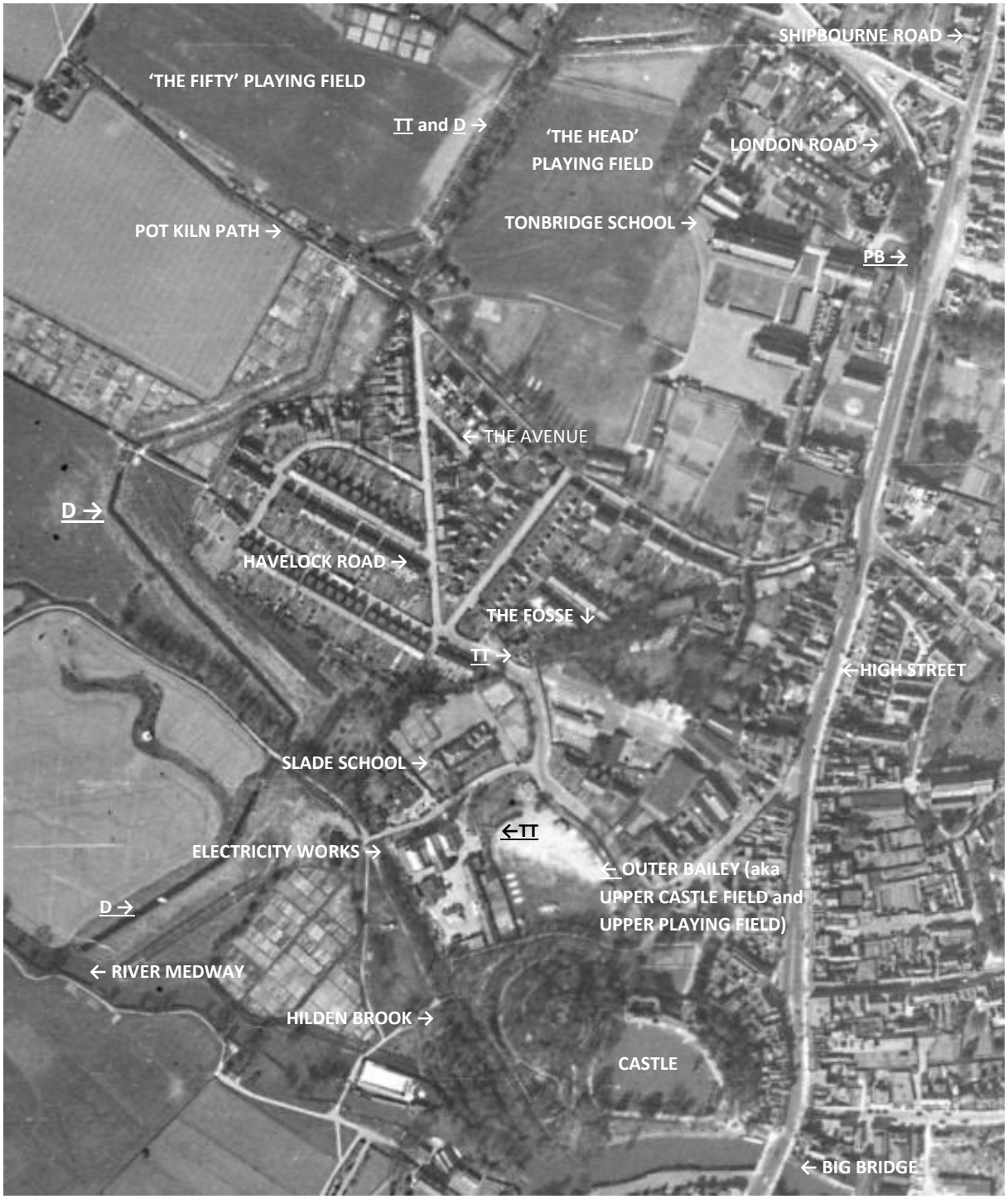
Derelict boat shed and other premises at Powell's Yard in 2019.

Above: boat shed at the southern end of the stop-line of tank-traps. Right: site of the stop-line on the east boundary of Powell's Yard, now marked by a gravel track leading down to the river.

Above: Duncan Welch on the site of the tank-traps in Powell's Yard in 2019; Lyons Crescent is in the background. Above right: Duncan Welch with a reinforcement bar salvaged when the tank traps were demolished in 2000.

Left: site of road-block in Lyons Crescent and, in the background, trees on the site of the stop-line of tank-traps which continued to East Street. Above: back gardens in The Lyons, on the site of the tank-traps that continued the stop-line from Lyons Crescent to East Street.

Anti-tank defences west of the High Street
(from Tonbridge School to The Slade and the River Medway)



Legend: *TT = Tank Traps D = Anti-tank ditch PB = Pillbox concealed among trees at Tonbridge School.*

West of the junction of Shipbourne Road and London Road, Tonbridge School's dormitories and other properties facing London Road would have become defended buildings. The perimeter then continued as an anti-tank ditch and tank-traps in the school grounds (at NRG TQ590472), running almost due west, parallel with North Path, to NRG TQ589471, then turned sharply south-west to follow the boundary between The Head and The Fifty, the school's playing fields. This section was lined with more than 30 tank-traps. The ditch turned south-west at NRG TQ588470, crossed Pot Kiln Path (a footpath from Lansdowne Road to Hilden Bridge),

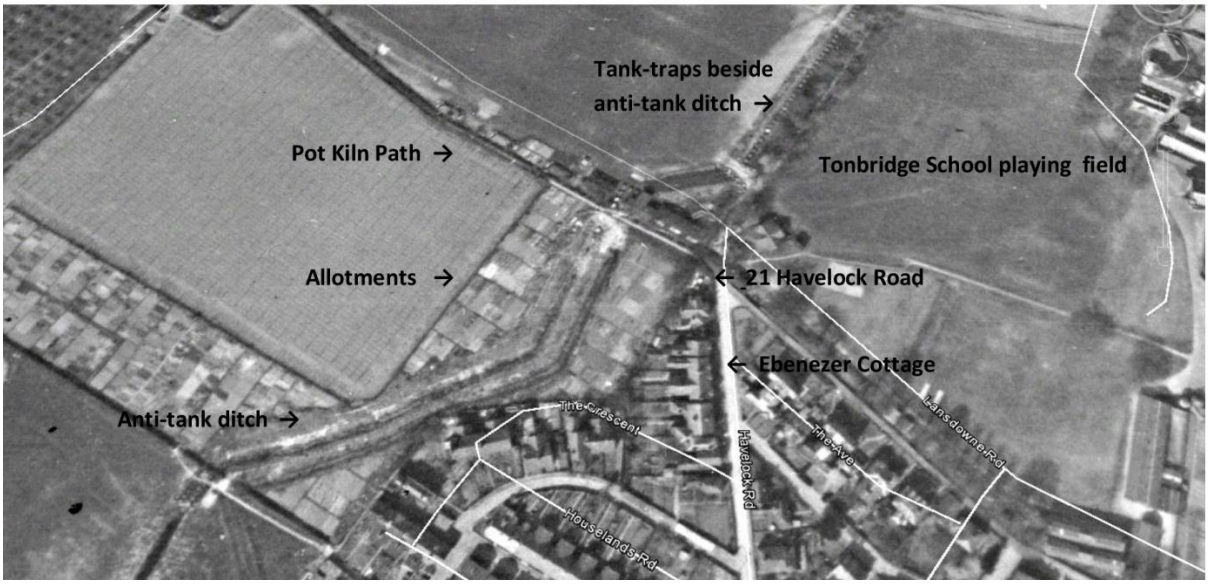
meandered through allotments west of The Slade's narrow streets and across the fields beyond, eventually reaching the Medway less than a mile from its eastern starting point at Mill Stream. Donald Fry recalled that The Slade section of the ditch was 18-20ft deep and lined with brushwood.

Above: The Head playing field, viewed from the site of the anti-tank defences at North Path. (©Tonbridge School)

Above: these trees on the boundary between The Head (right) and The Fifty playing fields mark the site of the anti-tank defences where they ran southwards from North Path. Above right: the site of the anti-tank defences where they emerged on to Pot Kiln Path is now flanked by the groundsman's store (left) and a sports pavilion.

From Pot Kiln Path the anti-tank defences ran through The Slade's allotment gardens behind Havelock Road and The Crescent and across farmland to the River Medway. This curve on the Wilmot Athletics Track is on the site of the allotments and defences. Havelock Road is in the mid-distance.

The Slade stop-line from Hilden Brook to Havelock Road



The northern area of The Slade, showing locations of defence works. (®Kent History Forum/Kent Heritage Maps)

This stop-line was to be held if enemy forces breached the GHQ Line along the Medway, penetrated the outer perimeter, and advanced on Tonbridge Castle and its environs. The line ran from Hilden Brook (NGR

TQ588466), along which 176 pyramidal tank-traps were ranged; past Tonbridge electricity generating station and Slade School, and across Stafford Road to the south end of the Fosse, where tank-traps about 5ft 6in. high were erected. Barbed wire barricades extended all along the east side of Havelock Road as far as Ebenezer Cottage (11 Havelock Road) and from there, on the west side, to Pot Kiln Path. No evidence survives in Havelock Road of the trench in which land mines were concealed, but the passage of war is marked by stumps of railings removed from the front garden of Ebenezer Cottage during the 1940 'scrap iron for munitions' campaign. There are similar stumps at No 9 Bank Street.

The Slade stop-line and the perimeter converged at Pot Kiln Lane and Nos 20 and 21 Havelock Road, in whose back gardens tank-traps were erected. The arc of fire from the proposed machine-gun at No.22 would have extended across the anti-tank defences and allotment gardens. On the December 1941 'Tonbridge Fortress' proposal, all the houses in Havelock Road were designated 'anti-tank obstacles using existing buildings where possible'. The proposal also shows another stop-line of tank-traps, with weapon pits and a pillbox, running from a road-block at the corner of the High Street and Castle Street to The Slade. The only evidence that this stop line was built is the photograph of 'dragons' teeth' being demolished in Castle Street in 1944.

*Left: This footpath follows the site of 176 pyramidal tank-traps erected beside Hilden Brook (among the trees on the left) to defend Tonbridge Castle if the enemy succeeded in breaching the GHQ Line (*aka *Ironside Line) and the perimeter.*

Above: the overgrown site of the west end of the line of tank-traps along Hilden Brook. Its width and depth at this point suggest it was reconfigured to form an anti-tank ditch in front of the tank-traps. Tonbridge Leisure Centre is on the right bank.

*From Hilden Brook the stop-line ran west of Tonbridge Castle's moat and outer bailey (*aka *Upper Castle Field), its course now marked by a sheltered housing development and an embankment (above) that was part of the outer bailey. Below: Slade School (right) and Upper Castle Field, opposite, where there were tank-traps and a V-shaped anti-tank ditch on the stop-line.*

This house in Stafford Road and the parking spaces mark the course of the stop-line. The trees stand where there was a group of tank-traps at the south end of the Fosse. Right: the only surviving substantial section of the Fosse, running from Stafford Road to Fosse Road.

Left: Havelock Road, looking north towards Pot Kiln Path. A barbed wire barricade ran along its east (right-hand) side as far as Ebenezer Cottage.

Above: the site of the land-mine trench in Havelock Road near the corner of The Avenue, from where the barricade ran along the west (left-hand) side of the road to Pot Kiln Path.

Above: view south from the site of the land-mine trench in Havelock Road. The second house on the right is Ebenezer Cottage. The corner of The Avenue is in the foreground. Right: stumps of the railings removed from the front garden of Ebenezer Cottage in 1940.

Nos 20 and 21 Havelock Road and (right) Pot Kiln Path, where the stop-line and the outer perimeter defences converged.

Bedroom windows in Havelock Road, from which machine-guns would have had a field of fire across the perimeter's anti-tank defences.

The 'Doodlebug' raids

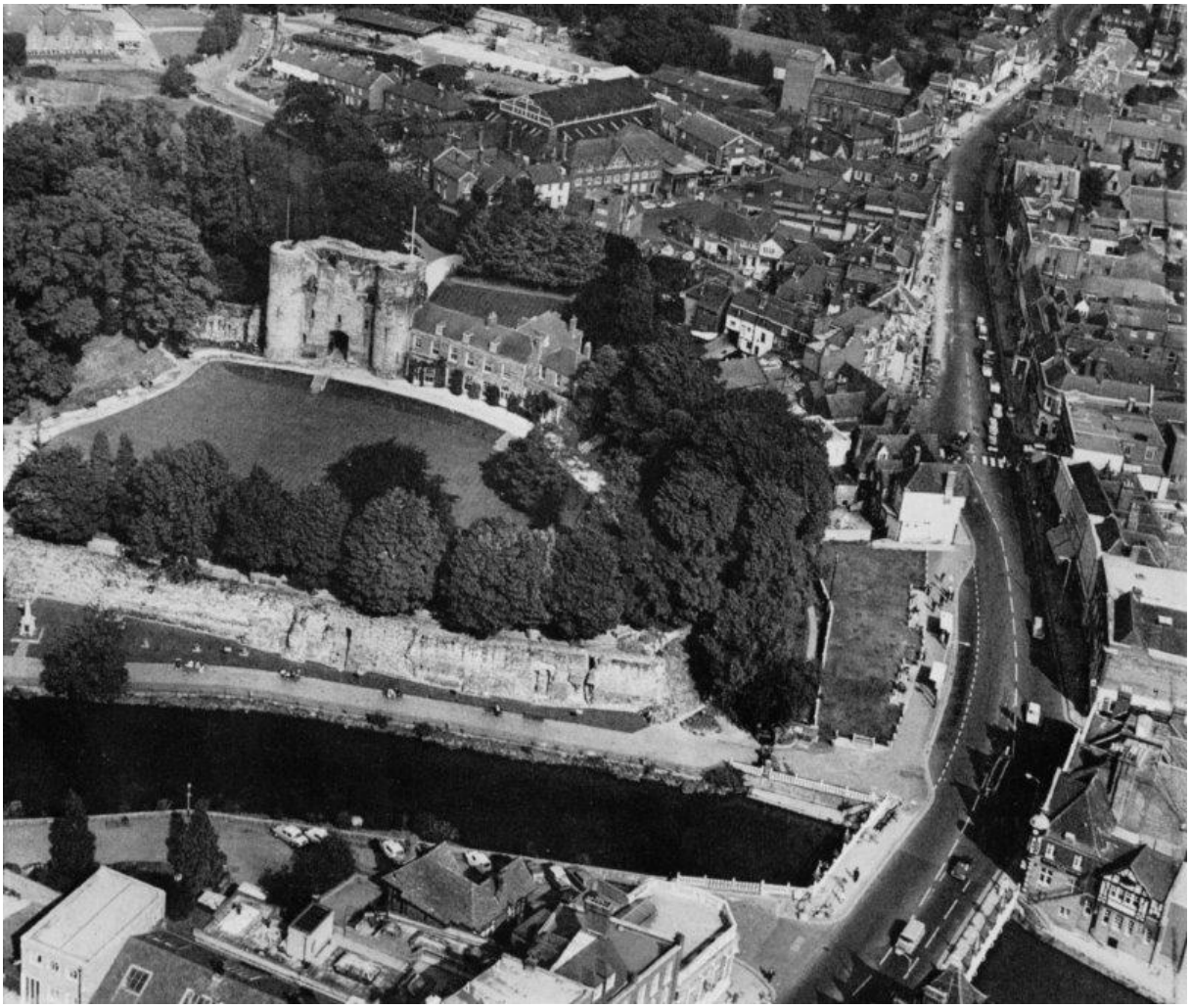
Soon after D-Day, Tonbridge School was on the front-line in 'Operation Diver', the RAF and Anti-Aircraft Command's attempt to protect London against V1 flying-bomb (*aka* 'Doodlebug') air-raids, Nazi Germany's desperate attempt to turn the tide of the war as the Allied armies fought their way across northern Europe to the Rhine. AA Command constantly shifted its 40mm Bofors guns and other artillery around Kent and Sussex to confront constantly changing lines of attack. The Kentish Gun Belt came into being on 17 June 1944 and was divided into four areas, controlled from operations rooms in military accommodation or requisitioned buildings. Tonbridge area was populated by the guns of the Royal Artillery's 127 Heavy Anti-Aircraft Regiment, commanded by Lt. Col. Albert Holdridge, whose HQ was at a house called 'Lealands' in London Road, Tonbridge. His Operations Room was in an Army hut near the school's cricket pavilion, the adjacent playing field being an ideal site from which to observe and fire at V1s. The other ORs were at the Drill Hall, Lingfield; Buston Manor, Hunton, and The Kennels, near Norton, Faversham. The retaliations were partially successful but Kent ('Doodlebug Alley') suffered much death and destruction during the onslaughts.

A cricket match on Tonbridge School's playing field, The Fifty, showing the pavilion (far right).(©Tonbridge School)

Artist's impression of a Second World War Bofors anti-aircraft gun on Tonbridge School's cricket field. ©Steve Sullivan, blighty-at-war.net)

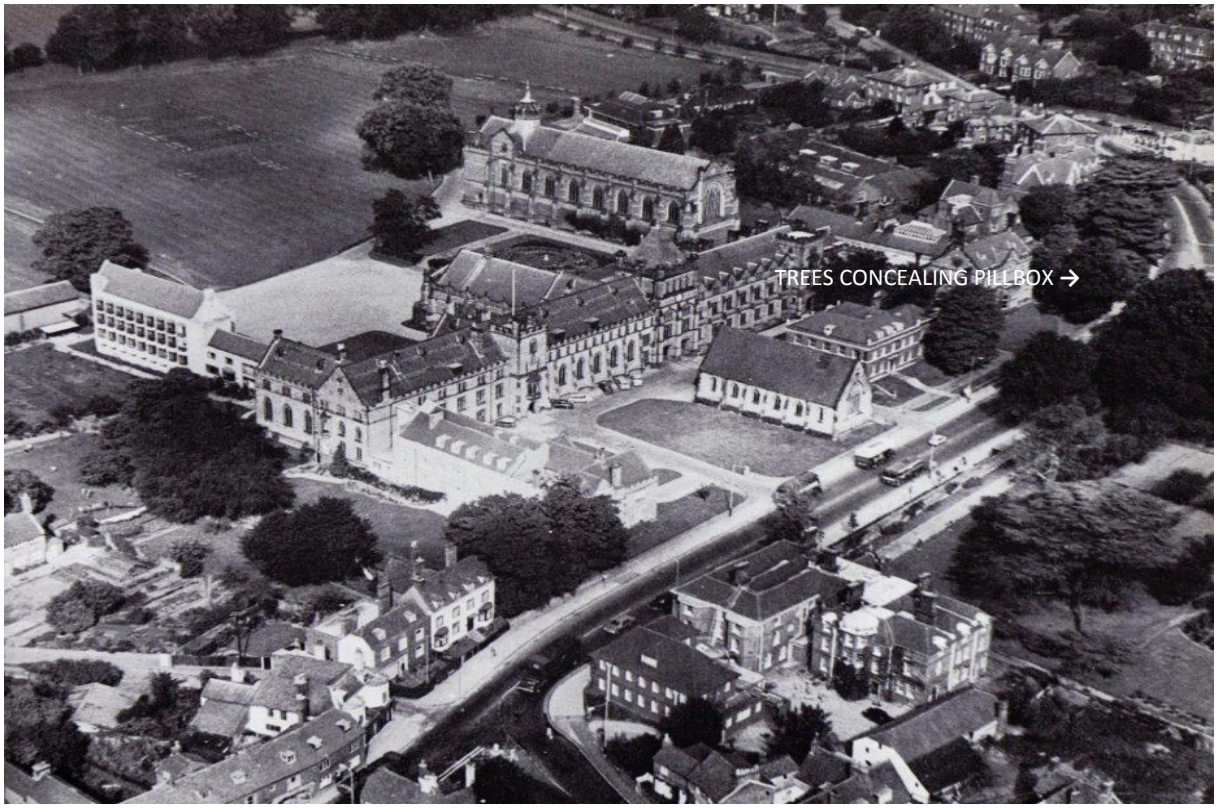
Chapter Eleven: A town at peace
Tonbridge 24 years after the war

Aerial photographs published in 1969 in the *Tonbridge Free Press* show the town when it was emerging from post-war austerity, with much of its war-damage repaired and its anti-invasion defences removed.

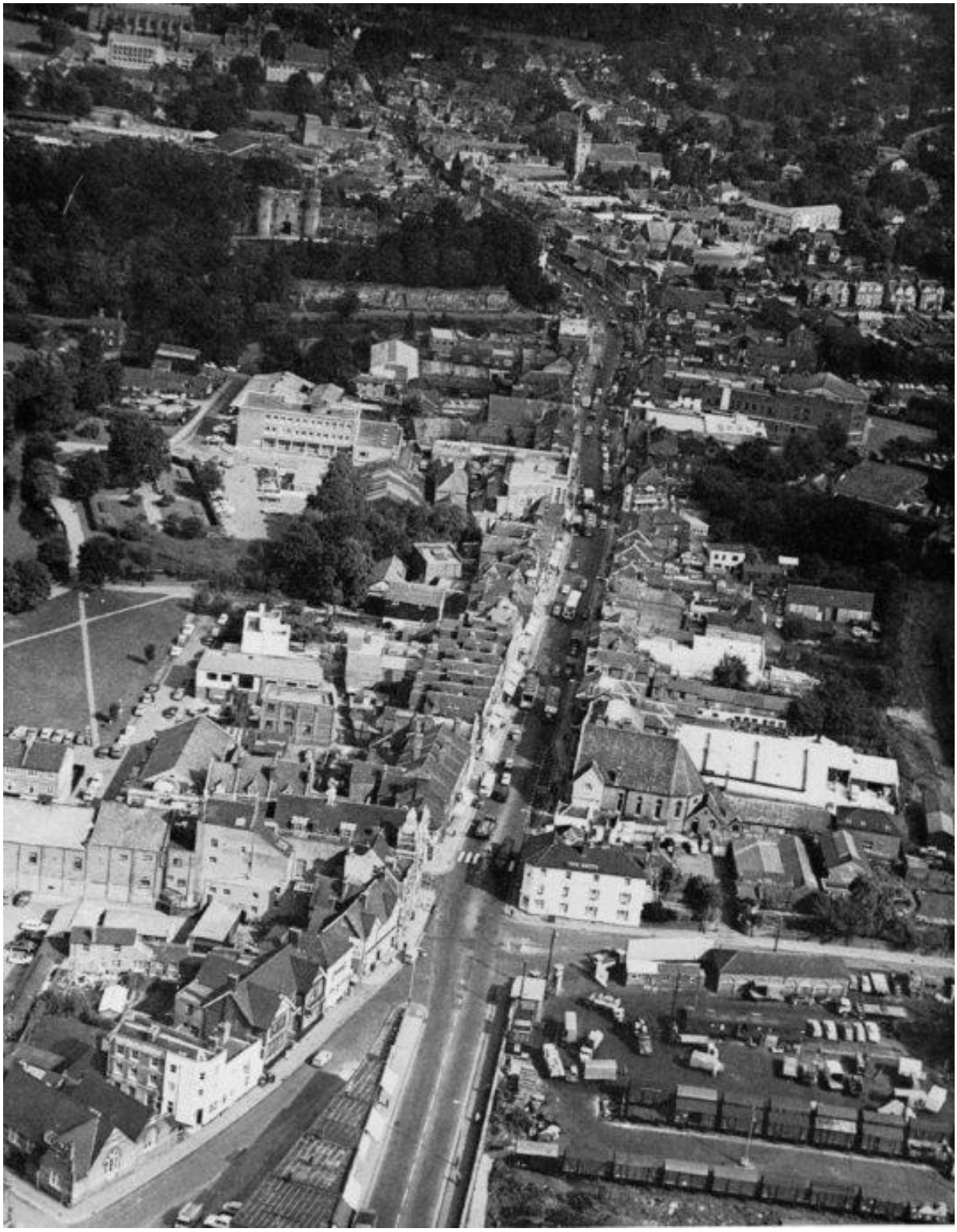


Tonbridge Castle, hub of the wartime 'Keep' area of Tonbridge Fortress. Slade School is at top left, Big Bridge at bottom right. The weapon pit in Riverside Gardens and the pillboxes on the curtain wall of the castle's outer bailey have been removed and Tonbridge School's Boer War Memorial has been restored.

Looking east across the High Street and Big Bridge. Tonbridge Castle, Castle Fields and part of The Slade are in the foreground. Beyond the High Street is the town's rapidly expanding industrial and commercial district. This and residential developments off Hadlow Road and Shipbourne Road had by now obliterated most traces of the wartime outer perimeter invasion defences. Tonbridge Gas Works had closed and its two gasometers by the river (top, centre) stored gas piped from Maidstone.



Tonbridge School and The Head playing field, bordered by trees (top left) running along the site of the wartime anti-tank ditch. The trees to the left of the north end of the High Street (top right) conceal the pillbox on which preservation work began in 2018.



The entire length of the High Street, seen from above the railway. In the foreground, Barden Road and Avebury Avenue are on the left; the Angel Hotel (on the corner of Vale Road) and the Congregational Church are on the right. The Big Bridge, the castle and the parish church and Tonbridge School are in the distance.

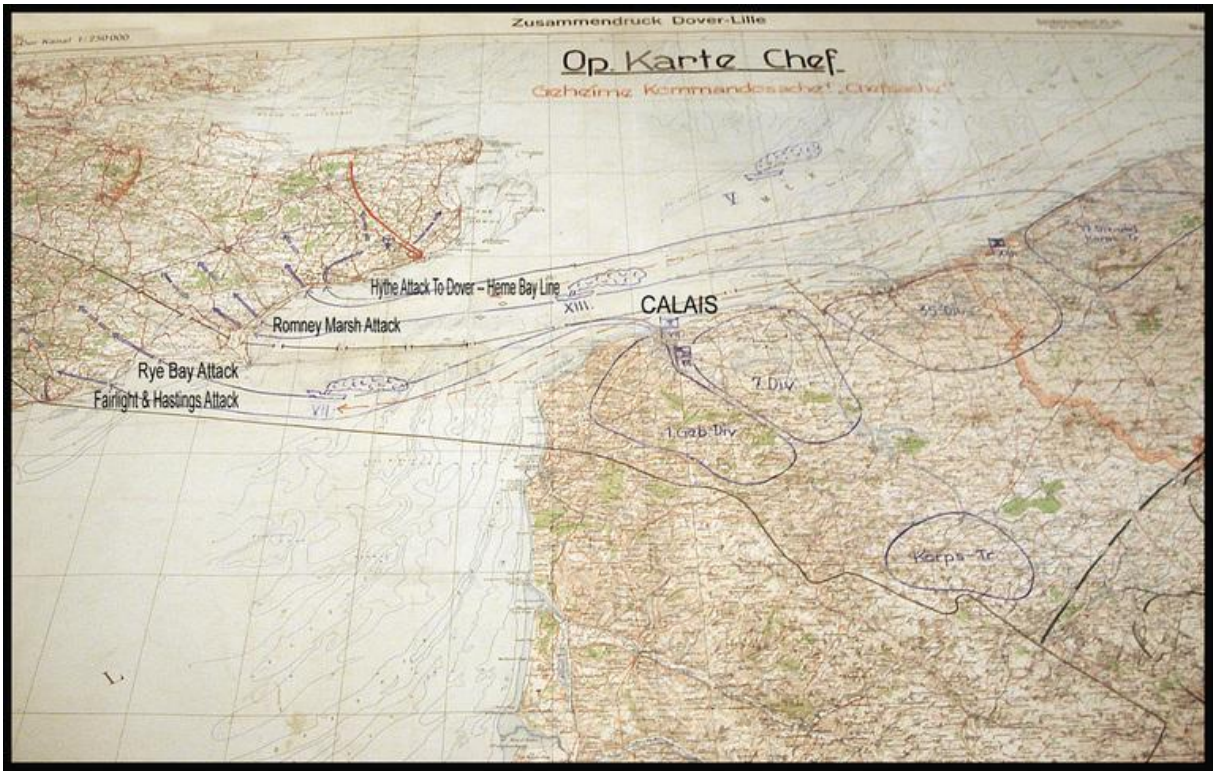
Chapter Twelve: Why Hitler could not have captured Tonbridge Fortress

Artist's impression of Tonbridge Castle decorated for VE Day celebrations.
(®Martin Laws)

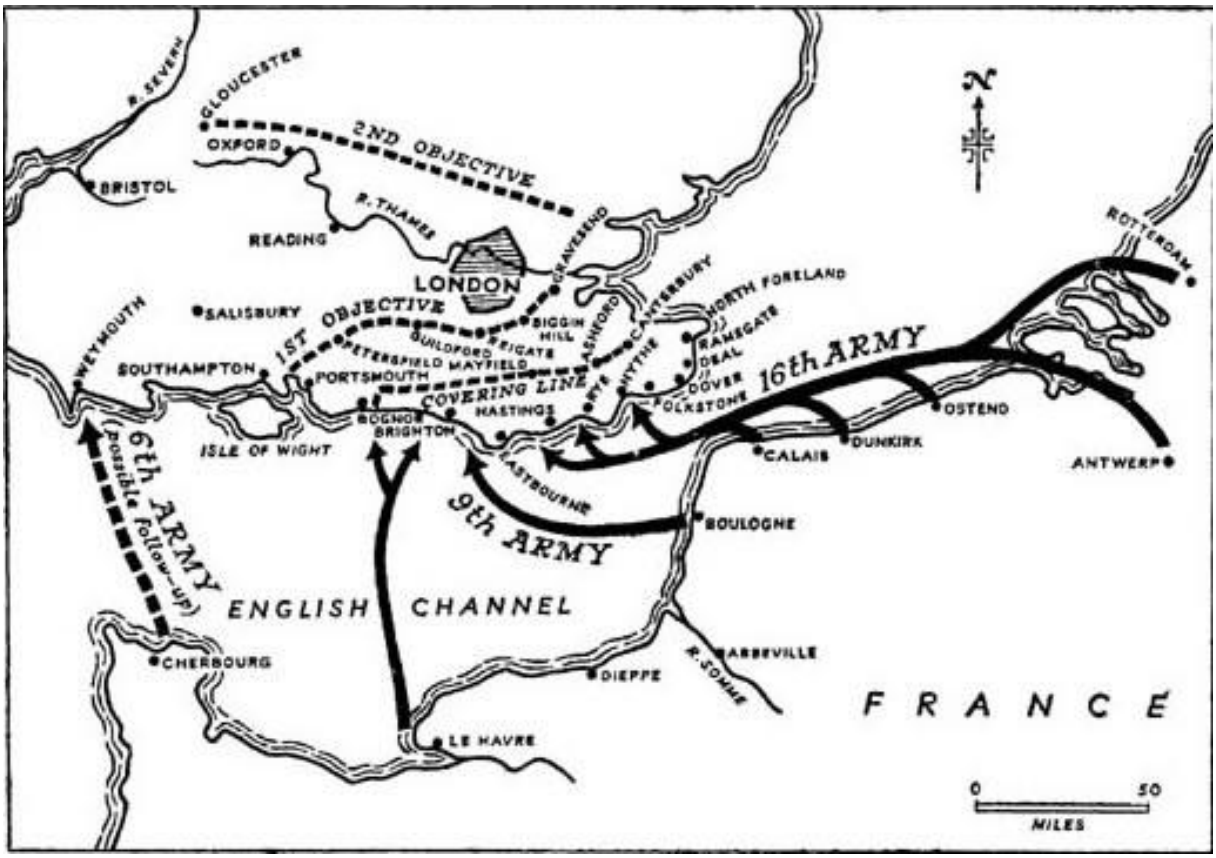
Would the anti-invasion plans conceived by Home Forces commanders 'Tiny' Ironside and Alan Brooke have succeeded in defeating Hitler's *Operation Seelöwe* in September 1940? Could the invaders have penetrated as far inland as the GHQ Line? Would the defenders on the stop-lines of pillboxes, anti-tank ditches and road-blocks, and the mobile forces deployed around them, have repelled advances by armoured columns, and attacks by airborne troops? Could 12 Corps' divisions, reserves and the Home Guard have routed them in land battles and forced them to retreat to their landing beaches and surrender or flee to France?

These questions were far from most minds five years later, on VE Day - Tuesday 8 May 1945 - when at 3pm Winston Churchill officially announced the end of the war with Germany and Tonbridge, bedecked like every other town and village in Britain with Union flags and red, white and blue bunting, began celebrations that continued throughout the night and into the following day.

An attempt to answer the questions was made 29 years later, at a war game conducted at the Royal Military College, Sandhurst.



Above: German invasion plan from the Third Reich archives. (®Steve Sullivan, blighty-at-war.net)



Above: interpretation of German invasion plan from Pillboxes. A Study of the UK Defences 1940, (Henry Wills, C*ooper/Secker & Warburg 1985).*

The exercise in 1974 was based on the known plans of the German and British forces and on Admiralty weather records for September 1940. Each side was played by serving officers and the moves of the opposing armies were plotted on a scale model of south-east England.

Two teams of four players each took part, representing air, sea and land commanders and politicians of the respective sides.

The German team comprised Rudolf Rothenfelder, ex-*Luftwaffe* officer and President of the German Fighter Pilots' Association, playing Hermann Göring; Professor Rohwer, Director of the Military Institute in Stuttgart (Admiral Erich Raeder); Colonel Wachasmuth, Bundeswehr liaison officer at Sandhurst (Field Marshal Walther von Brauchitsch, Commander-in-Chief of the German Army during the Nazi era). They were supported by Admiral Francis Schuenemann, Defence Attaché at the German embassy in London.

Brigadier Page, Assistant Commandant of the Royal Military Academy, played Winston Churchill but the names of those who played the British military commanders responsible for home defence in September 1940 (Hugh Dowding, Air Officer Commanding, RAF Fighter Command; General Alan Brooke, Commander-in-Chief, Home Forces, and Admiral of the Fleet Dudley Pound) are not recorded.

The panel of umpires included Adolf Galland (62), who fought 705 combat missions with the Luftwaffe and was credited with 104 victories; Admiral Friedrich Ruge (80), holder of Nazi Germany's Knight's Cross of the Iron Cross (Nazi Germany's highest military award) and first post-war commander of the German Navy; Air Chief Marshal Sir Christopher Foxley-Norris (57), wartime Hurricane pilot and squadron commander; Rear Admiral Edward Gueritz (55), recently retired after 40 years' service in the Royal Navy; General Heinz Trettner (67), wartime CO of Germany's 4th Parachute Division, and General Glyn Gilbert (54), one of only two Bermudians to land on the beaches of Normandy

The invasion was deemed to have started on Sunday, 22 September 1940, the main problems facing the Germans being that the *Luftwaffe* had yet to win air supremacy, and constraints imposed by weather and tidal conditions. Also, it had taken until late September to assemble the necessary shipping.

At dawn, elements of nine divisions comprising the first wave of a planned force of 330,000 men* stormed the beaches between Folkestone and Rottingdean, near Brighton, whilst the 7th *Fallschirmjaeger* (paratroop) Division landed at Lympne airfield, overlooking Romney Marsh seven miles west of Folkestone.

Motor torpedo boats of the Royal Navy inflicted minor losses on the *Kriegsmarin*e invasion fleet during the night but one of our heavy cruisers and three destroyers were sunk. Another cruiser and two destroyers were damaged while sinking three German destroyers.

The beach defences (Ironside's 'coastal crust') were overwhelmed within hours and reserve formations were despatched to Kent. Of the Army's 25 divisions in the UK, only 17 were fully equipped and only three [the 1st London Infantry Division, the 43rd Infantry Division and the 44th Home Counties Division] were based in Kent. However the defence plan relied on the use of mobile reserves, and armoured and mechanised brigades were committed as soon as the main landings were confirmed.

Meanwhile air battles raged overhead; the *Luftwaffe* flew 1,200 fighter and 800 bomber sorties before noon. The RAF even sent up trainer aircraft, hastily armed with bombs, to attack the invaders on the beaches but the *Luftwaffe* was already having problems deploying enough Me 109s to counter-attack, despite cramming as many as possible into the Pas de Calais.

On 22 and 23 September the Germans had yet to capture a major port. Shipping unloading on the shore suffered heavy losses from RAF bombing raids and further losses at their ports in France.

Germany's U-Boats, surface ships and the *Luftwaffe* lost contact with the Royal Navy until a cruiser squadron with supporting destroyers entered the Channel narrows and had to run the gauntlet of long range coastal guns, E-Boats and 50 Stukas. Two heavy cruisers were sunk and one was damaged, but a diversionary German naval sortie from Norway was completely destroyed and other raids by motor torpedo boats and destroyers inflicted losses on other enemy shipping milling about in the Channel.

German shipping losses on the first day amounted to more than 25 per cent of their invasion fleet; their barges proved to be desperately unseaworthy.

On 23 September, between dawn and 14.00 hours, the RAF lost 237 of its force of 1,048 aircraft (167 fighters and 70 bombers) and the navy suffered such heavy losses that it held back its battleships and aircraft carriers, but large forces of enemy destroyers and heavy cruisers were massing; air reconnaissance showed a German naval build-up in Cherbourg.

The *Kriegsmarin*e was despondent over its losses of barges but preparations to embark the next echelon of seaborne invaders and 22nd Division's *Fallschirmjaeger* troops continued, despite *Luftwaffe* losses of 165 fighters and 168 bombers, out of only 732 fighters and 724 bombers. Both sides overestimated losses inflicted by 50 per cent.

22nd Division landed successfully at Lympne, despite damage to the runways by long-range artillery fire directed by a stay-behind commando group. The first British counter-attacks halted the German 34th Division in its drive on Hastings and the 7th Panzer Division was being hampered by extensive anti-tank obstacles and assault teams armed with 'sticky bombs'. Meanwhile an Australian division had retaken Newhaven (the only port in Germans hands) but a New Zealand division arrived at Folkestone only to be attacked from the rear by 22nd Division's *Fallschirmjaegers*, who fell back on Dover having suffered 35 per cent casualties.

Between 1400 and 1900 hours on 23 September the *Luftwaffe* put up a maximum effort of 1,500 fighter and 460 bomber sorties, but the RAF persisted with its attacks on shipping and airfields. Admiral Erich Raeder, Commander-in-Chief of the *Kriegsmarin*e, appealed to the *Luftwaffe* for more air cover over the Channel.

However, the Royal Navy's Home Fleet had pulled out of air range, leaving the fight in the hands of 57 destroyers, 17 heavy cruisers and a number of motor torpedo boats. The *Kriegsmarin*e could pit very little surface strength against this. Waves of destroyers and heavy cruisers entered the Channel and although two were sunk by U-Boats (one of which was destroyed), they did not stop. The German flotilla at Le Havre despatched three destroyers and 14 E-Boats and at dusk intercepted the British but were wiped out, losing all their destroyers and seven E-Boats.

By now the Germans had 10 divisions ashore but in many cases these were incomplete and waiting for their second echelon to arrive. The weather was unsuitable for the barges however, and the decision to sail was referred up the chain of command.

At 1800 hours on 23 September, Hitler called a conference of his commanders that broke out into bitter inter-service rivalry. The *Wehrmacht* wanted to send their second echelon, the *Kriegsmarin*e protested that the weather was unsuitable and argued that the latest naval defeat rendered the Channel indefensible without air support.

Göring countered by saying this could only be offered by stopping the 'terror bombing' of London; Hitler vetoed the suggestion. The *Kriegsmarin*e was ordered to stand by.

Between 1900 hours on 23 September and dawn on the 24th, the RAF lost another 97 fighters, leaving only 440. The airfields of 11 Group were cratered ruins and once more the threat of defeat, which had receded, loomed. The *Luftwaffe* had lost another 71 fighters and 142 bombers.

On the ground the *Wehrmacht* made good progress towards Dover and Canterbury but suffered reverses around Newhaven. At 21.50 Hitler decided to launch the second wave, but only on the short crossings from Calais and Dunkirk. By the time his order reached the ports, the second wave could not possibly have had time to arrive before dawn. The *Wehrmacht*'s divisions at Newhaven, supplied from Le Havre, would not be reinforced at all.

At dawn on 24 September the German fleet set sail in calm weather, supported by U-Boats, E-Boats and fighters, but as the sun rose the invasion barges were spotted in mid-Channel by a destroyer flotilla. The *Luftwaffe* committed all its remaining bombers to the invasion and the RAF countered with 19 fighter squadrons. The Germans disabled two heavy cruisers and four destroyers but 65 per cent of the barges were sunk.

The attempted crossing failed, leaving the divisions that had landed in a desperate situation. They had sufficient ammunition for up to seven days but without extra men and equipment they could not extend their

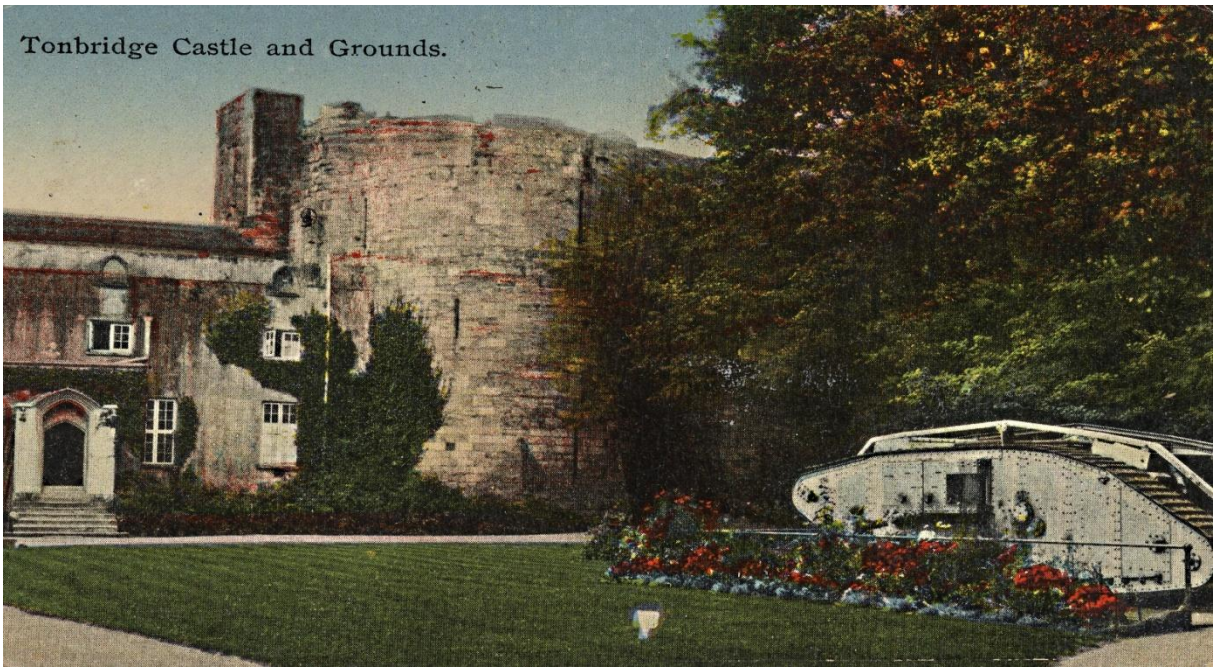
bridgehead, which included only two ports – Folkestone and Newhaven – and extended only 12 miles inland, less than halfway to the GHQ Line. As the British hemmed them in tighter, Hitler ordered the *Wehrmacht* to prepare to evacuate. The retreat was completed by 28 September.

Of the 90,000 troops who had landed six days earlier, only 15,400 succeeded in escaping to France. The rest were taken prisoner, killed on land or in the English Channel. The war game's umpires deemed the invasion a resounding failure.

**More than twice the number of Allied troops deployed on D-Day in 1944*.

* * *

Detailed accounts of the *Operation Seelöwe* war game, on which the above summary is based, are published in *Sealion* by Richard Cox (Thornton Cox, 1982) and on https://en.wikipedia.org/wiki/Operation_Sea_Lion_(wargame)

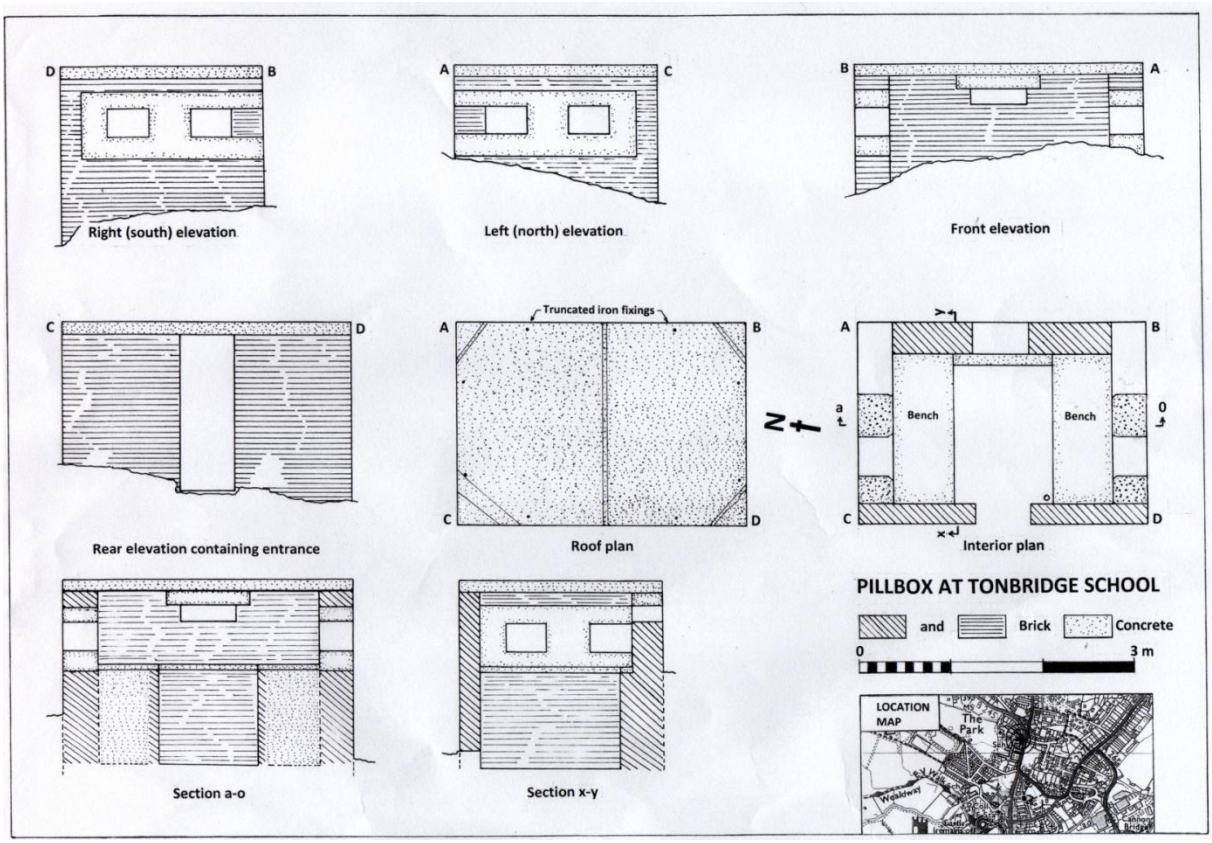


The only tank to breach Tonbridge Castle's defences was this British Mk 1V, 20 years before the Second World War. It fought in France in 1918 and was displayed in the inner bailey from 29 July 1919 until 1938, then sold for scrap for £52 10s. (®Tonbridge Historical Society)

Appendix: Anatomy of a Pillbox

1: Tonbridge School

By Victor Smith*, with contributions from Paul Tritton.



In December 2018 Kent County Council and Tonbridge School asked me to historically record the Second World War pillbox located near the north-east corner of the school grounds *(see Chapter Four)*. The investigation followed initial concern about the future of the pillbox, this having been earlier seen by members of the Kent Archaeological Society, enclosed by contractor's fences adjacent to works for the building of a new Science Centre. Enquiries at the school established that the historical significance and value of the pillbox was already known to them and that they had decided upon its retention and historical display for the interest and education of students, staff and visitors as well as for the local community.

Removal of obscuring bushes and vegetation has made the structure highly visible both from the school and to the public outside. A historical assessment and survey of the pillbox to help the school with their aims took place in 2019. The recording work undertaken contains the following elements which are included in this report:

- A measured survey to create a set of drawings.
- A photographic survey.
- A written survey.
- A limited study of documentary sources.

No historical reference to this structure, its date or purpose, has yet been found in documents, whether among those examined by Paul Tritton (for his foregoing study of Tonbridge during the early years of the Second World War), by Tonbridge School's archivist, Beverley Matthews (in her research of school records) or by me. Nor have any memories of its construction come to light. Its existence and position show it to have been an element of the measures adopted to create the Tonbridge 'nodal point' defences (subsequently upgraded to Fortress status) following the defeat of the Franco-British army and the withdrawal of its remnants from the coast of France from 26 May – 4 June 1940 and, mid-1941, when a German invasion of England was most feared.

A perimeter of anti-tank defences enclosed Tonbridge on three sides, the fourth side being the River Medway, along which ran the GHQ Line of pillboxes. At various places along its length the perimeter was breached by roads passing through the town. To the north of Tonbridge these included London Road and Shipbourne Road. Close to the school these converged and joined Tonbridge High Street and, if undefended, this would have given an invader access to Tonbridge itself. In consequence, these roads, as well as Portman Park east of the High Street, were to be given road-blocks and other protection which, if provided, could have been overseen from the embrasures of the pillbox at the school.

The pillbox has special significance for Tonbridge School because one of its alumni, General (later Field Marshal Lord) William Edmund Ironside (1880 – 1959), served as Commander-in-Chief, Home Forces, in the last weeks of his distinguished military career, during which time he directed the construction of the GHQ Line, popularly known as 'the Ironside Line'. This static defence 'stop-line' consisted of thousands of pillboxes, road-blocks and tank-traps, crossing much of southern England and running northwards from the Thames through the eastern counties. It was intended to impede Nazi invaders advancing inland towards London and the Midlands from beachheads on the Channel and North Sea coasts at a time, post-Dunkirk, when the British Army lacked sufficient mobile artillery and professional soldiers to defend the coastal hinterland.

Although to this day many pillboxes can be seen along the River Medway sector of the GHQ Line east and west of Tonbridge, the one at the school is the only survivor within the town.

Description

Some 10m east of the new Science Centre, this brick and concrete structure surmounts the top of an earthen slope from the school down to a boundary wall at the side of a footpath running along the west side of Tonbridge High Street. Its form is absent from the range of designs of pillboxes contemporarily designed by the Fortifications and Works Branch of the War Office.

It is of rectangular design, having a 3.16m x 2.20m plan and a height of 2m to a flat concrete roof. Its long rear wall contains the entrance. The front and side walls are pierced with embrasures. These, in varying degrees, face (a) south down Tonbridge High Street towards the Big Bridge over the River Medway; (b) east across the High Street to Portman Park and (c) north to the convergence of Shipbourne and London Roads. Embrasures are absent from the rear wall which faces the school buildings and was without a threat of direct fire by an enemy.

Left: the pillbox, partially revealed in February 2018 and, above, in January 2019. Tonbridge School's new Science Centre is on the left.

Embrasures facing south to Tonbridge High Street and (above) east to Portman Park pictured during early stages of preservation.

The walls are built of 9½ in. x 2½-in. smooth orange brick, except for the lower half of the right side where they are laid in rougher-faced yellow stocks. Perhaps no special significance is to be deduced from these unmatching colours, other than reflecting constraints on the availability of bricks of consistent colour at a time of wartime shortages. The brickwork combines elements of English, Flemish and Garden Wall bond. The rear wall, pierced with a 60cm undoored entrance, is 22cm thick, the front wall 35cm and the sides are 38cm. The reinforced concrete embrasures in the side walls appear to be pre-cast, around which the bricks were laid. As Paul Tritton has suggested in Chapter Five, these may have been made at the Southern Railway's pre-cast concrete factory at Ashford. Much of the concrete content of the castings is fine-grained but does contain some 1cm stone. The single front embrasure is brick, topped by a concrete lintel.

Internally, and 16cm below the side embrasures, are 66cm wide tables faced in brick, probably encasing a concrete fill. Their tops are surfaced in fine-grain concrete. The tables are built against, or integral with, the structure. There is a standing space of just 1.07 m between them. Some 46cm below the front embrasure is a narrow concrete ledge. The inside of the structure is otherwise bare, without internal fixtures and fittings. In places the walls display traces of a white coating, whether resulting from the leaching of lime, the use of whitewash, or both, is uncertain. Judging from the disturbance to a magnetic compass noted during the survey, the poured concrete floor is reinforced.

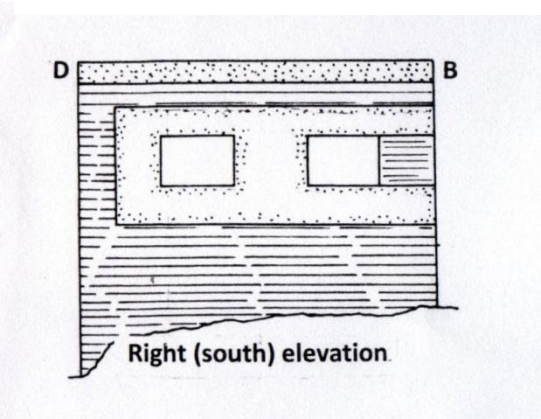
The entrance to the pillbox is protected against the ingress of surface water by a small lip above the floor and there is a 7cm diameter hole in the floor, perhaps a sump. The floor is likely to be the visible part of a larger concrete raft on which the walls were built, extending externally 30cm or so beyond them.

The concrete roof is 12-13 cm thick, its aggregate content being variable but with stone up to 1.5cm. It had been laid on 9in. (23cm) wooden scaffolding-type boards which, after removal, left imprints in the ceiling.

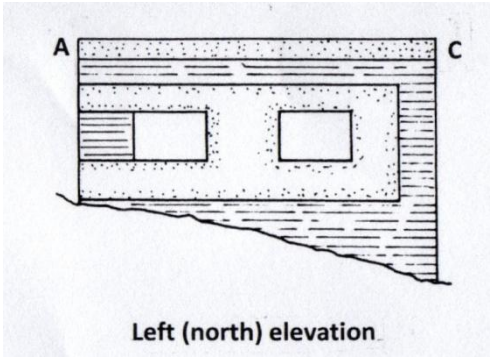
Externally and at eight places slightly set back from the edge of the roof, protrude small and now truncated iron or steel fixings. Also at various places along the edge of the roof are, at 15-20cm intervals, the exposed ends of what appear to be reinforcing rods. It has been suggested that a section of railings which had been removed locally as part of a wartime scrap-metal drive was used to reinforce the roof. Diagonally across the corners of the outside surface of the roof are shallow imprints of a once-existing frame or structure of some kind, with a transverse imprint across the middle.

Other than very small finishing facets, the embrasures are not splayed to guide angles of fire as is usual for pillboxes, being straight-through apertures with right angles. The front embrasure is 60 x 16cm, those in the side walls closest to the rear wall being 42 x 30cm and 80 x 30cm where, adjoining the front of the structure, it was cut out to give a greater angle of vision. Spalling of concrete from the embrasures in the side walls reveals metal reinforcement.

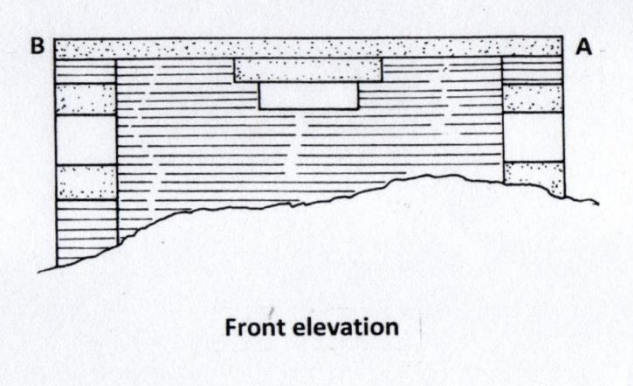
The ground-level around the structure is variable, in part reflecting its situation on a mound. There has been earlier and recent landscaping around the structure and the exact original ground profile in not precisely known.



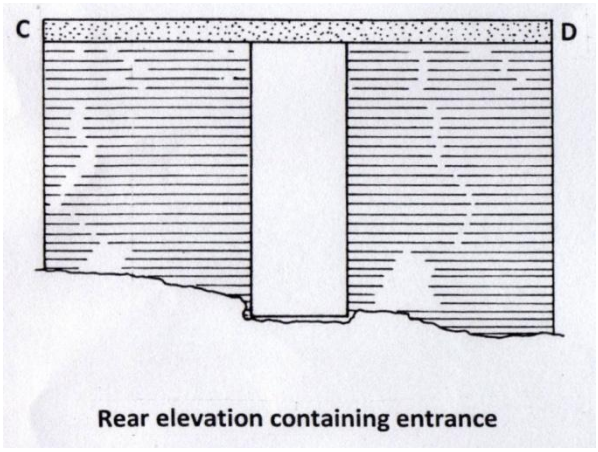
Above: right (south) elevation of the pillbox. Right: south elevation, showing reinforcement exposed due to spalling of the precast concrete embrasure facing the High Street.



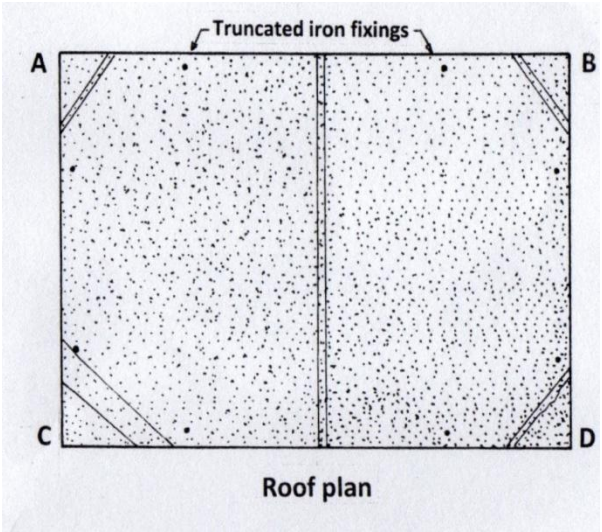
Above: left (north) elevation. Right: north elevation before conservation, showing reinforcement exposed due to spalling of the precast concrete embrasure facing junction of High Street, London Road and Shipbourne Road.



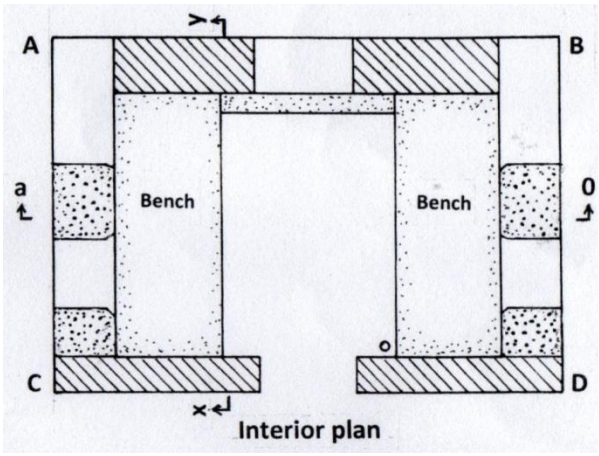
Above: front (east) elevation. Right: east elevation, showing main embrasures and central 60 x 16cm embrasure with line of fire across High Street to Portman Park.



Above and right: rear elevation, showing 60cm wide entrance.

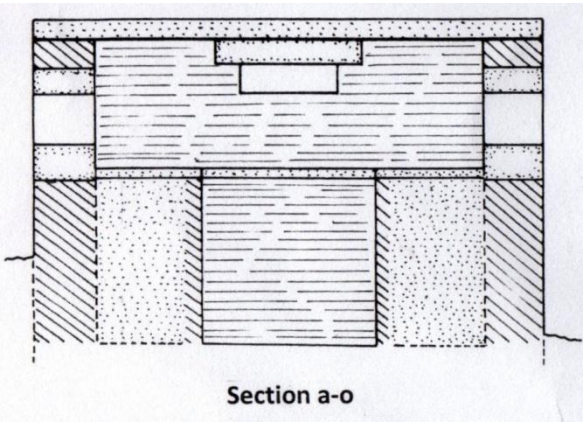


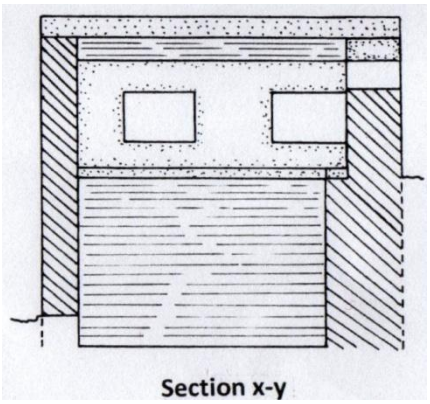
Above: roof plan. Right: the roof, showing truncated fixings and transverse imprints at corners.



Above: interior plan, showing wide benches to side embrasures and narrow shelf to front embrasure. Right: wide bench to south-facing embrasure.

Above: Victor Smith and Sara Normand (PA/Operations Assistant, Tonbridge School) during survey of pillbox, April 2019. Right: Rear and north elevation, June 2019.





Above: section a-o. Right: section x-y.

* * *

As has been mentioned, the pillbox appears to be a non-standard structure resembling, by coincidence, as Roger Thomas , Co-ordinator of the Pillbox Study Group, has remarked, one of the coastal and riverine mine-watching posts of the Second World War - and, it might be added, fire-watching posts, to be found at some key industrial premises during the same period.

Roger Thomas further commented: 'I have not seen a pillbox of this design before. It is probably an ad hoc design that was suited to its location. The width of the side tables seems a little excessive just for riflemen and perhaps were for the use of a light machine-gun of some sort, resting on a bipod, with boxes, magazines or drums of ammunition to hand, whereas the narrow shelf to the front embrasure would have been sufficient to rest an elbow on when taking aim.

'The alignment of the pillbox in relationship to the roads shows that the side walls were the principal defended aspects that covered the High Street in both directions, which would explain why there was a single narrow embrasure and shelf in the less important front wall that was most likely for observing a checkpoint at a road-block at the junction of the High Street and Portman Park.

'One feature that is of interest is the relatively thin rear wall, akin to the wall thickness of the First World War square pillboxes on the coast of the East Riding of Yorkshire. These structures were built as formers for a sandbag covering, much the same as the Norcon and Croft pillboxes of the Second World War, but of course, in the case of this pillbox, the side and front walls are 11 inches (28cm) thick, which would be considered as being bullet-proof and, to some extent, blast proof, but I suppose sandbags may still have been added to it, both for protection and to break up the profile. In fact, I suspect that when in use, the large embrasures would have been reduced in size by sandbags or removable concrete blocks'.

The eight iron or steel fixings around the edge of the roof may have been places for the attachment of camouflage nets drawn down to the ground. As to the imprints in the concrete on top of the roof, Roger Thomas has suggested that these might be the 'tell-tales' from a once existing timber frame as part of camouflaging.

As mentioned earlier, this pillbox should not be seen in isolation but as part of a larger suite of defences to impede road access from the north into Tonbridge. Although it has not been confirmed that all the defences on the War Office's 'Proposed Layout of Tonbridge Fortress' published in December 1941 were actually built, the proposal did provide for a road-block at the junction of Portman Park and the High Street and two more

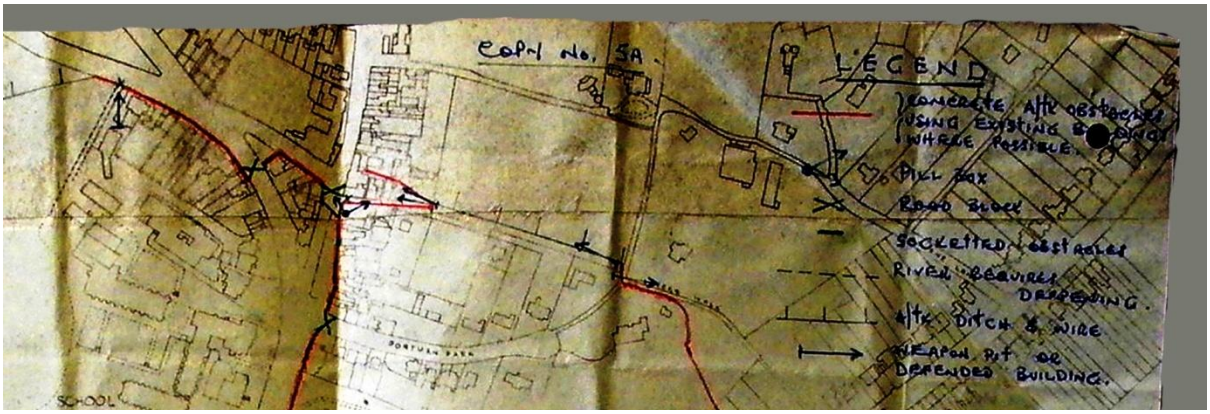
just to the north, on the outer perimeter where the High Street joins London Road and Shipbourne Road, as well as two weapon pits or defended buildings. If provided, it is likely that the road-blocks were also defended by two nearby Spigot Mortar positions or a Smith Gun to fire on tanks and other vehicles, or perhaps even a fougasse and other positions for hand-grenade bombers, riflemen and machine-gunners.

Certainly a pillbox is also shown on the December 1941 plan as envisaged for erection on the north-east corner of the triangular traffic island where these roads meet. For some reason Tonbridge School's pillbox is not marked, though there is every reason to assume that it existed at the end of 1941. Even if the evidence has vanished it is likely, or at least possible, that there were supporting extemporized firing positions in the school's windows.

Although primarily relating to defence against enemy penetration into Tonbridge from the north, had the enemy got through the perimeter across the Big Bridge on the south side of the town, the embrasures of the pillbox facing in that direction down the High Street would have been brought in action.

If that stage had been reached fortress would have been lost.

Unless there is an as yet unknown dimension to this structure, its design is not beyond reproach in relation to the limitations of its internal space and the form of its embrasures.



Detail from 1941 'Proposed Layout of Tonbridge Fortress', showing defences at High Street/Portman Park junction and (top left), junction of High Street, London Road and Shipbourne Road. The plan shows an intended enhancement of defences that already existed and not all the elements shown can be confirmed as having been built. (See Chapter Eight and Chapter Ten)

Conservation and display

Pillboxes were an iconic feature of home defence during the Second World War and it is commendable that the Tonbridge School authorities not only recognize and value this structure as a heritage asset but have begun steps for its display. These have taken the form of the clearance from its walls of obscuring vegetation and the carrying out of some gentle landscaping, combining to make the pillbox strikingly visible. An electrical supply has been installed to enable the embrasures to be illuminated from within at night. The entrance is closed for security purposes by a timber barrier which, with the use of tools, may easily be removed for access.

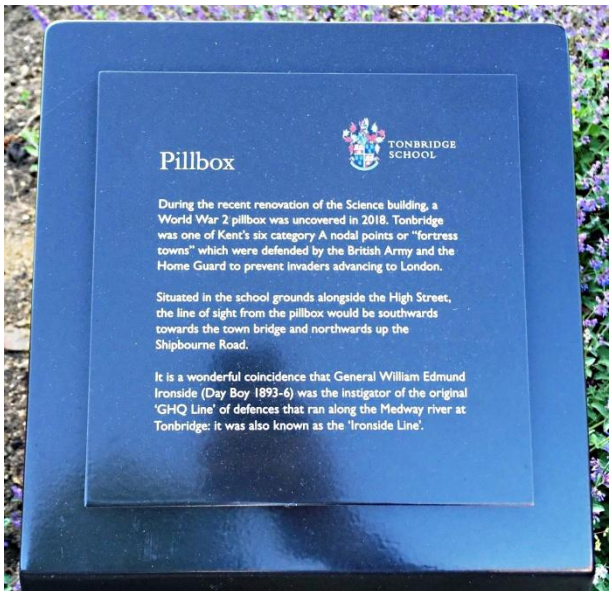
Use of a spirit-level has shown that the pillbox is exact in both its vertical and horizontal planes, the structure continuing to be stable despite recent groundworks and landscaping. Few repairs to the brickwork appear necessary. However, spalling of the concrete (notably of the embrasures of the side walls but also, to a small degree, of the roof) needs early attention to prevent further decay from the penetration of rainwater which

risks corrosion and damaging expansion of the metal reinforcement. A conservation architect might be consulted by the school but sand-blasting and sealing of the reinforcing steels where exposed, and reinstatement of missing concrete to keep out the weather and preventing further deterioration, seems advisable.

The school has already decided to enhance display of the pillbox by means of a heritage panel at the foot of the slope down from the pillbox to the High Street, where a suitable position has been found by the school's perimeter wall, providing ease of visibility and readability from passers-by on the pavement. For their benefit and education this would, ideally, contain several related informational and interpretational components, based on images and short supporting explanatory texts. The primary image might be of the pillbox itself (perhaps a cut-way drawing ,with figures inside), set into a background plan of the Shipbourne Road/London Road/Portman Park/High Street road convergence and junction, with road-blocks marked to make the placement and significance of this structure instantly explicable. The remainder of the panel could include a drawing of the Tonbridge Fortress to place this in context plus an image of Edmund Ironside, explaining his importance in British home defence at a critical period in the Second World War and, not least, his links and associations with the school.

A small commemorative plaque has already been installed and it has also been suggested that an educational package should be created for students at the school, based on Paul Tritton's research.

Overshadowed by Tonbridge School's new Science Centre, the school's earlier buildings and an electrical sub-station, the diminutive Second World War pillbox is pictured here in June 2019 in its new landscaped setting.



Above: commemorative plaque installed at the site in June 2019. Right: late 19th century or early 20th century hydrant marker plate unearthed during landscaping work around the pillbox in 2019. A relic of Tonbridge's first mains water distribution system, it was probably thrown over the High Street wall beside the pillbox during maintenance work on the mains. 'E' denotes the type of coupling installed at a distance of 6ft 6 in. from where the marker was erected. © Tonbridge School.

This Royal Naval Auxiliary Service Mine-Watching Post at Breakwater Fort, Portland, Dorset (NGR SY7075276231) has corner embrasures similar to those in Tonbridge School's pillbox but in this case for observation. (©Roger J C Thomas, Pillbox Study Group)

Sources consulted

No reference has been found in any documents but, for general context, several formation War Diaries in The National Archives have been consulted, including: WO166/521, the War Diary for 44 Division, General Staff (GS), responsible for the defence of the Tonbridge area in 1939-40; WO166/1216, and the War Diary for the Kent home defence area, 1 January – 30 November 1941.

* * *

Victor Smith and Paul Tritton thank Wendy Rogers of the Heritage Conservation Group of Kent County Council for her encouragement to carry out this survey. Sara Normand and Tonbridge School have shown great interest and support for this investigation and on several occasions made access available. We are also grateful to Beverley Matthews, the school's archivist, for her search of school historical records. George Haysom took photographs for the authors at an early stage. Roger Thomas, co-ordinator of the Pillbox Study Group, kindly commented on some of the findings from the survey.

*Victor Smith is an independent historian and investigator of historic defences in Britain and the Caribbean and was a co-ordinator for Kent County Council's 20th century Defence of Britain Project. He is past-chairman of the Kent Archaeological Society's Kent Historic Defences Group.

* * *

2: Hildenborough

The preservation of Tonbridge School's pillbox coincided with the exposure of a contemporary structure that had been almost completely concealed by trees and undergrowth for at least 30 years in the front garden of No. 44 Stocks Green Road, Hildenborough, unrecorded in national surveys of anti-invasion defences and known only to local residents, the Hildenborough History Society and few others.

In 2018, No. 44 Stocks Green Road *(above)* was offered for sale for £563,000, advertised as 'a detached house, in need of modernisation or replacement (subject to planning permission), with 4/5 bedrooms, large gardens, ample parking, and close to Stocks Green School'. At this time Tim Asquith of the Hildenborough History Society became concerned that the pillbox - an important relic of Hildenborough's wartime history - could be in danger of being demolished to make way for redevelopment of the site, or simply because the new owner might regard it as an eyesore to be removed forthwith.

Permission to clear the undergrowth and inspect the pillbox was refused by the executors of its last owners but in 2019 the new owners, Lynn and Marcus van Nieuwenhuizen, instructed landscaping contractors working on the garden to carefully uncover the structure; later they removed the previous owners' household rubbish that had accumulated within it. The structure was then measured and photographed.

This done, two questions arose: why was the structure located in a suburban front garden (when there were open spaces only a few yards away), and for what purpose? In the absence, so far as is known, of any contemporary records, we have to indulge in a degree of speculation in seeking answers.

Location, location, location

Situated one and a half miles north of the GHQ Line along the Medway, and a similar distance from the anti-tank ditch and tank-traps on the sector of Tonbridge's outer perimeter that crossed Tonbridge School's playing field, the pillbox is barely visible on an RAF aerial photograph taken in October 1947 and even less evident in later views.

No 44 Stocks Green Road was built in 1925 in the fashionable mock-Tudor style of the period, and named 'Oakfield'. In about 1930 it was purchased by distinguished Kent and England cricketer Frank Woolley, who previously lived with his wife Sybil and their family at 'Yew Tree Cottage,' Southborough. Among the few neighbouring properties in Stocks Green Road at that time were the Old Barn Tea Rooms, opposite No 44, patronized by local residents out for a country walk, and the first generation of leisure motorists taking their families for a Sunday 'spin' in their Austin and Morris motor cars.

In 1931 Frank wrote to the *Courier*, Tonbridge's local weekly newspaper, saying that visitors to the tea rooms might be wondering about 'the large green shed' in his garden. It had, he explained, been built for his cricket coaching school and indoor tennis court, which he now intended to become 'a practice club for cricketers', open every weekday evening. A new badminton club was also accommodated there.

The venue became very popular, and after retiring from professional cricket in 1938 Frank had more time to nurture his gardens and enjoy the company of the sports enthusiasts using his pavilion.

However, the Woolleys' happy days at 'Oakfield' were numbered. At the outbreak of war the property was acquired by Johnsen and Jorgensen Flint Glass Ltd, one of Britain's leading manufacturers of industrial and household glassware, which decided to move from Charlton, south London, to the relative safety of the Kent countryside. Production lines were initially set up in the sports pavilion but later extended into two factory buildings erected on a vacant plot adjacent to the large front garden of 'Oakfield.'

Frank, Sybil and their 22-year-old daughter Joan moved from Hildenborough, never to return. By National Registration Day (29 September 1939), when every civilian in Great Britain had to apply for identity cards and ration books, the family was living at 25 Princes Gardens, Margate, with Mabel Day, their domestic

servant. Frank's occupation was 'cricket coach', Sybil was listed as being engaged on 'domestic duties' and Joan was an ARP and Red Cross volunteer.

The prospect of their popular sports facility becoming a factory upset Hildenborough's residents, who sought assurances that the pavilion would be restored for its original use after the war. Imagine their surprise and apprehension when, in Britain's 'darkest hour' after Dunkirk, they witnessed a pillbox being constructed in the garden, and no doubt subsequently camouflaged, and the neighbourhood rapidly being transformed into a military zone within a complex of wartime defences, of which the 'Oakfield' pillbox was one.

Although not within Tonbridge Fortress, it would have been in the thick of the action during an invasion of the town. The presence within a few miles of various military establishments, including a Royal Artillery regimental HQ in what is now Sackville School, Hildenborough (NGR TQ563486) and Gaza Barracks in Scabharbour Road (NGR TQ531505) may have necessitated the construction of this pillbox and others in what now seem unlikely locations.

The rear boundary of 'Oakfield' is about 50 yards from the southern edge of West Wood, in which it is possible that some kind of military establishment was concealed. The pillbox's entrance was only a few yards from the glassworks' factory's extension. Post-war, the factory site was redeveloped for housing and is now occupied by No. 42 Stocks Green Road. The east wall of the pillbox stands exactly on the boundary of Nos 42 and 44.

Construction

The pillbox is approximately 11ft x 10ft in plan, with a ceiling height of 79in. Its entrance is 'notched' into the north-east corner. The walls are of standard 'English bond' brickwork of good quality, dense with sharp corners, and do not appear to contain a concrete infill. There is a brickwork embrasure under a tapered precast concrete lintel in all four walls. These enabled small arms fire to be aimed directly south to Leigh Road railway bridge (NGR TQ568478) and west to Stocks Green Road railway bridge (TQ563481), both approximately 300 yards away; north towards West Wood, and east to the north end of Leigh Road.

An enemy formation that breached the GHQ Line, captured the main line railway from Tonbridge to London, and then approached the main road (now the B245) to Tonbridge and London at Hildenborough, would have been fired on from the south and west embrasures. The north and east embrasures covered zones from which attacks were less likely.

An unusual feature of the embrasures is that the surrounding brickwork partially intrudes into the firing aperture, narrowing the gunner's view and restricting his arc of fire. An internal baffle wall would have deflected bullets fired through the entrance into the pillbox.

The pillbox has a reinforced concrete floor and a concrete roof slab. This is 5½in. deep and has a 2in. drip overhang to deflect rainwater on all sides, although not above the entrance. Nails in the roof, along its edges and above the entrance probably once secured camouflage netting. The ceiling is spalling due to rusting of the reinforcing bars in the roof slab.

The handbook for the Council for British Archaeology's Defence of Britain Project, published in 2002, shows a variety of structures similar to the one in Stocks Green Road under the general heading 'posts and small observation posts'. Police posts were built at the entrances to military establishments; firewatchers' posts were generally sited on industrial premises; minewatchers' posts were near harbours and ports. Mike Osborne's regional series of '20th Century Defences in Britain' books just calls them observation posts.

The Stocks Green Road pillbox may have been a forward observation post, guarding a roadside check-point. The glassworks factory was unlikely to have been of sufficient importance to justify its own purpose-built defences, although the possibility that vital military assets or clandestine activities were concealed in the factory cannot be ruled out.

Further research is merited.

Below: exterior of south wall, showing embrasure with line of fire to Leigh Road railway bridge. Below right: internal view of embrasure. (©Susan Featherstone)

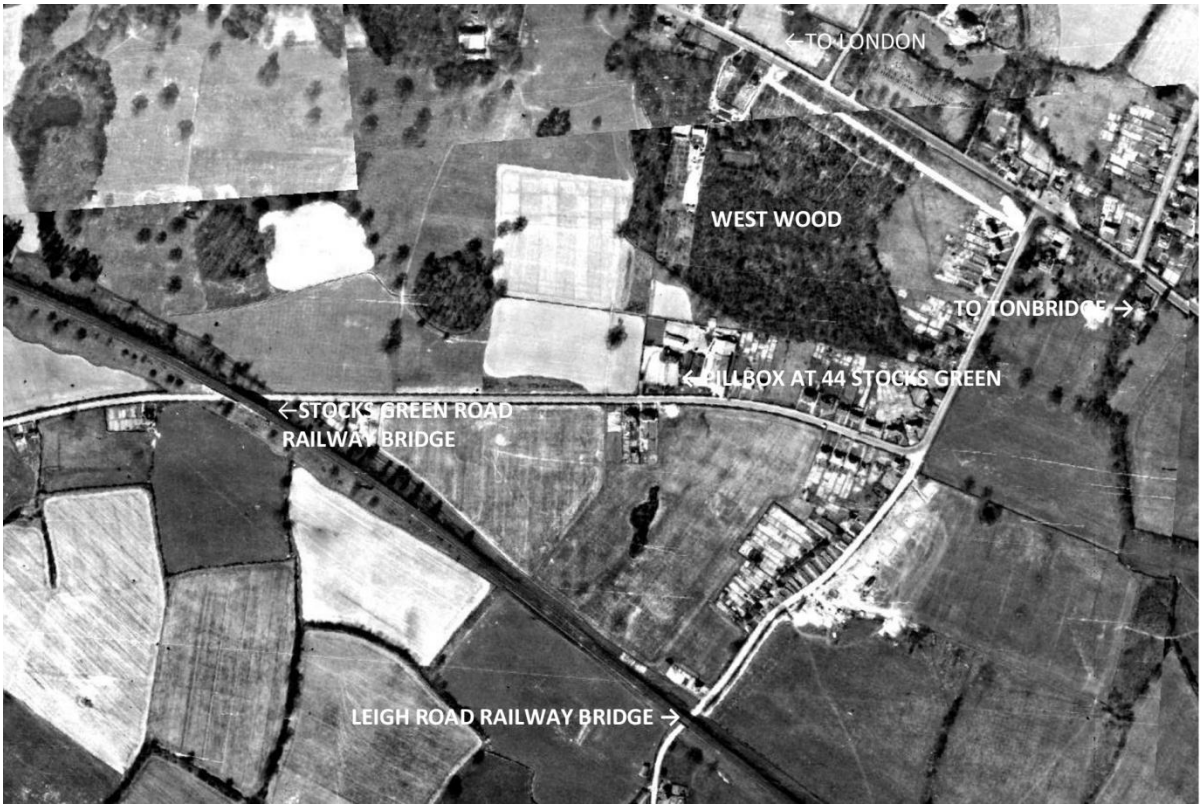
'Bricks of good quality, dense with sharp corners '. The south-west corner of the pillbox. (©Susan Featherstone)

Above : the west embrasure with a line of fire to Stocks Green Road railway bridge. (©Susan Featherstone)
Above right: internal view of the west embrasure, also showing damage to the ceiling caused by spalling due to rusting of reinforcing bars and hole in roof (probably post-war damage). (©Susan Featherstone)

Above: the east wall, with embrasure with line of fire across neighbouring properties to the north end of Leigh Road. The wall stands exactly on the boundary of Nos 42 and 44 Stocks Green Road. Above right: interior view of east embrasure. (©Susan Featherstone)

Above: the north wall of the pillbox and its entrance notched into its north-east corner. Right: internal view of the north embrasure, showing brickwork restricting the gunner's view and arc of fire. (©Susan Featherstone)

Construction details, showing (above left) drip overhang on roof and (above), nails in edge of roof to secure camouflage netting. (©Susan Featherstone)



Aerial view of location of pillbox, October 1947.

Author's Acknowledgements

My thanks to my wife Pat who in December 2017, from the top deck of a 401 bus, drew my attention to a pillbox had been exposed by contractors clearing a building site at Tonbridge School. This led us to embark on an investigation into the pillbox's origins that has now culminated in the publication of this book, substantial aspects of which are the result of Pat's diligent research and editorial assistance.

Immediately after we reported the revelation of the pillbox to the Kent Archaeological Society, local member George Haysom hurried to the site to take photographs just in case the structure became an

'endangered species'. Subsequently the society's Kent Historic Defences Group liaised with the school authorities and Kent County Council's Heritage Conservation Group to preserve and record the structure and bring it to public attention.

Thanks also to my mentors and collaborators Clive Holden and Victor Smith of the Kent Historic Defences Group for their guidance and advice, and for consulting War Diaries and other military records at The National Archives for me, to KAS colleagues Shiela Broomfield, Deborah Cole, George Fry and Mike Clinch for their help during this project, to Paul Cuming, KCC Historic Environment Record Manager for his cartographical assistance and for writing the Foreword, and to his colleague Wendy Rogers; also to Beverley Matthews (archivist) and Sara Normand (PA/Operations Assistant) at Tonbridge School, Derek Butler, Wendy Akast (bracketts.co.uk), Gary Coppins, Steve Sullivan, Lynn and Marcus van Nieuwenhuizen, David Walsh and Duncan Welch, and to the following organizations: Harrietsham History Society (Peter Brown); Hildenborough History Society (Tim Asquith); Imperial War Museum, Duxford (Stephen Walton, Senior Curator); Kent Archives; Leigh and District Historical Society (Joyce Field); Pillbox Study Group (Colin Anderson, Roger Thomas); Royal Engineers Museum, Library and Archive (Rebecca Blackburn); Royal Observer Corps Association (Keith Arnold, Neville Cullingford, Edwina Holden); The Slade Area Residents' Association (Jacquie Wyatt); Subterranea Britannica (Nick Catford), Tenterden and District Local History Society (Dr Jack Gillett), Tonbridge Historical Society (George Buswell, Pat Hopcroft, Anthony Wilson), Tonbridge and Malling Borough Council and Tonbridge River Trips.

Identifying the location of the town's outer perimeter defences and the stop-lines within it that survived after the war would have been impossible but for Kent County Council's superb Kent Heritage Maps website and its facility to compare maps dating from 1871 with current Ordnance Survey maps, and aerial photographs for 1947, 1900 and 2008.

I gratefully acknowledge the many local historians from whose books and websites (included in the bibliography below) I gleaned many details about civilian experiences and military activities in and around Tonbridge and Tunbridge Wells during what Churchill called Britain's 'darkest hour' – the period between the Fall of France in June 1940 and the Axis invasion of the Soviet Union in June 1941.

Most of the photographs I have published are my own or, to the best of my knowledge and belief, are from the public domain. Wherever possible I have acknowledged sources of images. I apologize for any unintentional oversights and will correct these accordingly in any future editions.

Bibliography and recommended further reading

Alanbrooke, Field Marshal, *Alanbrooke War Diaries 1935 – 1945*, Weidenfeld and Nicolson Ltd, 2001.

Alexander, Colin, *Ironside's Line, a Guide to the Defence Line planned for Great Britain in response to the threat of German Invasion, 1940-1942,* Storrington/Historic Military Press, 1999.

Bates, Ann, *Tunbridge Wells in the Second World War and the Years of Austerity 1939 – 1953,* Royal Tunbridge Wells Civic Society Local History Monograph No. 11, 2009.

Brown, Ian, and others, *20th Century Defences in Britain,* Council for British Archaeology, 1996.

Buswell, George/Wilson, Anthony, *Tonbridge Through Ten Centuries*, Tonbridge Historical Society, 2015.

Chalklin, C W (Ed.), *Late Victorian and Edwardian Tonbridge*, Kent County Library, 1988.

Chapman, Frank, *Tales of Old Tonbridge*, Froglets, 1995.

Cox, Richard, *Operation Sea Lion***,** Thornton Cox, 1982.

Dobinson, Colin, *'Operation Diver,'* Historic England, 2019.

Featherstone, Susan, *1940 and the Pillboxes around Leigh,* Leigh Parish Magazine, July 2002.

Goodsall, Robert H, *A Third Kentish Patchwork*, Stedehill Publications, 1970.

Hamilton, Nigel, *The Full Monty: Montgomery of Alamein 1887-1942*, Allen Lane, 2001.

Hennessy, Peter, *Never Again: Britain 1945-51*, Penguin Books 2006.

Holden, Clive, *Kent: Britain's Frontline County*, Amberley Publishing, 2017.

Hylton, Stuart, *Kent and Sussex 1940: Britain's Front Line*, Pen and Sword Military, 2004.

Ironside, Edmund Oslac, *Ironside: the authorised biography of Lord Ironside, 1880-1959,* Stroud: The History Press, 2018.

Kent: The County Administration in War 1939 – 1945, Kent County Council, n.d.

Khan, Mark, *Kent at War 1939-1945,* Pen and Sword Military, 2014.

Longmate, Norman, *The Real Dad's Army,* Amberley Publishing; 2016.

McKinstry, Leo, *How Britain Crushed the German War Machine's Dreams of Invasion in 1940*, John Murray 2018.

Montgomery, Field Marshal Bernard Law, *The Memoirs of Field Marshal Montgomery*, Pen and Sword Military, 2005.

Orchard, Barry, *A Look at The Head and the Fifty: A history of Tonbridge School*, James & James (Publishers) Ltd, 1991.

Schenk, Peter, *Invasion of England, 1940: Planning of Operation Sea Lion*, Conway Maritime Press Ltd, 1990.

Simmons, Sydney, *Tonbridge Castle: further observations on an ancient castle*, Archaeologia Cantiana Vol. 116, Kent Archaeological Society, 1966.

Slade Area Residents' Association, *A Little Knot of Narrow Streets, a History of The Slade, Tonbridge,* 2012.

Smith, Victor, *Front-line Kent: Defence against invasion from 1400 to the Cold War*, Kent County Council, 2001.

Tonbridge Free Press, *Tonbridge Free Press Centenary*, 1969.

Tonbridge Historical Society, *Tonbridge's Industrial Heritage*, 2005.

Wade, Stephen, *Air-raid shelters of World War II: Family stories of survival in the Blitz*, Barnsley: Remember When, 2011.

Walsh, David, *A Duty to Serve: Tonbridge School and the 1939-45 War*, Third Millennium 2011.

Waterstone, Tim, *The Face Pressed Against a Window*, Atlantic Books, 2019.

Wills, Henry, *Pillboxes. A Study of the UK Defences 1940,* Cooper/Secker & Warburg 1985.

Wynn, Tanya*, Kent at War 1939-45*, Pen and Sword Military, 2019.

Wynne, G C, *Stopping Hitler: an official account of how Britain planned to defend itself in the Second World War*, Frontline Books, 2017.

* * *

The Kent Archaeological Society has published the following papers on the Chatham 'nodal point' (part of Medway's twentieth-century military and civil defences) and 'Canterbury Fortress':

Smith, Victor T C, *Kent's Twentieth-Century Military and Civil Defences Part 2 – Medway,* Archaeologia Cantiana Vol. 131, 2011.

Smith, Victor T C, *Kent's Twentieth-Century Military and Civil Defences Part 3 – Canterbury,* Archaeologia Cantiana Vol. 132, 2012.

These can be read on-line at https://www.kentarchaeology.org.uk/Research/Pub/ArchCant

* * *

Recommended Websites

http://archaeologydataservice.ac.uk/archives
http://webapps.kent.gov.uk/KCC.ExploringKentsPast.Web.Sites.Public/Default.aspx
http://webapps.kent.gov.uk/KCC.HeritageMaps.Web.Sites.Public/Default.aspx
http://www.bbc.co.uk/history/ww2peopleswar/stories
http://www.castlesfortsbattles.co.uk/south_east/tonbridge_castle.html
http://www.kenthistoryforum.co.uk/index
http://www.kentphotoarchive.com
http://www.pillbox-study-group.org.uk
http://www.southeast-defencephotos.com
http://www.southeast-defencephotos.com/gallery/
http://www.subbrit.org.uk
http://www.subbrit.org.uk
http://www.tonbridgehistory.org.uk
https://en.wikipedia.org/wiki/British_anti-invasion_preparations_of_the_Second_World_War

https://hildenboroughhistorysociety.weebly.com
https://www.blighty-at-war.net
https://www.leighhistorical.org.uk/history/1940-and-the-pillboxes-around-leigh
https://www.quora.com/Why-did-Nazi-Germany-never-actually-invade-the-UK