

= Battle of Messines (1917) =

The Battle of Messines (7 ? 14 June 1917) was an offensive conducted by the British Second Army , under the command of General Sir Herbert Plumer , on the Western Front near the village of Messines in West Flanders , Belgium , during the First World War . The Nivelle Offensive in April and May had failed to achieve its more ambitious aims , led to the demoralisation of French troops and the dislocation of the Anglo @-@ French strategy for 1917 . The offensive at Messines forced the Germans to move reserves to Flanders from the Arras and Aisne fronts , which relieved pressure on the French . The tactical objective of the attack at Messines was to capture the German defences on the ridge , which ran from Ploegsteert (Plugstreet) Wood in the south , through Messines and Wytschaete to Mt . Sorrel , to deprive the German 4th Army of the high ground south of Ypres . The ridge commanded the British defences and back areas further north , from which the British intended to conduct the " Northern Operation " , to advance to Passchendaele Ridge , then capture the Belgian coast up to the Dutch frontier .

The Second Army had five corps , of which three conducted the attack and two remained on the northern flank , not engaged in the main operation ; the XIV Corps was available in General Headquarters reserve (GHQ reserve) . The 4th Army divisions of Gruppe Wijtschate (Group Wytschaete) held the ridge , which were later reinforced by a division from Gruppe Ypern . The battle began with the detonation of a series of mines beneath German lines , which created 19 large craters and devastated the German front line defences . This was followed by a creeping barrage 700 yards (640 m) deep , covering the British troops as they secured the ridge , with support from tanks , cavalry patrols and aircraft . The effectiveness of the British mines , barrages and bombardments was improved by advances in artillery survey , flash @-@ spotting and centralised control of artillery from the Second Army headquarters . British attacks from 8 ? 14 June advanced the front line beyond the former German Sehnen (Oosttaverne) line . The Battle of Messines was a prelude to the much larger Third Battle of Ypres campaign , the preliminary bombardment for which began on 11 July 1917 .

= = Background = =

= = = British plans 1916 ? 1917 = = =

In 1916 , the British planned to clear the German army from the Belgian coast to prevent them from using the coastal ports as bases from which to attack merchant ships and troop transports in the North Sea and English Channel . In January 1916 , General Sir Herbert Plumer recommended to Field Marshal Sir Douglas Haig the capture of Messines Ridge (part of the southern arc of the Ypres Salient) before an operation to capture the Gheluvelt plateau further north .

The Flanders campaign was postponed , because of the German offensive at Verdun and the demands of the Battle of the Somme . When it became apparent that the Nivelle Offensive (16 April ? 9 May 1917) had failed to achieve its most ambitious objectives , Haig instructed the Second Army to capture the Messines ? Wytschaete Ridge as soon as possible . Haig intended to force the Germans to move troops away from the French armies on the Aisne front , where demoralisation amid the failure of the Nivelle Offensive had led to a number of mutinies . British operations in Flanders would relieve pressure on the French Army , as the Battle of the Somme had done . The capture of Messines Ridge would give the British control of the strategically important ground on the southern flank of the Ypres Salient , shorten the front , deprive the Germans of observation over British positions further north and would occupy ground from which the British could observe the southern slope of Menin Ridge at the west end of the Gheluvelt plateau , in preparation for a larger offensive in the Ypres Salient .

The front line around Ypres had changed relatively little since the end of the Second Battle of Ypres (22 April ? 25 May 1915) . The British held the city , while the Germans held the high ground of the Messines ? Wytschaete Ridge to the south , the lower ridges to the east and the flat ground to the

north . The Ypres front was a salient bulging into the German lines but was overlooked by German artillery observers on the higher ground . The British had little ground observation of the German rear areas and valleys east of the ridges .

The ridges ran north and east from Messines , 264 feet (80 m) above sea level at its highest point , past " Clapham Junction " at the west end of the Gheluvelt plateau , 2 @ 5 miles (4 @ 0 km) from Ypres at 213 feet (65 m) and Gheluvelt which was above 164 feet (50 m) to Passchendaele , 5 @ 5 miles (8 @ 9 km) from Ypres at 164 feet (50 m) above sea level , declining from there to a plain further north . Gradients varied from negligible , to 1 : 60 at Hooge and 1 : 33 at Zonnebeke . Underneath the soil was London clay , sand and silt . Since the First Battle of Ypres in 1914 , much of the drainage in the area had been destroyed by artillery fire , although some repairs had been achieved by army Land Drainage Companies brought from England . The area was considered by the British to be drier than Loos , Givenchy and Plugstreet Wood further south .

= = Prelude = =

= = = British offensive preparations = = =

The Second Army devised a centralised artillery plan of great sophistication , following the practice established at the Battle of Arras in April 1917 . The use of field survey , gun calibration , weather data and a new and highly accurate 1 : 10 @, @ 000 scale map , gave British artillery much improved accuracy . Target @-@ finding became systematic , with the use of new sound @-@ ranging equipment , better organisation of flash @-@ spotting and the communication of results through the Army Report Centre at Locre Château . Second Army counter @-@ battery artillery bombardments increased from twelve in the week ending 19 April , to 438 in the last ten days before the attack . A survey of captured ground after the battle found that 90 percent of the German artillery positions had been plotted . The 2nd Field Survey Company also assisted the mining companies by establishing the positions of objectives within the German lines , using intersection and a special series of aerial photographs . The company surveyed advanced artillery positions , so that guns moving forward to them once the battle had begun could begin firing as soon as they arrived at the positions .

The British had begun a mining offensive against the German @-@ held Wijtschate (sic) salient in 1916 . Sub @-@ surface conditions were especially complex and separate ground water tables made mining difficult . To overcome the technical difficulties , two military geologists assisted the miners from March 1916 , including Edgeworth David , who planned the system of mines . Sappers dug the tunnels into a layer of " blue clay " 80 ? 120 feet (24 ? 37 m) below the surface , then drifted galleries for 5 @, @ 964 yards (5 @, @ 453 m) to points deep underneath Group Wytschaete 's front lines , despite German counter @-@ mining . German tunnellers came within metres of several British mine chambers , found the mine at La Petite Douve Farm and wrecked the chamber with a camouflet . The British diverted the attention of German miners from their deepest galleries , by making many secondary attacks in the upper levels . Co @-@ ordinated by tunnelling companies of the Royal Engineers , Canadian , Australian , New Zealand and British miners laid 26 mines with 447 long tons (454 t) of ammonal explosive . The British knew of the importance the Germans placed on holding the Wijtschate salient , after a captured corps order from Gruppe Wijtschate stating " that the salient be held at all costs " was received by Haig on 1 June . In the week before the attack , 2 @, @ 230 guns and howitzers bombarded the German trenches , cut wire , destroyed strong @-@ points and conducted counter @-@ battery fire against 630 German artillery pieces , using 3 @, @ 561 @, @ 530 shells .

In May , the 4th Australian , 11th and 24th divisions were moved north from Arras , to become reserve divisions for those corps in the Second Army which were preparing to attack Messines Ridge . Seventy @-@ two of the new Mark IV tanks also arrived in May and were hidden south @-@ west of Ypres . British aircraft began to move north from the Arras front , the total rising to

about 300 operational aircraft in II Brigade in the Second Army area . The mass of artillery to be used in the attack was supported by many artillery observation and photographic reconnaissance aircraft , in corps squadrons which had been increased from twelve to eighteen aircraft . Strict enforcement of wireless procedures allowed a reduction of the minimum distance between observation aircraft from 1 @, @ 000 yards (910 m) at Arras in April 1917 to 400 yards (370 m) at Messines , without mutual wireless interference . Wire @-@ cutting began on 21 May and an extra two days were added to the bombardment for more counter @-@ battery fire . The main bombardment began on 31 May , with only one day of poor weather before the attack . Two flights of each observation squadron concentrated on counter @-@ battery observation and one became a " bombardment flight " , working with particular artillery " bombardment groups " for wire @-@ cutting and trench @-@ destruction ; these flights became " contact @-@ patrol flights " intended to observe the positions of British troops once the assault began . The attack barrage was rehearsed on 3 June to allow British air observers to plot masked German batteries , which mainly remained hidden but many minor flaws in the British barrage were reported . A repeat performance on 5 June induced a larger number of hidden German batteries to reveal themselves .

The 25th Division made its preparations on a front from the Wulverghem ? Messines road to the Wulverghem ? Wytschaete road , facing 1 @, @ 200 yards (1 @, @ 100 m) of the German front line , which tapered to the final objective 700 yards (640 m) wide at the near crest of the ridge , 3 @, @ 000 yards (2 @, @ 700 m) distant , behind nine German defensive lines . The advance would begin up a short rise to the near edge of the Steenbeek Valley , then up the steep rise from the valley floor between Hell and Sloping Roof Farms to Four Huns , Chest and Middle Farms on the main ridge , with Lumm Farm on the left flank of the objective . Artillery emplacements for the 25th divisional artillery and 112th Army Field Brigade were built and the Guards Division field artillery was placed in concealed forward positions . Road making and the construction of dug @-@ outs and communication trenches took place between 12 ? 30 April and between 11 May ? 6 June . An assembly trench was dug 150 yards (140 m) from the German front line , in three hours on the night of 30 / 31 May , complete with communication trenches and barbed wire . Bridges and ladders were delivered in the two days before the attack . 13 @, @ 000 yards (12 @, @ 000 m) of telephone cable was dug in at least 7 feet (2 @. @ 1 m) deep , which withstood fifty German artillery hits before the British attack .

Large numbers of posts , from which machine @-@ guns were to fire an overhead barrage were built and protective pits were dug for mules , which were to carry loads of 2 @, @ 000 rounds of ammunition to advanced troops . Three field companies of engineers with a pioneer battalion were kept in reserve , to follow up the attacking infantry and rebuild roads and work on defensive positions as ground was consolidated . The artillery in support of the division devised a creeping and standing barrage plan and time @-@ table , tailored to the estimated rates of advance of the infantry units . The standing barrage lifts were to keep all trenches within 1 @, @ 500 yards (1 @, @ 400 m) of the infantry under continuous fire and targets fired on by 4 @. @ 5 @-@ inch howitzer , 6 @-@ inch howitzer and 8 @-@ inch howitzers were to change from them only when infantry got within 300 yards (270 m) . The 18 @-@ pounder field gun standing barrages would then jump over the creeping barrages , to the next series of objectives . The concealed guns of the Guards Division field artillery were to join the creeping barrage for the advance at 4 : 50 a.m. and at 7 : 00 a.m. the 112th Army Field Brigade was to advance to the old front line , to be ready for an anticipated German counter @-@ attack by 11 : 00 a.m.

The 47th Division planned to attack with two brigades , each reinforced by a battalion from the reserve brigade , along either side of the Ypres ? Comines Canal . Large numbers of machine @-@ guns were organised to fire offensive and defensive barrages and signal detachments were organised to advance with the infantry . An observation balloon was reserved for messages by signal lamp from the front line , as insurance against the failure of telephone lines and message @-@ runners . The divisional trench mortar batteries were to bombard the German front line opposite the 142nd Brigade , where it was too close for the artillery to shell without endangering British troops . Wire @-@ cutting began in mid @-@ May , against considerable local retaliation by German artillery . At the end of May the two attacking brigades began training at Steenvoorde , on

practice courses built to resemble the German positions to be attacked , using air reconnaissance photographs to mark the positions of machine @-@ gun posts and hidden barbed wire . Divisional intelligence summaries were used to plan the capture of German company and battalion headquarters . The 140th Brigade with four tanks attached , was to occupy White Château and the adjacent part of Damstrasse , while the 142nd Brigade attacked the spoil heaps and the canal bank to the left . On 1 June , the British artillery began the intense stage of preparatory bombardment for trench @-@ destruction and wire cutting and the two attacking brigades assembled for the attack from 4 ? 6 June .

British fighter aircraft tried to prevent German aircraft observing for their artillery , by dominating the air from the British front line to the German balloon line , about 10 @,@ 000 yards (9 @,@ 100 m) beyond . Better aircraft like the Bristol Fighter , S.E.5a and the naval Sopwith Triplane had entered service since Arras and matched the performance of the German Albatros D.III and Halberstadt D.II fighters . The " barrage line " was patrolled all day for the week before the attack , by fighters at 15 @,@ 000 feet (4 @,@ 600 m) with more at 12 @,@ 000 feet (3 @,@ 700 m) in the centre of the attack front . No British corps aircraft were shot down by German aircraft until 7 June , when 29 corps aircraft were able to direct artillery fire simultaneously over the three attacking corps . Behind the barrage line lay a second line of defence , which used wireless interception to take bearings on German artillery observation aircraft and guide British aircraft into areas where German flights were most frequent . By June 1917 , each British army had a control post of two aeroplane compass stations and an aeroplane intercepting station , linked by telephone to the army wing headquarters , fighter squadrons , the anti @-@ aircraft commander and the corps heavy artillery headquarters .

The new anti @-@ aircraft communication links allowed areas threatened by German bombardment to be warned , German artillery spotting aircraft to be attacked and German artillery batteries to be fired on when they revealed themselves . From 1 ? 7 June , II Brigade had 47 calls through wireless interception , shot down one German aircraft , damaged seven and stopped 22 German artillery bombardments . Normal offensive patrols continued beyond the barrage line out to a line from Ypres to Roulers and Menin , where large formations of British and German aircraft clashed in long dogfights , once German air reinforcements began operating in the area . Longer @-@ range bombing and reconnaissance flights concentrated on German @-@ occupied airfields and railway stations and the night bombing specialists of No. 100 Squadron RFC attacked trains around Lille , Courtrai , Roulers and Comines . Two squadrons were reserved for close air support on the battlefield and low attacks on German airfields .

= = = Plan of attack = = =

The British planned to advance on a 17 @,@ 000 @-@ yard (16 @,@ 000 m) front , from St. Yves to Mt . Sorrel east to the Oosttaverne line , a maximum depth of 3 @,@ 000 yards (2 @,@ 700 m) . Three intermediate objectives to be reached a day at a time became halts , where fresh infantry would leap @-@ frog through to gain the ridge in one day . In the afternoon a further advance down the ridge was to be made . The attack was to be conducted by three corps of the Second Army (General Sir Herbert Plumer) : II Anzac Corps in the south @-@ east was to advance 800 yards (730 m) , IX Corps in the centre was to attack on a 5 @,@ 000 yards (4 @,@ 600 m) front , which would taper to 2 @,@ 000 yards (1 @,@ 800 m) at the summit and X Corps in the north had an attack front of 1 @,@ 200 yards (1 @,@ 100 m) . The corps planned their attacks under the supervision of the army commander , using as guides , the analyses of the Somme operations of 1916 and successful features of the attack at Arras on 9 April . Great care was taken in the planning of counter @-@ battery fire , the artillery barrage time @-@ table and machine @-@ gun barrages .

German artillery positions and the second (Höhen) line were not visible to British ground observers . For observation over the rear slopes of the ridge , 300 aircraft were concentrated in II Brigade RFC and eight balloons of II Kite Balloon Wing were placed 3 @,@ 000 ? 5 @,@ 000 feet (910 ? 1 @,@ 520 m) behind the British front line . The Second Army artillery commander , Major @-@ General George Franks , co @-@ ordinated the corps artillery plans , particularly the heavy artillery

arrangements to suppress German artillery , which were devised by the corps and divisional artillery commanders . The Second Army Report Centre at Locre Château was linked by buried cable to each corps report centre , corps heavy artillery headquarters , divisional artillery headquarters , RFC squadrons , balloon headquarters , survey stations and wireless stations . Responsibility for counter @-@ battery fire was given to a counter @-@ battery staff officer with a small staff , who concentrated exclusively on the defeat of the German artillery . A conference was held each evening by the counter @-@ battery staffs of divisions and corps , methodically to collate the day 's reports from observation aircraft and balloons , field survey companies , sound ranging sections and forward observation officers . Each corps had a counter @-@ battery area , which was divided into zones and allotted to heavy artillery groups . Each heavy artillery group headquarters divided their zones into map squares , which were allotted to artillery batteries , required to be ready swiftly to open fire on them .

The attacking corps organised their heavy artillery within the army plan according to local conditions . II Anzac Corps created four counter @-@ battery groups , each with one heavy artillery group and IX Corps arranged four similar groups and five bombardment groups , one for each of the three IX Corps divisions making the initial attack and two (with the heaviest howitzers) in reserve , under the control of the corps heavy artillery commander . A Heavy Artillery Group Commander was attached to each divisional artillery headquarters , to command the heavy artillery once the infantry attack began . Field artillery arrangements within corps also varied , in IX Corps groups and sub @-@ groups were formed so that infantry brigades had an artillery liaison officer and two sub @-@ groups , one with six 18 @-@ pounder batteries and one with six 4 @. @ 5 @-@ inch howitzer batteries . Surplus field artillery brigade headquarters planned forward moves for the guns and were kept ready to replace casualties . It was expected that much of the artillery would need to switch rapidly from the bombardment plan to engage counter @-@ attacking German infantry . It was planned that the Forward Observation Officers of the divisions in the first attack onto the ridge would control the artillery which had remained in place and the reserve divisions advancing down the far slope to the Oosttaverne line would control the artillery hidden close to the front line and the artillery which advanced into no @-@ man 's @-@ land .

Franks planned to neutralise German guns within 9 @, @ 000 yards (8 @, @ 200 m) of the attack front . On the flanks of the British attack front of 17 @, @ 000 yards (16 @, @ 000 m) , 169 German guns had been located , for which 42 British guns (25 percent of the German total) were set aside . The 299 German guns in the path of the attack were each to be engaged by a British gun , a formula which required 341 British guns and howitzers to be reserved for counter @-@ battery fire . Every 45 yards (41 m) of front had a medium or heavy howitzer for bombardment , which required 378 guns , with 38 super @-@ heavy guns and howitzers (5 percent) deployed with the field artillery that was due to fire the creeping and standing barrages . Franks devised a bombardment timetable and added arrangements for a massed machine @-@ gun barrage . The 756 medium and heavy guns and howitzers were organised in forty groups and the 1 @, @ 510 field guns and howitzers in sixty @-@ four field artillery brigades within the attacking divisions and thirty @-@ three Army field artillery brigades , divided among the three attacking corps . Ammunition weighing 144 @, @ 000 long tons (146 @, @ 000 t) was delivered with 1 @, @ 000 shells for each 18 @-@ pounder , 750 shells per 4 @. @ 5 @-@ inch howitzer , 500 rounds for each medium and heavy piece and another 120 @, @ 000 gas and 60 @, @ 000 smoke shells for the 18 @-@ pounder field guns .

Two thirds of the 18 @-@ pounders were to fire a creeping barrage of shrapnel immediately ahead of the advance , while the remainder of the field guns and 4 @. @ 5 @-@ inch howitzers were to fire a standing barrage , 700 yards (640 m) further ahead on German positions and lift to the next target , when the infantry came within 400 yards (370 m) of the barrage . Each division was given four extra batteries of field artillery , which could be withdrawn from the barrage at the divisional commander 's discretion to engage local targets . The field batteries of the three reserve divisions were placed in camouflaged positions , close to the British front line . As each objective was taken by the infantry , the creeping barrage was to pause 150 ? 300 yards (140 ? 270 m) ahead and become a standing barrage , while the infantry consolidated . During this time the pace of fire was to

slacken to one round per @-@ gun per @-@ minute , allowing the gun @-@ crews a respite , before resuming full intensity as the barrage moved on . The heavy and super @-@ heavy artillery was to fire on German artillery positions and rear areas and 700 machine @-@ guns were to fire a barrage over the heads of the advancing troops .

At 03 : 00 a.m. the mines would be detonated , followed by the attack of nine divisions onto the ridge . The blue line (first objective) was to be occupied by zero + 1 : 40 hours followed by a two @-@ hour pause . At zero + 3 : 40 hours the advance to the black line (second objective) would begin and consolidation was to start by zero + 5 : 00 hours . Fresh troops from the unengaged brigades of the attacking divisions or from the reserve divisions would then pass through , to attack the Oosttaverne line at zero + 10 : 00 hours . As soon as the black line was captured , all guns were to bombard the Oosttaverne line , conduct counter @-@ battery fire and place a standing barrage beyond the black line . All operational tanks were to join with the 24 held in reserve , to support the infantry advance to the Oosttaverne line .

= = = German defensive preparations = = =

The Messines defences were on a forward slope , overlooked from Haubourdin Hill (Hill 63) south of the Douve valley and Kemmel Hill , 5 @,@ 000 yards (4 @,@ 600 m) west of Wijtschate , an arrangement which the experience of 1916 showed to be obsolete . A new line incorporating the revised principles of defence derived from the experience of the Battle of the Somme , known as Flanders I , was begun in February 1917 . The first section began 6 miles (9 @.@ 7 km) behind Messines Ridge , running north from the Lys to Linselles then Werviq and Beselare , where the nearest areas giving good artillery observation to the west were found . In April , Field Marshal Crown Prince Rupprecht and his chief of staff , Lieutenant @-@ General Hermann von Kuhl , favoured withdrawal to the Warneton (third) line , before a British attack . The local divisional commanders objected , due to their belief that counter @-@ mining had neutralised the British underground threat and the inadequacy of the Warneton line . The convex eastern slope limited artillery observation and the Ypres ? Comines canal and the river Lys restricted the space below the ridge where infantry could manoeuvre for counter @-@ attacks . British observation from the ridge would make the ground to the east untenable as far as Flanders I 6 miles (9 @.@ 7 km) beyond . A withdrawal that far would uncover the southern slopes of Menin Ridge , which was the most vital part of the Flanders position . Rupprecht re @-@ examined the Warneton (third) line and the extra Sehnen line (Oosttaverne line to the British) between the Warneton Line and the Höhen (second) line and dropped the withdrawal proposal .

Gruppe Wijtschate with three divisions under the command of the headquarters of XIX Corps (General Maximilian von Laffert) , held the ridge , as part of the 4th Army (General Friedrich Bertram Sixt von Armin) . The ridge garrison was reinforced with the 24th Division in early May . The 35th and 3rd Bavarian divisions were brought up as Eingreif divisions and Gruppe Wijtschate was substantially reinforced with artillery , ammunition and aircraft . The vulnerability of the northern end of Messines Ridge , where it met the Menin Ridge , led to the German command limiting the frontage of the 204th (Württemberg) Division to 2 @,@ 600 yards (2 @,@ 400 m) . The 24th Division to the south held 2 @,@ 800 yards (2 @,@ 600 m) and the 2nd Division at Wijtschate held 4 @,@ 000 yards (3 @,@ 700 m) . In the south @-@ east , 4 @,@ 800 yards (4 @,@ 400 m) of the front line either side of the river Douve , was defended by the 40th Division . The front @-@ line was lightly held , with fortifications distributed up to 0 @.@ 5 @-@ mile (0 @.@ 80 km) behind the front line . At the end of May , British artillery fire was so damaging that the 24th and 40th divisions were relieved by the 35th and 3rd Bavarian (Eingreif) divisions , which were replaced by the 7th and 1st Guard Reserve divisions in early June and relief of the 2nd Division was promised for 7 / 8 June .

The German front line regiments held areas 700 ? 1 @,@ 200 yards (640 ? 1 @,@ 100 m) wide with one (Kampf) battalion forward , one (Bereitschaft) battalion in support and the third in reserve 3 ? 4 miles (4 @.@ 8 ? 6 @.@ 4 km) back . The Kampf battalion usually had three companies in the front system (which had three lines of breastworks called " Ia " , " Ib " and " Ic ") and one in the

Sonne (intermediate) line (with a company of the support battalion , available for immediate counter @-@ attack) between the front system and the Höhen (second) line on the ridge crest . The other three companies of the support battalion sheltered in the Höhen (second) line . About 32 machine @-@ gun posts per regimental sector were dispersed around the defensive zone . The German defence was intended to be mobile and Stosstrupps in " Ic " the third breastwork , were to conduct immediate counter @-@ attacks to recapture " Ia " and " Ib " . If they had to fall back , the support battalions would advance to restore the front system , except at Spanbroekmolen Hill , which due to its importance was to be held unbedingt Halten (at all costs) .

On 8 May , the British preliminary bombardment began and on 23 May became much heavier . The breastworks of the front defences were demolished and concrete shelters on both sides of the ridge were systematically destroyed . Air superiority allowed the British artillery observation aircraft to cruise over the German defences , despite the defensive efforts of the Richthofen Circus . On 26 May , the German front garrisons were ordered to move forward 50 yards (46 m) into shell @-@ holes in no @-@ man 's @-@ land at dawn and return to their shelters at night . When the shelters were destroyed , shell @-@ hole positions were made permanent as were those of the companies further back . Troops in the Höhen (second) line were withdrawn behind the ridge and by the end of May , the front battalions were being changed every two days instead of every five , due to the effect of the British bombardment . Some German troops on the ridge were convinced of the mine danger and their morale was depressed further by the statement of a prisoner taken on 6 June , that the attack would be synchronised with mine explosions . On 1 June , the British bombardment became more intense and nearly every German defensive position on the forward slope was obliterated . The Luftstreitkräfte effort reached its maximum from 4 ? 5 June , when German aircraft observed 74 counter @-@ battery shoots and wireless interception by the British showed 62 German aircraft , escorted by up to seven fighters each , directing artillery fire against the Second Army . British air observation on the reverse slope was less effective than in the foreground but Mesen and Wijtschate villages were demolished , as were much of the Höhen and Sehnen lines , although many pill boxes survived . Long @-@ range fire on Comines , Warneton , Wervicq and villages , road junctions , railways and bridges caused much damage and a number of ammunition dumps were destroyed .

= = Battle = =

= = = Second Army = = =

Fine weather was forecast for 4 June , with perhaps a morning haze (between 15 May ? 9 June the weather was fair or fine except for 16 , 17 and 29 May , when it was very bad) . Zero Day was fixed for 7 June , with zero hour at 3 : 10 a.m. , when it was expected that a man could be seen from the west at 100 yards (91 m) . There was a thunderstorm in the evening of 6 June but by midnight the sky had cleared and at 2 : 00 a.m. , British aircraft cruised over the German lines to camouflage the sound of tanks as they drove to their starting points . By 3 : 00 a.m. , the attacking troops had reached their jumping @-@ off positions unnoticed , except for some in the II Anzac Corps area . Routine British artillery night @-@ firing stopped around half an hour before dawn and birdsong could be heard and at 3 : 10 a.m. the mines began to detonate . After the explosions , the British artillery began to fire at maximum rate . A creeping barrage in three belts 700 yards (640 m) deep began and counter @-@ battery groups bombarded all known German artillery positions with gas shell . The nine attacking divisions and the three in reserve began their advance as the German artillery reply came scattered and late , falling on British assembly trenches after they had been vacated .

= = = = First objective (blue line) = = = =

The II Anzac Corps objective was the southern part of the ridge and Messines village . The 3rd

Australian Division on the right , had been disorganised by a German gas bombardment on Ploegsteert (Plugstreet) Wood around midnight , which caused 500 casualties during the approach march but the attack between St. Yves and the river Douve began on time . The 9th and 10th Brigades benefitted from four mine explosions at Trenches 122 and 127 , which were seven seconds early and left craters 200 feet (61 m) wide and 20 feet (6 @. @ 1 m) deep . The craters disrupted the Australian attack formation , some infantry lines merging into a wave before reforming as they advanced . The New Zealand Division approached over Hill 63 and avoided the German gas bombardment . The two attacking brigades crossed the dry river bed of the Steenebeke and took the German front line , despite the abandonment of the mine at La Petite Douve Farm and then advanced towards Messines village . On the left of the corps , the 25th Division began its advance 600 yards (550 m) further back than the New Zealand Division but quickly caught up , helped by the mine at Ontario Farm .

On the right of IX Corps , the 36th (Ulster) Division attack on the front of the 107th Brigade , was supported by three mines at Kruisstraat and the big mine at Spanbroekmolen , 800 yards (730 m) further north . The 109th Brigade on the left was helped by a mine at Peckham House . The devastated area was crossed without resistance , German survivors being stunned by the mine explosions . The 16th (Irish) Division attacked between Maedelstede Farm and the Vierstraat ? Wytschaete road . The mines at Maedelstede and the two at Petit Bois devastated the defence ; the mines at Petit Bois on the left were about 12 seconds late and knocked over some of the advancing British infantry . On the left of IX Corps , the 19th Division , north of the Vierstraat ? Wytschaete road , attacked with two brigades into the remains of Grand Bois and Bois Quarante . Three mine explosions at Hollandscheschuur allowed the infantry to take a dangerous salient at Nag 's Nose , as German survivors surrendered or retreated .

X Corps had a relatively short advance of 700 yards (640 m) to the crest and another 600 yards (550 m) across the summit , which would uncover the German defences further north on the southern slope of the Gheluvelt plateau and the ground back to Zandvoorde . The German defences had been strengthened and had about double the normal infantry garrison . The German artillery concentration around Zandvoorde made a British attack in the area highly vulnerable but the British counter @-@ battery effort suppressed the German artillery , its replies being late and ragged . On the night of 6 / 7 June , gaps were cut in the British wire to allow the troops to assemble in no @-@ man 's @-@ land , ready to attack at 3 : 10 a.m. The 41st Division attacked with two brigades past a mine under the St. Eloi salient , finding the main obstacle to be wreckage caused by the explosion . The 47th and 23rd divisions formed the left defensive flank of the attack , advancing onto the ridge around the Ypres ? Comines canal and railway , past the mines at Caterpillar and Hill 60 . The cuttings of the canal and railway were a warren of German dug @-@ outs but the 47th Division , advancing close up to the creeping barrage , crossed the 300 yards (270 m) of the German front position in 15 minutes , German infantry surrendering along the way . Soft ground in the valley south of Mt . Sorrel , led the two infantry brigades of the 23rd Division to advance on either side up to the near crest of the ridge , arriving while the ground still shook from the mines at Hill 60 .

In the areas of the mine explosions , the British infantry found dead , wounded and stunned German soldiers . The attackers swept through the gaps in the German defences as Germans further back hurriedly withdrew . About 80 @, @ 000 British troops advanced up the slope , helped by the creeping bombardment , which threw up lots of smoke and dust , blocking the view of the remaining German defenders . The barrage moved at 100 yards (91 m) in two minutes , which allowed the leading troops to rush or outflank German strong points and machine @-@ gun nests . Where the Germans were able to resist , they were engaged with rifle @-@ grenades , Lewis guns and trench mortars , while riflemen and bombers worked behind them . Pillbox fighting tactics had been a great success at the Battle of Vimy Ridge in April and in training for the attack at Messines , the same methods were adopted along with emphasis on mopping @-@ up captured ground , to ensure that bypassed German troops could not engage advancing troops from behind . In the smoke and dust , direction was kept by compass and the German forward zone was easily overrun in the 35 minutes allotted , as was the Sonne line , half way to the German Höhen (second) line on the ridge . The two supporting battalions of the attacking brigades leap @-@ frogged through , to

advance to the second objective on the near crest of the ridge 500 ? 800 yards (460 ? 730 m) further on . The accuracy of the British barrage was maintained and local German counter @-@ attack attempts were stifled . As the infantry approached the German second line , resistance increased .

= = = Second objective (black line) = = =

In the II Anzac Corps area , the 3rd Australian Division consolidated the southern defensive flank of the attack , digging @-@ in astride the river Douve with its right in the new craters at Trench 122 , defeating several hasty German counter @-@ attacks ; the left flank of the division was anchored by a captured German strong @-@ point . The New Zealand Division attacked Messines village , the southern bastion of the German defences on the ridge . The village had been fortified with a line of trenches around the outskirts and an inner defence zone comprising five pillboxes and all the house cellars , which had been converted into shell @-@ proof dug @-@ outs . Two machine @-@ gun posts on the edge of the village were rushed but fire from Swayne 's Farm 400 yards (370 m) north held up the advance , until a tank drove through it and caused 30 German troops to surrender . The New Zealanders penetrated the outer trenches behind the creeping barrage , which slowed to 100 yards (91 m) in 11 minutes ; the German garrison defended the village with great determination , before surrendering when the garrison commander was captured . The 25th Division took the Messines ? Wytschaete road on the ridge , north of the New Zealand Division with little opposition except at Hell Farm , which was eventually overrun .

In the IX Corps area , the 36th (Ulster) Division captured the wreckage of two woods and Bogaert Farm in between , finding that the artillery fire had cut the masses of barbed wire and destroyed many strong @-@ points . Further north , the 16th (Irish) and 19th divisions advanced through the remains of Wytschaete wood and Grand Bois , which had been hit by a 2 @, @ 000 oil drum Livens Projector bombardment on the night of 3 / 4 June and by standing barrages on all the known German positions in the woods . A German force at L 'Hospice held out despite being by @-@ passed , until 6 : 48 a.m. and the objective was reached just after 5 : 00 a.m.

German positions at Dammstrasse , which ran from the St. Eloi road to White Château , in the X Corps area , fell to the 41st Division after a long fight . White Château was attacked by the 47th Division as it advanced to the first objective , covered by smoke and Thermite shells fired on the German positions further to the north , along the Comines Canal . The German garrison fought hard and repulsed two attacks , before surrendering after a trench @-@ mortar bombardment at 7 : 50 a.m. The northern defensive flank was maintained by the 23rd Division , with an advance of 300 yards (270 m) in twenty minutes . A German force at the head of the Zwarteleen re @-@ entrant , south of Mt . Sorrel where the two attacking brigades met , held out until forced to surrender by volleys of rifle @-@ grenades .

Just after 5 : 00 a.m. all of the British second intermediate objective , the first trench of the German Höhen (second) line , on the near crest of the ridge , had been taken . German documents gleaned from the battlefield showed that they expected the forward crest of the ridge to be held until the Eingreif divisions arrived to counter @-@ attack ; the effect of the mines , artillery and British infantry tactics had been underestimated by the German command . The next objective was the rear trench of the German Höhen (second) line and the rear crest of the ridge , 400 ? 500 yards (370 ? 460 m) away . There was a pause of two hours , for fresh battalions to move forward and the captured ground to be consolidated . About 300 yards (270 m) beyond the forward positions , a protective bombardment by 18 @-@ pounders swept back and forth , while the heavier artillery stood ready to respond with SOS barrages . Pack animals and men carrying Yukon packs , brought supplies into the captured ground and engineers supervised the digging and wiring of strong @-@ points . At 7 : 00 a.m. the protective bombardment increased in intensity and began to creep forward again , moving at 100 yards (91 m) in three minutes , as some divisions used battalions from their third brigade and other divisions those that had attacked earlier . Most of the tanks still operational were outstripped but some caught up the infantry .

Fresh battalions of the New Zealand Division leap @-@ frogged through those which had attacked

earlier and advanced either side of Messines , where some German posts still held out . A German artillery headquarters at Blauwen Molen (blue windmill) , 500 yards (460 m) beyond Messines , was captured and a tank broke into a strong point at Fanny 's Farm , causing a hundred Germans to surrender . The reserve brigade of the 25th Division continued the advance to the north except at Lumm Farm , which was eventually taken with assistance from the right flank troops of the 36th (Ulster) Division . Helped by two tanks , the rest of the 36th (Ulster) Division advanced to the right of Wytschaete village and captured a German battalion headquarters . Wytschaete had been fortified like Messines but special bombardments fired on 3 June had demolished the village . Two battalions of the 16th (Irish) Division overran the German survivors and on the left , the reserve brigade of the 19th Division took the area from Wytschaete village to Oosttaverne Wood with little resistance .

X Corps had greater difficulty reaching some of its final objectives ; the loss of White Château disorganised the German defenders adjacent to the south . The 41st Division easily crossed the summit and reached the rear slope of the ridge 500 yards (460 m) away , which overlooked the eastern slope and Roozebeke valley , taking many prisoners at Denys and Ravine woods . North of the canal , the 47th Division had to capture a spoil heap 400 yards (370 m) long , where several German machine @-@ gun nests had been dug in . The British attacks established a footing on the heap at great cost , due to machine @-@ gun fire from the spoil heap and others in Battle Wood further north . At 9 : 00 a.m. the infantry withdrew to allow the area to be bombarded from 2 : 30 to 6 : 55 p.m. for an attack by a reserve battalion at 7 : 00 p.m. The 23rd Division had many casualties caused by flanking machine @-@ gun fire from the spoil heap while clearing Battle Wood , which took until the evening .

In the centre of the attack , a company from each battalion advanced behind the barrage , to an observation line several hundred yards down the east slope of the ridge , at 8 : 40 a.m. assisted by eight tanks and patrols of cavalry . Most German troops encountered surrendered quickly , except at Leg Copse and Oosttaverne Wood where they offered slight resistance . British aircraft added to German difficulties , with low @-@ level machine @-@ gun attacks . The second objective (the observation line) from Bethlehem Farm to south of Messines , Despagne Farm and Oosttaverne Wood , was reached with few casualties . Ground markers were put out for the three divisions due to attack in the afternoon and the area consolidated . The defensive frontages of the British units on the ridge had been based on an assumption that casualties in the advance to the first intermediate objective (blue line) would be 50 percent and in the advance to the ridge (black line) would be 60 percent . There were far fewer British casualties than anticipated , which caused congestion on the ridge , where the attacking troops suffered considerable casualties from German long @-@ range machine @-@ gun and artillery fire . The British planners expected that the two German Eingreif divisions behind the ridge , would begin organised counter @-@ attacks at about 11 : 00 a.m. and arranged for a long pause in the advance down the eastern slope , to enable them to be defeated from consolidated defensive positions , rather than encountered in the open while the British were still advancing . The masked batteries of the three reserve divisions were used to add to the protective barrage in front of the infantry but no Germans could be seen .

= = = Final objective (Oosttaverne line) = = =

A pause of five hours was considered necessary to defeat the German Eingreif divisions , before resuming the advance on the Oosttaverne (Sehnen) line . The pause was extended by two hours to 3 : 10 p.m. , after Plumer received reports on the state of the ground . More artillery joined the masked batteries close to the front line and others moved as far into no @-@ man 's @-@ land as the terrain allowed . On the nearside of the ridge , 146 machine @-@ guns were prepared , to fire an overhead barrage and each division placed sixteen more guns in the observation line on the eastern slope . The 24 tanks in reserve began to advance at 10 : 30 a.m. to join II Anzac Corps and IX Corps on the flanks . Surviving tanks of the morning attack in X Corps , were to join in from Damm and Denys woods .

The 4th Australian Division continued the attack on the II Anzac Corps front , the right hand brigade

reaching the assembly areas by 11 : 30 a.m. , before learning of the postponement . The brigade had to lie on open ground under German artillery and machine @-@ gun fire , which caused considerable loss but the left brigade was informed in time to hold back until 1 : 40 p.m. The bombardment began to creep down the slope at 3 : 10 p.m. at a rate of 100 yards (91 m) in three minutes . The right brigade advanced on a 2 @,@ 000 @-@ yard (1 @,@ 800 m) front towards the Oosttaverne line , from the river Douve north to the Blauwepoortbeek (Blue Gate Brook) . German machine @-@ gunners in the pillboxes of the Oosttaverne line caused many casualties but with support from three tanks the Australians reached the pillboxes , except for those north of the Messines ? Warneton road . As the Australians outflanked the strongpoints , the Germans tried to retreat through the British barrage , which had stopped moving 300 yards (270 m) beyond the rear trench of the Oosttaverne line . The left brigade was stopped on its right flank by fire from the German pillboxes north of the Messines ? Warneton road up to the Blauwepoortbeek , 500 yards (460 m) short of the Oosttaverne line , with many casualties . The left battalion , unaware that the 33rd Brigade (11th Division) to the north had been delayed , veered towards the north @-@ east to try to make contact near Lumm Farm , which took the battalion across the Wambeke Spur instead of straight down . The objective was easily reached but at the Wambeek , 1 @,@ 000 yards (910 m) north of the intended position . The Australians extended their line further north to Polka Estaminet trying to meet the 33rd Brigade , which arrived at 4 : 30 p.m. with four tanks . The brigade took Joye and Van Hove farms beyond the objective , silencing the machine @-@ guns being fired from them .

On the IX Corps front , the 33rd Brigade (11th Division) had been ordered to advance to Vandamme Farm at 9 : 25 a.m. but the message was delayed and the troops did not reach the assembly area at Rommens Farm until 3 : 50 p.m. , half an hour late . To cover the delay , the corps commander ordered the 57th Brigade (19th Division) from reserve , to take the Oosttaverne line from Van Hove Farm to Oosttaverne village then to Bug Wood , so that only the southern 1 @,@ 200 yards (1 @,@ 100 m) were left for the 33rd Brigade . These orders were also delayed and the 19th Division commander asked for a postponement , then ordered the 57th Brigade to advance without waiting for the 33rd Brigade . The troops only knew that they were to advance downhill and keep up to the barrage but were able to occupy the objective in 20 minutes against light opposition , meeting the Australians at Polka Estaminet .

Two brigades of the 24th Division in Corps reserve , advanced into the X Corps sector and reached Dammstrasse on time . The brigades easily reached their objectives around Bug Wood , Rose Wood and Verhaest Farm , taking unopposed many German pillboxes . The brigades captured 289 Germans and six field guns for a loss of six casualties , advancing 800 yards (730 m) along the Roozebeek valley , then took Ravine Wood unopposed on the left flank . The left battalion was drawn back to meet the 47th Division , which was still held up by machine @-@ gun fire from the spoil bank . The final objectives of the British offensive had been taken , except for the area of the Ypres ? Comines canal near the spoil bank and 1 @,@ 000 yards (910 m) of the Oosttaverne line , at the junction of the II Anzac Corps and IX Corps . Despite a heavy bombardment until 6 : 55 p.m. , the Germans at the spoil bank repulsed another infantry attack . The reserve battalion which had been moved up for the second attack on the spoil bank , had been caught in a German artillery bombardment while assembling for the attack . The companies which attacked then met with massed machine @-@ gun fire during the advance and only advanced half @-@ way to the spoil bank . The 207 survivors of the original 301 infantry , were withdrawn when German reinforcements were seen arriving from the canal cutting and no further attempts were made .

The situation near the Blauwepoortbeek worsened , when German troops were seen assembling near Steingast Farm , close to the Warneton road . A British SOS barrage fell on the 12th Australian Brigade , which was inadvertently digging @-@ in 250 yards (230 m) beyond its objective . The Australians stopped the German counter @-@ attack with small @-@ arms fire but many survivors began to withdraw spontaneously , until they stopped in relative safety on the ridge . As darkness fell and being under the impression that all the Australians had retired , New Zealand artillery observers called for the barrage to be brought closer to the observation line , when they feared a German counter @-@ attack . The bombardment fell on the rest of the Australians , who withdrew

with many casualties , leaving the southern part of the Oosttaverne line unoccupied , as well as the gap around the Blauwepoortbeek . An SOS barrage on the IX Corps front stopped a German counter @-@ attack from the Roozebeke valley but many shells fell short , precipitating another informal withdrawal . Rumour led to the barrage being moved closer to the observation line , which added to British casualties until 10 : 00 p.m. , when the infantry managed to get the artillery stopped and were then able to re @-@ occupy the positions . Operations to re @-@ take the Oosttaverne line in the II Anzac Corps area started at 3 : 00 a.m. on 8 June .

= = = Air operations = = =

As the infantry moved to the attack contact @-@ patrol aircraft flew low overhead , two being maintained over each corps during the day . The observers were easily able to plot the positions of experienced troops , who lit flares and waved anything to attract attention . Some troops , poorly trained and inexperienced , failed to co @-@ operate , fearing exposure to the Germans so aircraft flew dangerously low to identify them , four being shot down in consequence . Although air observation was not as vital to German operations because of their control of commanding ground , the speed by which reports from air observation could be delivered , made it a most valuable form of liaison between the front line and higher commanders . German infantry proved as reluctant to reveal themselves as the British so German flyers also had to make visual identifications . Reports and maps were dropped at divisional headquarters and corps report centres , allowing the progress of the infantry to be followed . During the pause on the ridge crest , an observer reported that the Oosttaverne line was barely occupied , at 2 : 00 p.m. a balloon observer reported a heavy German barrage on the II Anzac Corps front and a counter @-@ attack patrol aircraft reported German infantry advancing either side of Messines . The German counter @-@ attack was " crushed " by artillery fire by 2 : 30 p.m. Each corps squadron kept an aircraft on counter @-@ attack patrol all day , to call for barrage fire if German troops were seen in the open but the speed of the British advance resulted in few German counter @-@ attacks . Artillery observers watched for German gunfire and made 398 zone calls but only 165 managed to have German guns engaged . The observers regulated the bombardment of the Oosttaverne line and the artillery of VIII Corps to the north of the attack , which was able to enfilade German artillery opposite X Corps .

Fourteen fighters were sent to strafe from low altitude , German ground targets ahead of the British infantry , roving behind German lines , attacking infantry , transport , gun @-@ teams and machine @-@ gun nests ; the attacks continued all day , with two of the British aircraft being shot down . Organised attacks were made on the German airfields at Bisseghem and Marcke near Courtrai and the day bombing squadrons attacked airfields at Ramegnies Chin , Coucou , Bisseghem (again) and Rumbeke . Reconnaissance reports of German troops concentrating from Quesnoy ? Warneton , led to aircraft setting out to attack them within minutes . German fighters made a considerable effort to intercept corps observation aircraft over the battlefield but were frustrated by patrols on the barrage line and offensive patrols beyond ; only one British corps aircraft was shot down by German aircraft during the day . After dark , the night @-@ bombing specialists of 100 Squadron bombed railway stations at Warneton , Menin and Courtrai . Ignorance of the situation at the northern end of the II Anzac Corps front. was resolved by air reconnaissance at dawn on 8 June .

= = = German 4th Army = = =

At 2 : 50 a.m. on 7 June , the British artillery bombardment ceased ; expecting an immediate infantry assault , the German defenders returned to their forward positions . At 3 : 10 a.m. the mines were detonated , killing c . 10 @,@ 000 German soldiers and destroying most of the middle breastwork Ib of the front system , paralysing the survivors of the eleven German battalions in the front line , who were swiftly overrun . The explosions occurred while some of the German front line troops were being relieved , catching both groups in the blasts and British artillery fire resumed at the same moment as the explosions . Some of the Stoßtruppen (Stormtroops) in breastwork Ic were able to counter @-@ attack but were overwhelmed quickly , as the British advanced on the

Sonne line , which usually held half of the support battalions but had been reduced to about 100 men and six machine @-@ guns , in each 800 yards (730 m) regimental zone . Smoke and dust from the British barrage limited visibility to 100 yards (91 m) and some defenders thought that figures moving towards them were German soldiers , retreating elastically and were also overrun . After a pause , the British continued to the Höhen line , held by half of the support battalions , a company of each reserve battalion and 10 ? 12 machine @-@ guns per regimental sector . Despite daylight , German defenders only saw occasional shapes in the dust and smoke , as they were deluged by artillery fire and machine @-@ gunned by swarms of British aircraft . The German defence in the south collapsed and uncovered the left flank of each unit further north in turn , forcing them to retire to the Sehnen (Oosttaverne) line . Some German units held out in Wijtschate and near St. Eloi , waiting to be relieved by counter @-@ attacks which never came . The garrison of the Kofferberg (Caterpillar or spoil heap to the British) held on for 36 hours until relieved .

Laffert had expected that the two Eingreif divisions behind Messines Ridge , would reach the Höhen (second) line before the British . The divisions had reached assembly areas near Gheluvelt and Warneton by 7 : 00 a.m. and the 7th Division was ordered to move from Zandvoorde to Hollebeke , to attack across the Comines canal , towards Wijtschate into the British northern flank . The 1st Guard Reserve Division was to move to the Warneton line east of Messines , then advance around Messines to recapture the original front system . Both Eingreif divisions were plagued by delays , being new to the area and untrained for counter @-@ attack operations . The 7th Division was shelled by British artillery all the way to the Comines canal , then part of the division was diverted to reinforce the remnants of the front divisions holding positions around Hollebeke . The rest of the division found that the British had already taken the Sehnen (Oosttaverne) line , by the time that they arrived at 4 : 00 p.m. The 1st Guard Reserve Division was also bombarded as it crossed the Warneton (third) line but reached the area east of Messines by 3 : 00 p.m. , only to be devastated by the resumption of the British creeping barrage and forced back to the Sehnen (Oosttaverne) line , as the British began to advance to their next objective . Laffert contemplated a further withdrawal , then ordered the existing line to be held after the British advance stopped . Most of the losses inflicted on the British infantry by the German defence came from German artillery fire . In the days after the main attack , German shellfire on the new British lines was extremely accurate and well @-@ timed , inflicting 90 percent of the casualties suffered by the 25th Division .

= = Aftermath = =

= = = Analysis = = =

Military analysts and historians disagree on the strategic significance of the battle , although most describe it as a British tactical and operational success . In 1919 , Ludendorff wrote that the British victory cost the German army dear and drained German reserves . Hindenburg wrote that the losses at Messines had been very heavy and that he regretted that the ground had not been evacuated ; in 1922 , Kuhl called it one of the worst German tragedies of the war . In 1920 Haig 's Dispatches described the success of the British plan , organisation and results but refrained from hyperbole , referring to the operation as a successful preliminary to the main offensive at Ypres . In 1930 , Liddell Hart thought the success at Messines inflated expectations for the Third Battle of Ypres and that because the circumstances of the operations were different , attempts to apply similar tactics resulted in failure . In 1938 Lloyd George called the battle an apéritif and in 1939 , G. C. Wynne judged it to be a " brilliant success " , overshadowed by the subsequent tragedy of the Battles of Passchendaele . The Official Historian called it a " great victory " in 1948 and Prior and Wilson (1997) called the battle a " noteworthy success " but then complained about the decision to postpone exploitation of the success on the Gheluvelt plateau . Ashley Ekins referred to the battle as a great set @-@ piece victory , which was also costly , particularly for the infantry of II Anzac Corps , as did Christopher Pugsley , referring to the experience of the New Zealand Division . Heinz Hagenlücke called it a great British success and wrote that the loss of the ridge , had a worse effect

on German morale than the number of casualties . Jack Sheldon called it a " significant victory " for the British and a " disaster " for the German army , which was forced into a " lengthy period of anxious waiting " . Brown in 1996 and Simpson in 2001 concluded that extending British supply routes over the ridge , which had been devastated by the mines and millions of shells , to consolidate the Oosttaverne line and completion of the infrastructure further north in the Fifth Army area , was necessary before the " Northern Operation " (the Third Battle of Ypres) could begin and was the main reason for the operational pause in June and July .

= = = Casualties = = =

In 1941 the Australian Official Historian recorded II Anzac Corps losses from 1 ? 14 June as 4 @, @ 978 casualties in the New Zealand Division , 3 @, @ 379 casualties in the 3rd Australian Division and 2 @, @ 677 casualties in the 4th Australian Division . Using figures from the Reichsarchiv , Bean recorded German casualties for 21 ? 31 May , 1 @, @ 963 ; 1 ? 10 June , 19 @, @ 923 (including 7 @, @ 548 missing) ; 11 ? 20 June , 5 @, @ 501 and 21 ? 30 June , 1 @, @ 773 . In volume XII of Der Weltkrieg the German Official Historians recorded 25 @, @ 000 casualties for the period 21 May ? 10 June including 10 @, @ 000 missing of whom 7 @, @ 200 were reported as taken prisoner by the British . Losses of the British were recorded as 25 @, @ 000 casualties and a further 3 @, @ 000 missing from 18 May ? 14 June . The initial explosion of the mines , in particular the mine that created the Lone Tree Crater , accounts for the high number of casualties and missing from 1 ? 10 June . In 1948 , the British Official Historian gave casualties of II Anzac Corps , 12 @, @ 391 ; IX Corps , 5 @, @ 263 ; X Corps , 6 @, @ 597 ; II Corps , 108 and VIII Corps , 203 a total of 24 @, @ 562 casualties from 1 ? 12 June . The 25th Division history gave 3 @, @ 052 casualties and the 47th Division history notes 2 @, @ 303 casualties . The British Official Historian recorded 21 @, @ 886 German casualties , including 7 @, @ 548 missing , from 21 May ? 10 June , using strength returns from groups Ypern , Wijtschate and Lille in the German Official History , then wrote that 30 % should be added for wounded likely to return to duty within a reasonable time , since they were " omitted " in the German Official History , reasoning which has been severely criticised ever since . In 2007 Sheldon gave 22 @, @ 988 casualties for the German 4th Army from 1 ? 10 June 1917 .

= = = Subsequent operations = = =

At 3 : 00 a.m. on 8 June , the British attack to regain the Oosttaverne line from the river Douve to the Warneton road found few German garrisons as it was occupied . German artillery south of the Lys , heavily bombarded the southern slopes of the ridge and caused considerable losses among Anzac troops pinned there . Ignorance of the situation north of the Warneton road continued ; a reserve battalion was sent to reinforce the 49th Australian Battalion near the Blauwepoortbeek for the 3 : 00 a.m. attack , which did not take place . The 4th Australian Division commander , Major @-@ General William Holmes , went forward at 4 : 00 a.m. and finally clarified the situation . New orders instructed the 33rd Brigade (11th Division) to side @-@ step to the right and relieve the 52nd Australian Battalion , which at dusk would move to the south and join the 49th Australian Battalion for the attack into the gap at the Blauwepoortbeek . All went well until observers on the ridge saw the 52nd Australian Battalion withdrawing , mistook it for a German counter @-@ attack and called for an SOS bombardment . German observers in the valley saw troops from the 33rd Brigade moving into the area to relieve the Australian battalion , mistook them for an attacking force and also called for an SOS bombardment . The area was deluged with artillery fire from both sides for two hours , causing many casualties and the attack was postponed until 9 June .

Confusion had been caused by the original attacking divisions on the ridge , having control over the artillery which covered the area occupied by the reserve divisions down the eastern slope . The arrangement had been intended to protect the ridge from large German counter @-@ attacks , which might force the reserve divisions back up the slope . The mistaken bombardments of friendly troops ended late on 9 June , when the New Zealand , 16th (Irish) and 36th (Ulster) divisions

were withdrawn into reserve and the normal corps organisation was restored ; anticipated large German counter @-@ attacks had not occurred . On 10 June , the attack down the Blauwepoortbeek began but met strong resistance from the fresh German 11th Division , brought in from Group Ypres . The 3rd Australian Division advanced 600 yards (550 m) either side the river Douve , consolidating their hold on a rise around Thatched Cottage , which secured the right flank of the new Messines position ; early on 11 June , the Germans evacuated the Blauwepoortbeek sector . British observation from the Oosttaverne line proved to be poor , which led Plumer to order a further advance down the slope . On 14 June , the II Anzac Corps was to push forward on the right from Plugstreet Wood to Trois Tilleuls Farm and Hill 20 and another 1 @,@ 000 yards (910 m) to the Gapaard spur and Ferme de la Croix . IX Corps was to take Joye Farm , the Wambeke hamlet and come level with the Australians at Delporte Farm ; X Corps was to capture the Spoil Bank and the areas adjacent . The attack was forestalled by a German retirement on the night of 10 / 11 June and by 14 June , British advanced posts had been established without resistance .

Meticulously planned and well executed , the assault secured its objectives in fewer than twelve hours . The combination of tactics devised on the Somme and at Arras , the use of mines , artillery survey , creeping barrages , tanks , aircraft and small @-@ unit fire @-@ and @-@ movement tactics , created a measure of surprise and allowed the attacking infantry to advance by infiltration when confronted by intact defences . Well @-@ organised mopping @-@ up parties prevented by @-@ passed German troops from firing on advanced troops from behind . The British took 7 @,@ 354 prisoners , 48 guns , 218 machine @-@ guns and 60 trench mortars . The offensive secured the southern end of the Ypres salient in preparation for the British " Northern Operation " . Laffert , commander of Gruppe Wijtschate , was sacked two days after the battle .

Haig had discussed the possibility of rapid exploitation of a victory at Messines with Plumer before the attack , arranging for II and VIII Corps to advance either side of Bellewaarde Lake , using some of the artillery from the Messines front , which Plumer considered would take three days to transfer . On 8 June , patrols on the II and VIII Corps fronts reported strong resistance , Haig urged Plumer to attack immediately and Plumer replied that it would still take three days to arrange . Haig transferred the two corps to the Fifth Army and that evening , gave instructions to Gough to plan the preliminary operation to capture the area around Stirling Castle . On 14 June , Gough announced that the operation would put his troops into a salient and that he wanted to take the area as part of the main offensive . On 13 June , German aircraft began daylight attacks on London and the south @-@ east of England , leading to the diversion of British aircraft from the concentration of air forces for the " Northern Operation " .

= = = Victoria Cross = = =

Private John Carroll , 33rd Battalion , 3rd Australian Division .

Lance @-@ Corporal Samuel Frickleton , 3rd Battalion , New Zealand Rifles , New Zealand Division .

Captain Robert Cuthbert Grieve , 37th Battalion , 3rd Australian Division .

Private William Ratcliffe , 2nd South Lancashire Regiment , 25th Division .