



HM Submarine E22

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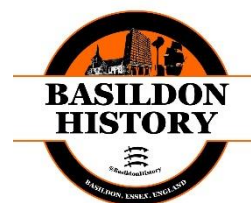
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Sources

- HMS E22 Online Memorial
- Imperial War Museum
- National Archives
- National Museum of the Royal Navy
- Submarine Museum (Gosport)
- Wikipedia

Dedicated to the Crew of HMS E22



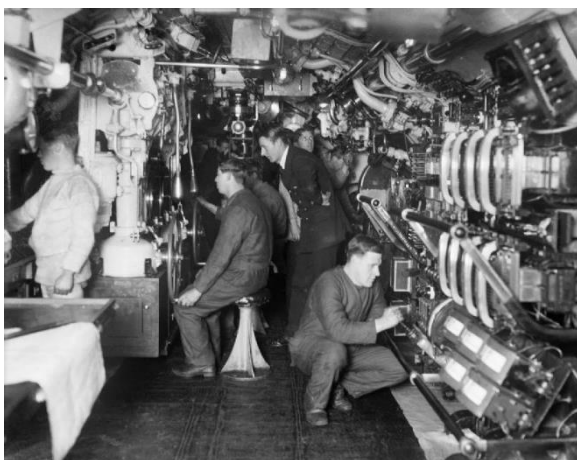
Submarines in the Great War

The outbreak of the First World War in August 1914 thrust naval warfare into an unprecedented era of technological innovation and tactical shifts. While dreadnought battleships dominated the public imagination, a new and increasingly formidable weapon was quietly reshaping maritime strategy: the submarine. Far from the rudimentary craft of earlier centuries, submarines of the Great War were becoming potent, if still experimental, instruments of war, capable of inflicting devastating damage on surface shipping and challenging traditional naval dominance. However, their operations were fraught with immense danger, demanding extraordinary courage and resilience from their crews.

At the forefront of the Royal Navy's burgeoning submarine fleet were the E-class submarines. Designed primarily for extended patrol and offensive operations, these boats represented a significant leap forward in submarine technology. Launched from 1912 onwards, the E-class were the largest and most advanced submarines in the Royal Navy at the start of the war. They typically displaced around 660–700 tons surfaced, had a maximum speed of about 15 knots on the surface and 10 knots submerged, and were powered by diesel engines on the surface and electric motors when underwater. Crucially, they were well-armed, usually featuring five torpedo tubes (one in the bow, two on each beam, and one in the stern), giving them formidable offensive capability against enemy warships and merchant vessels. Their operational range and endurance made them ideal for patrols in the North Sea and beyond, crucial areas for Britain's naval strategy against the Imperial German Navy.

Did you know that despite their growing capabilities, early WWI submarines like the E-class typically spent less than 10% of their operational time submerged? Their diesel engines, essential for surface speed and range, required atmospheric oxygen, meaning prolonged underwater operations were limited to battery power, which offered slower speeds and far less endurance. This meant submarines often had to surface to recharge batteries or travel, making them vulnerable to detection and attack.

It is within this context of evolving naval warfare and technological advancement that HM



Submarine E22 took its place. As a member of the successful E-class, E22 embodied the cutting edge of submarine design at the time of its commissioning. Its wartime service would contribute to the Royal Navy's efforts to control the seas, enforce blockades, and counter the growing threat posed by German U-boats. The story of E22 is not just a tale of steel and machinery, but of the brave men who served within its confines, navigating the unseen dangers of the deep and the constant threat of enemy action in the perilous waters

of the North Sea. This booklet will explore E22's brief but significant life, from its construction to its final patrol, shedding light on the challenging realities of submarine warfare during the Great War.

Genesis of an E-Boat

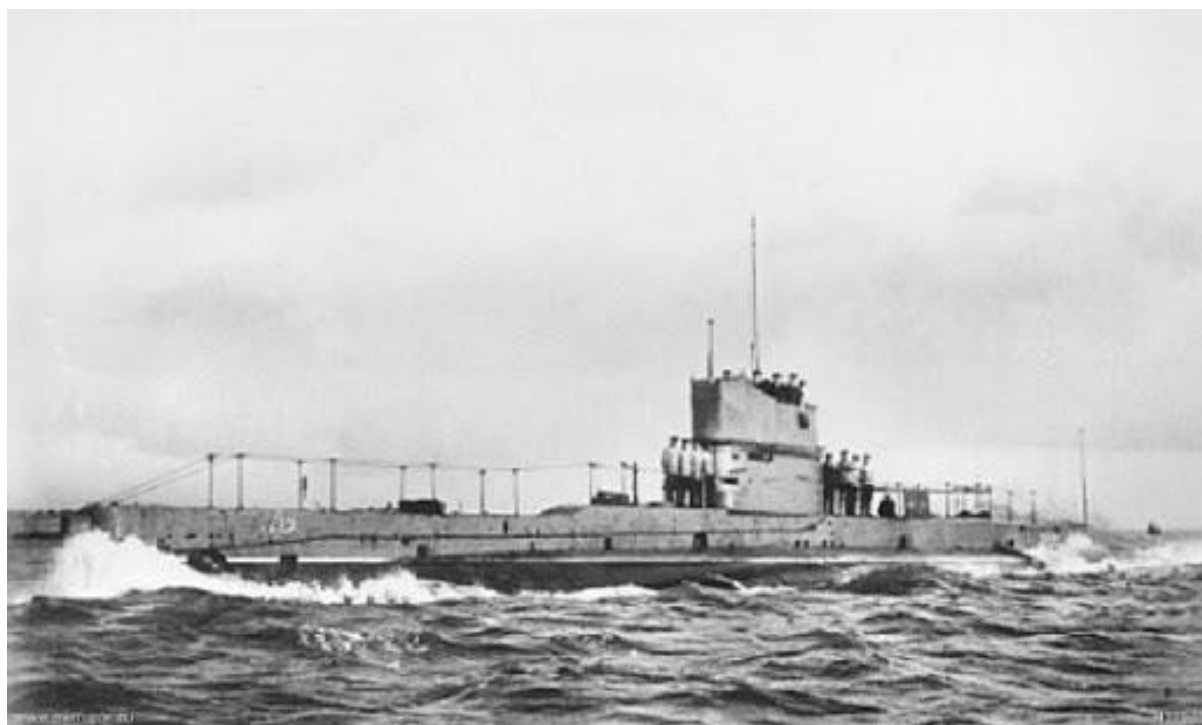
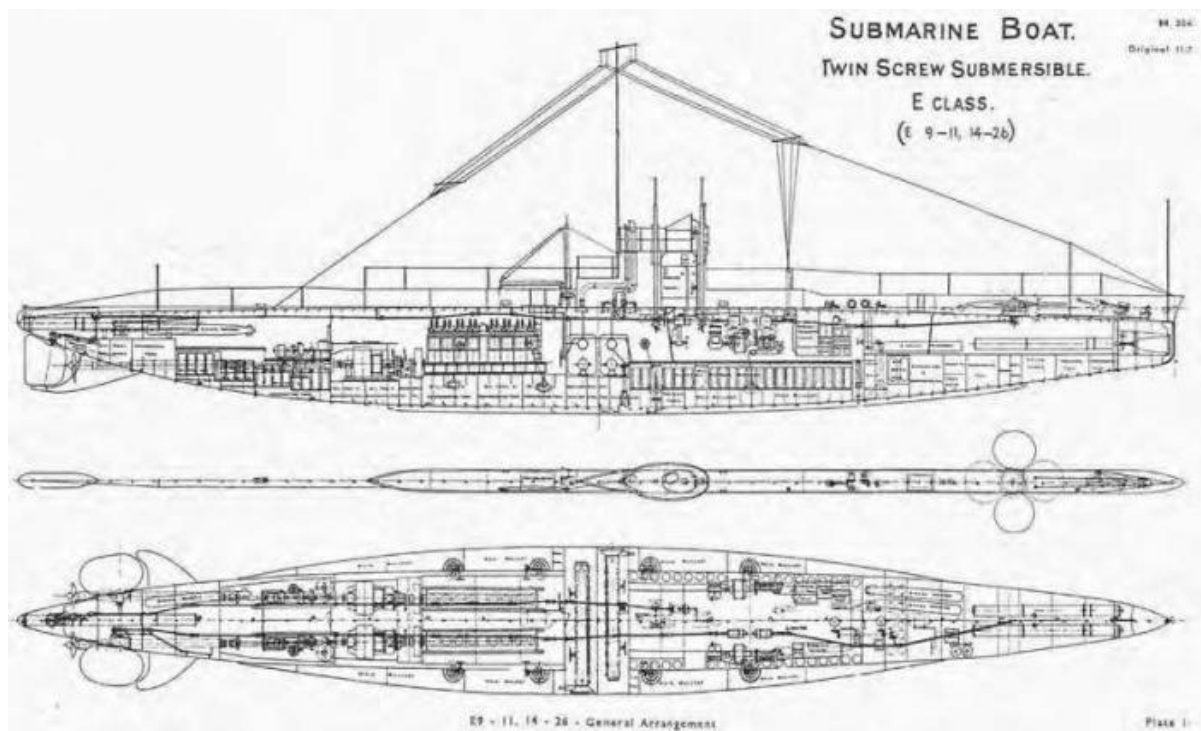
The E-class submarines represented a bold step forward in British naval engineering, conceived as a more powerful and enduring successor to the earlier D-class. These boats were designed for extended patrol and offensive operations in the often-treacherous waters of the North Sea and beyond. Construction of the E-class began in 1912, with the initial boats being built in stages, incorporating lessons learned from their predecessors. They boasted significant improvements in size, armament, and habitability for their crews compared to earlier designs, reflecting the Royal Navy's growing confidence in the strategic role of submarines.

HM Submarine E22 was part of this pioneering class. She was built by the Vickers shipyard in Barrow-in-Furness, a renowned naval construction firm responsible for many of Britain's advanced warships. E22 was laid down on 27th July 1914, launched on 27th December 1914, and commissioned into the Royal Navy on 8th April 1915. Her rapid construction timeframe, less than a year from keel-laying to commissioning, highlights the urgent demand for submarines as the First World War escalated and the threat of German U-boats became increasingly apparent. As an E-class boat, E22 typically displaced around 667 tons (surfaced) and 807 tons (submerged), measuring approximately 55 metres (181 feet) in length. Her propulsion system consisted of two 800 hp Vickers diesel engines for surface running and two 300 hp electric motors for submerged operations, allowing her to reach speeds of around 15 knots on the surface and 10 knots submerged. Her primary armament comprised four 18-inch (45 cm) torpedo tubes: one in the bow, two amidships on the beam, and one in the stern. She carried a complement of up to 30 officers and ratings.

Did you know that early E-class submarines had a unique 'pop-up' mast system for their periscopes and even a wireless telegraphy mast? These masts were manually raised and lowered, a process that could be cumbersome and slow. Furthermore, their large size and visible 'hump' on the surface made E-class boats somewhat distinctive, yet they were revolutionary for their time, paving the way for more sophisticated underwater craft.

Life aboard an E-class submarine during the First World War was incredibly arduous and challenging. The internal spaces were cramped, noisy, and poorly ventilated. Basic amenities were severely limited, and privacy was non-existent. Crews endured a constant atmosphere of diesel fumes, stale air, and dampness, often exacerbated by leaks or condensation. Extreme temperatures were common, with the boats becoming stiflingly hot in the engine room or during deep dives, and bitterly cold in the unheated forward compartments during winter patrols. The psychological strain was immense, with crews facing the constant threat of enemy attack,

mechanical failure, or undetected mines. Submariners underwent rigorous training, which focused on mastering the complex machinery, precision navigation in a three-dimensional environment, and maintaining composure under extreme pressure. This highly specialised and dangerous role required a unique breed of naval personnel, renowned for their dedication, technical skill, and unwavering courage, as they prepared to take their cutting-edge vessel into the perilous waters of the Great War.



North Sea Operations and the Grand Fleet

Upon its commissioning in April 1915, HM Submarine E22 was assigned to the 8th Submarine Flotilla, based at Harwich. This strategically vital port on England's east coast served as a hub for light cruisers, destroyers, and submarines, forming the Harwich Force. Their primary mission was to protect the eastern approaches to Britain, conduct reconnaissance, sweep for German mines, and counter the growing threat posed by the Imperial German Navy's U-boats and surface raids into the North Sea. For an E-class submarine like E22, operations in this theatre meant long, arduous patrols in some of the most dangerous and unpredictable waters of the war.

Did you know that despite the dangers, the life expectancy for a WWI submariner was actually better than that of an infantryman on the Western Front? While submarine warfare was undeniably hazardous, with high loss rates for boats that were sunk, the total number of personnel involved was far smaller than the millions serving in land armies. The specific risks were immense, but a submariner's chance of surviving the war was statistically higher than that of someone in the trenches.

The North Sea, a vast and often turbulent expanse, was a critical battleground. For E22 and her sister boats, patrols were characterised by a combination of monotonous routine and sudden, extreme peril. Missions could last for days or even weeks, requiring the crew of 30 to endure cramped conditions, limited fresh food, and the constant hum of machinery. The weather was a perpetual challenge; heavy seas could make surface travel treacherous, pitching the boat violently and causing seasickness, while submerged, the cold was often bone-chilling. Visibility was frequently poor, adding to the navigational difficulties in waters that increasingly became dotted with minefields laid by both sides.

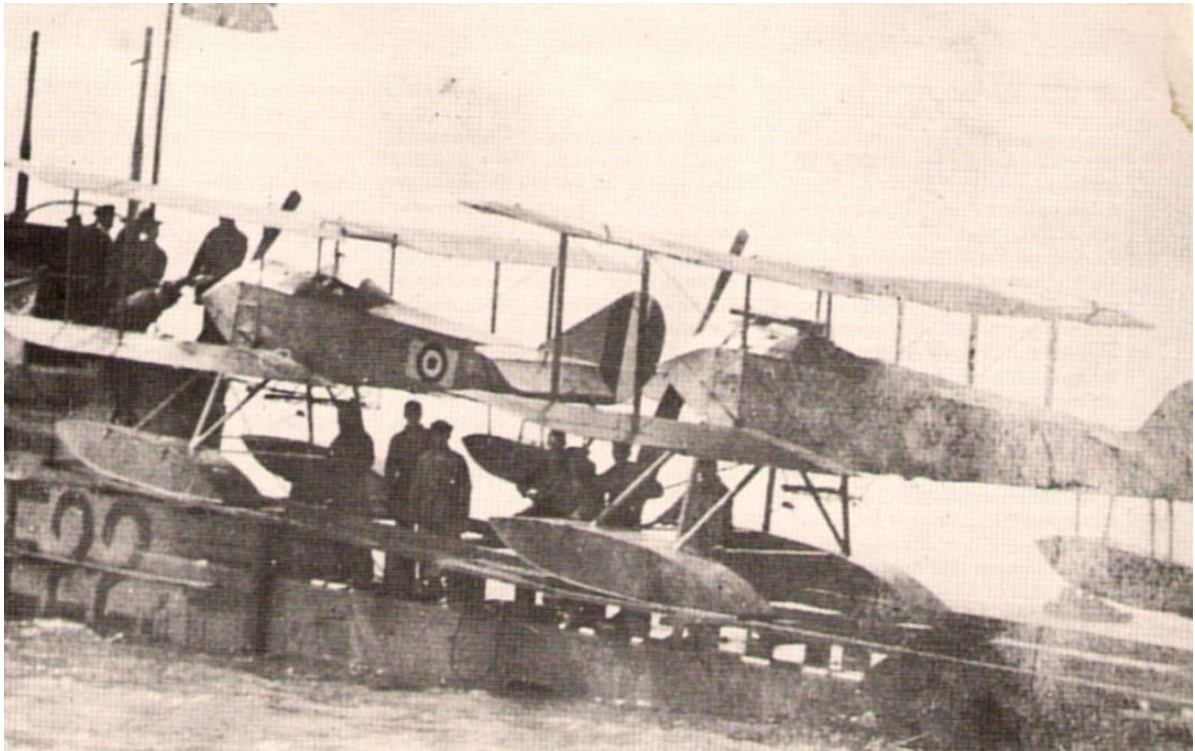


Destroyers of the Harwich Force

E22's role, typical of her class, involved screening operations for larger fleet units, including the Grand Fleet, conducting anti-submarine sweeps, and reconnaissance patrols to report on enemy movements. This was a challenging task, as early anti-submarine warfare (ASW) techniques were still rudimentary. British submarines might also attempt to intercept German surface forces venturing into the North Sea. The silent, lurking threat of German U-boats, the risk of friendly fire in busy shipping lanes, and the constant vigilance required against mines ensured that tension was a permanent fixture for the crew. Submariners learned to identify distant engine noises, subtle changes in water pressure, and even the smell of enemy diesel as signs of danger. The threat of depth charges, though less sophisticated than in later wars, was ever-present, sending terrifying vibrations through the hull and testing the crew's

resolve. Despite the inherent dangers and physical discomforts, the professionalism and dedication of E22's crew would have been paramount as they executed their demanding duties in the unforgiving environment of the wartime North Sea.

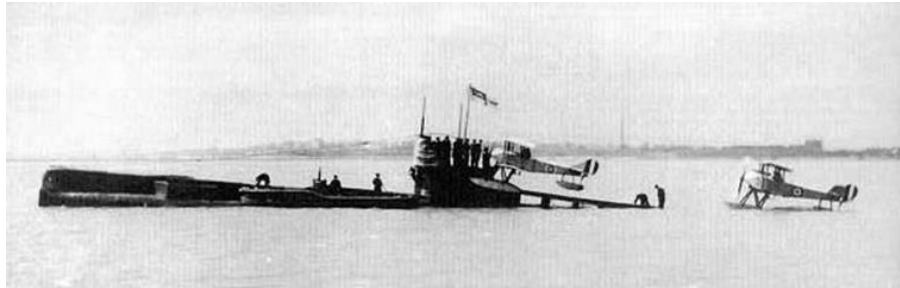
Earlier in her career, E22 was involved in highly innovative experiments in the North Sea aimed at intercepting German Zeppelins. For these trials, E22 carried two Sopwith Schneider seaplane scouts on her casing. The concept involved the submarine submerging in calm waters, allowing the seaplanes to float off its casing onto the surface. The planes would then take off, ideally to scout for or engage Zeppelins, before returning to the East coast of England at Felixstowe.



Although an ingenious attempt to combine naval and air power for anti-Zeppelin defence, these trials were not repeated, indicating their limited success or practical difficulties at the time. Despite the inherent dangers and physical discomforts, the professionalism and dedication of E22's crew would have been paramount as they executed their demanding duties, including pioneering experiments, in the unforgiving environment of the wartime North Sea.

The Final Patrol

By the spring of 1916, the North Sea remained a perilous theatre for both Allied and German submarines. The waters were increasingly criss-crossed with minefields, and anti-submarine warfare (ASW) tactics, though still evolving, posed a constant threat. HM Submarine E22, having completed numerous patrols, was operating as part of the Harwich Force, undertaking its vital role in the ongoing naval contest. The specific circumstances of its final mission on 25th April 1916 highlight the inherent dangers faced by submariners, even on routine operations.



On that fateful day, E22 was patrolling off the coast of Great Yarmouth, a known area for German U-boat activity, forming part of a defensive patrol line. At approximately 11:00 AM, a German submarine, SM U-B 18, commanded by Oberleutnant zur See Franz Stellmacher, sighted E22 on the surface. UB-18 was a Type UB II coastal submarine, smaller than the E-class but well-suited for operations in the North Sea and English Channel. The German U-boat quickly moved into an attack position, undetected by E22.

Did you know that the Royal Navy lost 54 submarines during the First World War? Of these, a significant proportion (29) were lost due to enemy action, including torpedoes, mines, and ramming by surface ships. The remaining losses were attributed to accidents, often linked to the experimental nature of the technology and the hazardous operating conditions, demonstrating the extremely high-risk environment submariners faced.

Without warning, UB-18 fired a single torpedo which struck E22. The impact was catastrophic. HM Submarine E22 sank swiftly, going down in approximately 31 metres (102 feet) of water. Of the crew of 30 officers and ratings on board, two men survived the sinking: Engine Room Artificer Frederick Samuel Buckingham and Signalmen William Thomas George Harrod. They were subsequently rescued from the water by UB-18 and taken as prisoners of war (POWs) for the remainder of the conflict. The remaining 31 crew members, including her commanding officer, Lieutenant C.E. Crocker, were lost with the submarine.

The loss of E22 was one of many suffered by both sides in the relentless submarine war, underscoring the extreme risks inherent in this relatively new form of naval combat. While not as large or famous as some other losses, E22's sinking served as a grim reminder of the effectiveness of submarine-on-submarine attacks, which were becoming more common as both sides improved their underwater detection and attack capabilities. The wreck of HM Submarine E22 lies off Great Yarmouth, a war grave that serves as a silent memorial to the men who perished within its hull, alongside the unique story of the two who survived.

A Life of Service

The impersonal statistics of naval losses during the Great War often obscure the individual lives that comprised them. Yet, each casualty represented a unique human story, a family profoundly affected, and a life dedicated to service. Such is the case of Chief Petty Officer William John Cornelius Bewers, Royal Navy service number 280241 (Ch), a man whose journey from rural Essex to the perilous depths of a First World War submarine embodies the dedication and sacrifice of countless others.



William was born on Marsh Farm in Woodham Ferrers, Essex, on 5th May 1876. He was one of a remarkable 13 children born to William and Mary Anne Bewers, a large family typical of the agricultural communities of that era. His upbringing in the heart of the Essex countryside shaped his early life before the call of the sea beckoned. Around 1898, at the age of 22, William took the significant step of joining the Royal Navy, embarking on a career that would span nearly two decades and take him across the globe.

His naval service quickly saw him involved in imperial duties. Notably, William served in China during the tumultuous period of the Boxer Rebellion (1899-1901), an international conflict that saw foreign powers intervening in China. For his participation in this campaign, he was awarded the China Medal, a tangible recognition of his early military service in challenging circumstances. This experience would have instilled in him a profound understanding of naval discipline and the rigours of service far from home.

As the years passed, William progressed through the ranks, demonstrating skill and dedication. By the time the First World War erupted in August 1914, he was a seasoned naval

veteran, holding the crucial position of Chief Stoker. This role was paramount to the functioning of any warship, but particularly so on a submarine. As Chief Stoker on HM Submarine E22, William was responsible for the intricate and unforgiving machinery that powered the vessel – its powerful diesel engines for surface running and its complex electric motors and battery systems for submerged operations. His expertise ensured the submarine's movement, its ability to dive and surface, and the critical management of its power systems, all within the cramped, hot, and often dangerous environment of the engine room. It was a role demanding technical mastery, unflagging vigilance, and nerves of steel.

In August 1915, amidst the escalating conflict, William married Violet Eva Grange in Runwell, Essex. Their marriage, taking place during wartime, would have been touched by the omnipresent threat of conflict, particularly given William's perilous occupation. Tragically, the war's destructive reach extended further into the Bewers family: William's brother, Henry Robert Bewers, would also lose his life later that same year, killed in action on the Somme in France, highlighting the devastating personal toll the war inflicted across British families.

Chief Petty Officer William John Cornelius Bewers was lost with HM Submarine E22 on 25th April 1916 off Great Yarmouth. He was one of the 31 men who perished when the submarine was torpedoed by the German U-boat UB-18. Although his body was not recovered, his sacrifice is permanently commemorated across various national and local memorials. His name appears on the Chatham Naval Memorial, which honours over 18,000 Royal Navy personnel lost at sea without a known grave during the First and Second World Wars. Closer to his roots, he is also remembered on the Wickford & Runwell War Memorial and St. Catherine's War Memorial, Wickford, ensuring his name lives on in the communities he hailed from. For his service in the Great War, William was posthumously awarded the Victory Medal and the British War Medal. William Bewers' life story provides a poignant human connection to the machinery of war, reminding us of the individual courage, expertise, and profound personal cost embedded within the grand narrative of naval history.

William is my Great Grand Uncle.

The Crew

BACON, Harry S
BEWERS, William J C
BREWER, James W
CARLES, Alan J
CARTER, Fred
COLLIER, Edward Des F
DADFORD, Charles H
DIMSDALE, Reginald T
DUMELow, William H
DWYER, James
ELLIOTT, Wilfred
FLYNN, Patrick
FROST, Charles A
HAYWARD, George J
HAZLETON, Harold
HINGSTON, Richard H B
HOOD, Charles R
HOSKIN, John C
HUNT, Ernest W
JECOCK, George W
JELF, Ernest S
NORTON, Harold F
ORGAN, Frederick J
PUCKHABER, Herbert AV
RAYER, Arthur
REGAN, Edward F O
ROOK, William
SKINNER, William H
SKOYLES, Henry T
TREBBLE, John
WOODLAND, William R

Survivors (POW)

BUCKINGHAM, Frederick
SHARROD, William TG