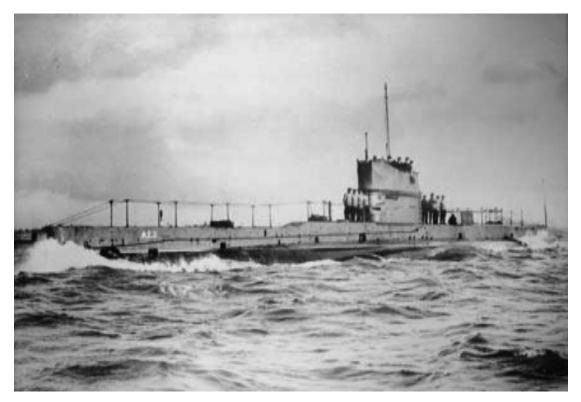
THE SILENT ANZAC HIS MAJESTY'S AUSTRALIAN SUBMARINE *AE2* Dr Graham Seal AO Submarine Institute of Australia Inc

During the First World War one of Australia's first two submarines, *AE2*, set a world record and accomplished what was considered an impossible feat of arms. Her sister ship, the ill-fated *AE1*, shared in the same record-making voyage and became the focus of a still unsolved mystery.

Built in Britain for the Royal Australian Navy *AE1* and *AE2* were sailed to Australia in 1914. These two legendary vessels made a significant contribution to naval history and are an important element of the Anzac heritage. *AE2* went into action at the same moment as Australian and New Zealand troops were landing at Gallipoli on the morning of April 25, 1915.

Five years earlier, in December 1910, a young Australian nation ordered two submarines from shipbuiders Vickers Maxims. These were to be boats of the British E class, their national designation heralded in the prefix 'A'. There had been a strong debate in Australian and British defence circles about the value of submarines and even a report recommending against their use. But after representing Australia at the 1907 Colonial Conference in London, Prime Minister Deakin became convinced of their value and ignored the negative advice. The Commonwealth government paid just over 105,000 pounds sterling for each boat, taking delivery from the builders in Barrow-in-Furness in January 1914. Six weeks later *AE1* and *AE2* were commissioned into the Royal Australian Navy, their 32-man crews having joined the boats early the same month.ⁱ

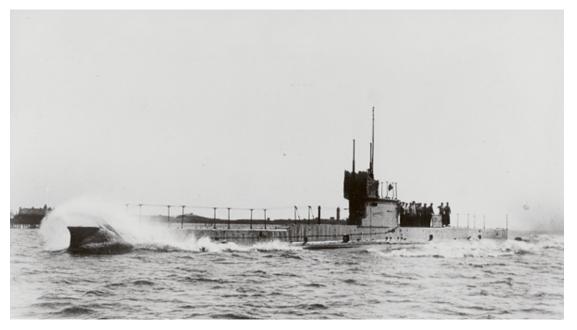


AE2 entering or leaving harbour

The E class submarines had been developed from earlier British designs, themselves based on the American Holland boats of the 1890s. After much technical and engineering experimentation, trial and error and some notable disasters, the submarine was just beginning to become a serviceable weapon of war, even though few people had any idea how they might best be deployed. The men who commanded and crewed these fragile and dangerous vessels were among those few, their skill and bravery creating a lasting legacy for all later submariners.

At 178 feet and 1 inch (just over 54 meters), E boats were lengthier than most of their predecessors. They were also heavier but faster, able to achieve speeds of 15 knots on the surface and 9 knots dived. Their propulsion depended on two six-cylinder diesels and 2 electric motors and they were armed with four torpedo tubes, one at the bow, one at the stern and two on the beam. For the first time ever, these submarines were also fitted with gyroscopes and wireless equipment, the latter necessitating the addition of an extra crew member as telegraphist, an innovation that was to have important consequences for the later Gallipoli campaign.

The inside of these long, narrow machines only 22 feet and 6 inches beam was festooned with pipes, levers and torpedos, making very cramped living conditions. The crews necessarily lived in close quarters, the limited air quickly becoming polluted while underwater. Leadership and morale were therefore even more important considerations than usual and the commanding officers and crew were carefully chosen. English-born Lieutenant T F Besant, RN, became the commander of *AE1* and Irishman Lieutenant Henry Hugh Gordon Dacre Stoker, RN, commanded *AE2*. Their crews were Royal Navy and Royal Australian Navy men, the senior sailors in particular selected for their underwater experience.



AE1 –Location unknown

The sister submarines began their pioneering voyage from England to Australia on the morning of March 7, 1914, escorted by HMS *Eclipse*. The journey started as it would continue, with the need for constant attention to defects and non-performing machinery. Only three days from Portsmouth a blade fell off the port propeller of AE2. The starboard propeller suffered the same problem three weeks later. Even the spare propeller was found to be faulty, with a large crack appearing, it was mostly thought, from poor manufacturing techniquesⁱⁱ. These mishaps caused a great deal of difficulty and were the subject of much paperwork and considerable repairing when the submarines reached Gibraltar late on March 6.

They sailed for Malta on March 9 and left for a rough passage to Port Said three days later. As the small convoy passed through the Suez Canal and the Red Sea, temperatures inside the submarines sometimes reached 100 degrees Fahrenheit (almost 38 degrees Celsius). *AE1* was painted white in an effort to reduce the heat. After an improvised but effective refitting of *AE2's* starboard propeller in Aden, the ships made a good passage to Colombo where *Eclipse* was relieved by HMS *Yarmouth*. Partly under tow, *AE1* and *AE2* sailed to Singapore, meeting with their Australian escort HMAS *Sydney* on April 21. Conditions had improved little for the crew, as Engine Room Artificer John Marsland wrote in his diary of the voyage: 'The heat in the submarine is now almost unbearable.'ⁱⁱⁱ

Unfortunately, the *Sydney* had been ill-prepared to host the novelty of submarines and there was no shipboard accommodation for the submarine crews while in port, the men having to remain aboard their cramped and torrid craft. To make matters worse, *Sydney* coaled with poor quality fuel, her cinders and sparks blowing back onto the submarines under tow, causing discomfort and navigational difficulties. On April 25 they left for Djakarta (then called Batavia). Here they were entertained by the Dutch authorities until their departure for Darwin on April 28.

While travelling through the treacherous Lombok Strait *Sydney* and the submarines almost collided while *AE2* was under tow due to a parted towrope hampering *Sydney's* steering. Disaster was narrowly averted through astute seamanship aboard the submarines and they arrived safely at Darwin on May 5. After two days they left for Cairns where they spent five days, heading for Sydney on May 18. Following delays caused by bad weather, *AE1* and *AE2* sailed through Sydney Heads at six-o-clock in the morning of Empire Day - May 24 - docking at Garden Island. The two vessels had accomplished the longest submarine voyage ever undertaken at that time. Even though under tow for around a third of the distance, they and their crews had covered 13 000 miles (almost 21 000 kilometres), 'a significant feat of seamanship and engineering'^{iv}, even acknowledged by the mighty London *Times*. Diarist Marsland simply called it 'a most wonderful journey of endurance'.^v

AE1 and *AE2* were still being refitted from their record-breaking journey when war between Britain and Germany was declared on August 5 1914. Australian ships were tasked to attack the German Pacific Fleet. The repaired submarines, with their parent ship *Upolo*, joined an Australian flotilla near Rabaul (Papua New Guinea) as part of the hunt for the German ships. On September 14 *AE1* and *Parramatta* were patrolling together near Cape Gazelle. The ship and submarine were in visual contact until *AE1* was last seen disappearing into a sea haze just before 3.30pm. She has not been seen or heard of since.

AE1 was probably not sunk by enemy action but may have suffered a fatal accident, perhaps from a navigational error caused by an inoperable starboard engine^{vi} or due to a fire in the always-volatile batteries. No wreckage or bodies were ever found during the search that followed. She

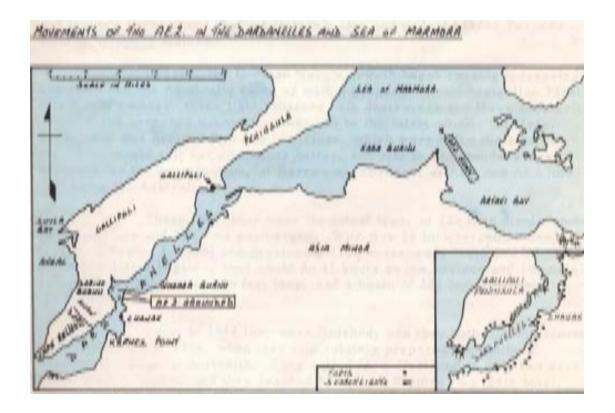
was the first RAN warship to be lost in action during the war. Despite a number of expeditions in the 1970s and $1980s^{vii}$, the fate of *AE1* and her crew remains one of the persistent mysteries of Australian naval history.^{viii}



Enamel commemorative badge issued to World War 1 submariners by Submarines Old Comrades Association, 1918.

Greatly saddened by the loss of their sister ship and all hands, Stoker and the crew of *AE2* were soon to face dangers of their own. Back in port, Stoker convinced the Australian Naval Board and Senator Pearce, then Minister for Defence, that the remaining submarine would be best deployed in the northern hemisphere. In company with the Transport *Berrima* and *Sydney*, *AE2* joined the second contingent of the First AIF that departed from Albany on December 31. Crewman AB Albert Knaggs later recorded in his diary that the submarine was 'the sole escort for 20 transports with the exception of a few which were armed with 4in guns.'^{ix}.

Originally headed for the Mediterranean, *AE2* was diverted by the Admiralty to join British B class submarines patrolling the Dardanelles Straits, arriving in early February. Here, there were various unsuccessful attempts to penetrate the heavily mined area of the Straits known as 'The Narrows'. This would allow the allied fleet into the Sea of Marmara, threatening Constantinople (Istanbul) and so forcing the Turks to ease their confrontation with Russian forces on the Caucasus. This strategy was interrupted by the subsequent plan to land an invasion force on the peninsula that has since become known as Gallipoli.



Stoker was keen to have the honour of being the first to force the Dardanelles. The British submarine *E15* had been destroyed in an attempt on April 17 with the death of the captain and six crew and imprisonment of

the remainder. Stoker then developed his own dangerous but potentially successful plan that was approved by Commander of the allied Dardanelles fleet, Vice Admiral Sir John de Robeck. The first attempt on April 24 failed due to a broken hydroplane, but on the fateful morning of April 25 Stoker took his tiny metal container and her crew into the jagged narrows and minefields of the Dardanelles. They 'entered the straits at about 8 knots', as Stoker wrote in his official report, with Turkish searchlights 'sweeping the straits'. Stoker had been ordered to 'generally run amok' in the Narrows as a diversionary action to cover the landings at what was to become known as Anzac. He remained surfaced as long as possible to conserve his batteries although this would make the submarine a prime target for the guns of the Turkish forts and warships. Around 4.30am AE2 was fired on from a gun battery on the northern shore. She dived to 70 or 80 feet then proceeded through the minefield. 'During the ensuing halfhour or so the scraping of wires against the vessel's side was almost continuous, and on two occasions something caught up forward and became loose and scraped away aft'. ^x

After escaping the mines, AE2 came to periscope depth and was spotted by the Turks who opened fire from the forts. As he narrowly avoided being rammed by a Turkish destroyer, Stoker fired off a bow torpedo and hit and disabled a small cruiser, which was subsequently abandoned^{xi}. In making her escape from the scene of this success AE2 grounded beneath Fort Anatoli Medjidieh, fortunately too close inshore for the fort's guns to bear. AB Knaggs wrote in his diary that 'Fire was opened on us from all sides, the captain said the sea was one mass of foam caused by the shells fired at us but luckily we were not hit.' He went on to recall 'we could hear inside the boat the shrapnel dropping on us like a lot of stones.'^{xii} Stoker managed to get the boat off, only to ground again on the opposite bank beneath Fort Derinburna. Once more, Stoker was able to drag his boat off. He thought that she was now too badly damaged to fight 'but as I considered my chief duty was to prove the passage through the straits to be possible, I decided to continue on my course.' Recollecting these events AB John Wheat wrote 'Nobody knows what a terrible strain it is on the nerves to undergo anything like this.'^{xiii}

Pursued by Turkish warships, *AE2* settled to the bottom and waited. They narrowly escaped attempts by the Turks to detect them using two boats dragging cables slung between them on which were carried an early form of depth charge. Not until 9pm was it safe to surface, recharge the batteries and replenish the fetid air inside the submarine after sixteen nerve-wrenching hours of confinement. Stoker ordered the 23 year-old wireless telegraphist William Falconer to signal their success. This he did, but was unable to receive a reply, continuing to send the signal in the desperate hope that it would be picked up. It was, and the news that an Australian submarine had penetrated the Dardanelles and torpedoed a Turkish warship provided a much-need morale boost to the faltering Gallipoli landings when Sir Ian Hamilton received it in the grim early morning hours of April 26. Instead of agreeing with the shore commanders' recommendation that the landing forces withdraw, Hamilton informed them of *AE2's* success and urged them 'to dig, yourselves right in and stick it out.'^{xiv}

After spending a rainy night on the surface, *AE2* proceeded further along the Straits. On the morning of April 26 she attempted a torpedo attack on a Turkish ship, but narrowly missed. Stoker then continued on, diving beneath a fleet of fishing boats, finally entering the Sea of Marmara. The next few days were a game of cat and mouse between *AE2* and at least six

Turkish boats diverted to hunt down the submarine. Stoker raised the White Ensign as often as possible to let the enemy know that their defences had been breached. There were a number of unsuccessful attacks, mainly due to failures of the torpedoes, and *AE2* narrowly avoided being shelled and rammed. Many opportunities to attack the enemy while on the surface had to be foregone due to the frustrating lack of a deck gun.



The three officers of *AE2* photographed during their internment as POWs, 1915. L-R LEUT G A G Haggard, LCDR H Stoker, LEUT J Cary. Source: Stoker, H.G. 1925 *Straws in the Wind*, London.

In the evening of April 29 the crew of AE2 were surprised to meet with E14. The British submarine had followed Stoker's example and also penetrated the Sea of Marmara after Falconer's message had proved that the Dardanelles could be forced. The commanders of the two submarines arranged to rendezvous at 10am the next day. AE2 spent the night on the bottom once again. Next morning she arrived at the meeting point to find E14 coming towards them under pursuit from a Turkish torpedo boat, *Sultanhisar*, and two gunships. According to the diary of Able Seaman Alfred Knaggs 'E14 dived and we continued to draw the enemy on while E14 manouvered for an attack'.^{xv} But the enemy got too close and AE2 dived and waited. Half an hour later and for no apparent reason^{xvi} she went wildly out of control and began rising to the surface where she was easy prey for the torpedo boat's guns. Flooding a forward tank caused AE2 to

dive but she could not be controlled and sank to well below her 100-foot maximum depth where she was in danger of being crushed by the pressure. Stoker ordered full astern and *AE2* now began to rise stern first as uncontrollably as she had sunk.

Breaking the surface, *AE2* presented an unmissable target and *Sultanhisar* fired into her pressure hull and engine room. Captain Riza sent two torpedos at *AE2* but one failed and one missed^{xvii}. Without deck guns^{xviii}, *AE2* had no chance of fighting back and she was beginning to sink. Stoker reported that he:

... blew the main ballast and ordered all hands on deck. Assisted by Lieutenant [Geoffrey] Haggard, I then went round opening all tanks to flood the sub. Cary [Lieutenant John Cary], on the bridge, watched the rising water to give warning in time for our escape. A shout from him and we clambered up. 'Hurry, Sir, she's going down'. As I reached the bridge the water was about two feet from the top of the conning tower.^{xix}

Stoker needed to ensure a thorough scuttling that would keep the top-secret craft out of enemy hands. He was last to leave, finding the remainder of the crew who had not yet been picked up by the Turks or swum for their lives huddled on the sinking stern. All were rescued and a little before 11am '*AE2* just slid away on her last and longest dive', as Stoker later wrote in his autobiography^{xx}, disappearing into 55 fathoms of water about 8 kilometres off Karaburun.^{xxi}

Many other allied submarines followed *AE2*'s lead into the Sea of Marmara, causing havoc with Turkish shipping and, using deck-mounted guns, on land transport. Altogether, 148 sailing vessels, 44 steamers, 11 transports, 5 gunboats as well as a destroyer and a battleship were sunk or badly damaged by submarine action against the Turks and their German allies. As the historian of Australian submarining, Michael White, observes:

'If *AE2* had not successfully penetrated the Marmara, it has to be acknowledged that none of the others would have done so. The greatest achievement of Stoker and the crew of the *AE2* was that they showed the feat was possible. Until 25 April, two submarines had fallen victim to the traps and hazards of the Narrows. By careful planning and outstanding courage and shiphandling, Stoker pioneered the route, so that those who followed had the comfort and encouragement of knowing before they set out that the feat was possible.^{xxii}

These actions, together with those of *AE2*, forced the Turks to reorganise their supply lines to their troops on the Gallipoli peninsula. Instead of using the route through the Sea of Marmara, their ammunition, reinforcements and supplies had to be taken by the much slower overland route. This provided significant relief for the hard-pressed land forces on Gallipoli.

Two Victoria Crosses and other decorations were awarded as a consequence of these activities, though *AE2*'s achievement remained largely ignored. Stoker apparently never complained about this and the nearest he came in public, at least, was in his autobiography where he drily noted that the results of the campaign in the Dardanelles for the submarine commanders ' ... was death for one; three and a half years of the living death for another; and Victoria Crosses for the other two'.^{xxiii}

Stoker would eventually be awarded a Distinguished Service Order and promoted to Commander after the war^{xxiv}. But the gallantry and unprecedented achievement of Stoker and his men seem to have been submerged in the desire to forget the military defeat of Gallipoli and the all-consuming events of the western front.

Stoker and his crew spent the remaining three and a half years of the war in various Turkish prisons and work camps, including Afion Kara Hissar, St Stefano and the brutal Belmedik. They were initially treated well and politely interrogated. But when the questioning failed to reveal any useful information, the submariners were subjected to bad treatment including poor and inadequate food, clothing and accommodation infested with vermin and rats. Stoker and Lieutenant Geoffrey Fitzgerald from the British submarine E15 also suffered a long period of solitary confinement as a reprisal for alleged allied mistreatment of Turkish prisoner. They were fortunate that the American Ambassador in Turkey, Henry Morganthau, intervened with Enver Pasha on their behalf and they were finally released after thirty-two days imprisonment, twenty-five of them in solitary confinement. There were also some cases of brutality from individual guards and commandants, in particular by the notorious, Maslum Bey of Afion Kara Hissar, a camp said to have been 'a veritable hell' by late Spetmeber, 1916.^{xxv}



AE2 crew in Turkish Prison Camp (AWM P371/01/01)

Numerous, mostly unsuccessful, escape attempts were made by various of *AE2*'s crew, sometimes with other captured British submariners. Stoker was involved with two of these, the first in March 1916. In company with Archibald Cochrane and Lieutenant Rice from the British *E7*, Stoker managed to reach the coast, the group having covered a distance of around 130 miles in eighteen exhausting days. But within sight of the liberating sea they were betrayed by a shepherd they believed to be assisting them. After months of imprisonment the escapees were tried by court martial, resigned to execution. The court predictably found them guilty but to the surprise and relief of the prisoners they were sentenced to only twenty-five days imprisonment. They burst into near hysterical laughter at this absurdly minimal sentence, their mirth causing the court to join in. A later escape attempt, inspired by maps sent secretly to the prisoners through the mail, ended in near farce before any of them even left the camp.

During their three-and-a-half years of captivity four crew members of *AE2* died, mainly as a result of exhaustion from overwork, poor nutrition and resultant diseases, including typhus and malaria. The survivors were repatriated mostly to Britain at the war's end, though Stoker Petty Officer Kinder travelled back to Australia direct. After his recovery, Henry Stoker

briefly continued his submarine career but after serving in them since 1906 'I was tired of them'^{xxvi}, he wrote, and took to the stage, a talent for acting having surfaced during amateur theatricals while a prisoner of war. He retired from the Royal Navy in October, 1920 and went on to become a noted character actor, producer, director and writer. Stoker served again in the Royal Navy during World War 2 and died in 1966 on his eighty-first birthday. Sooner or later after the end of the war, most of the surviving *AE2* crew returned home to Australia or emigrated.

Their gallant submarine remained lost beneath the Sea of Marmara until the determined research of Turkish maritime historian Selçuk Kolay OAM discovered her in 1998. The Silent Anzac was lying upright in the mud, encrusted with more than 80 years of weed, shellfish and discarded fishing nets. Her hatch was still open, as Stoker had left it, a large eel having taken up residence inside. Discussions about appropriate procedures for the protection and preservation of *AE2* have been in progress since then and in 2007 the Commonwealth government provided funds for a feasibility study into appropriate preservation measures. The Submarine Institute of Australia has established 'The Silent ANZAC' project 'to ensure the protection, preservation and promotion of AE2, to contribute to an informed debate on her future and ensure that AE2's contribution to the Gallipoli campaign is duly recognised ...'.

It is fitting to leave the last words to *AE2*'s commander. In his autobiography, *Straws in the Wind*, Henry Stoker summarised the accomplishments of *AE2*, a record in which the ill-fated *AE1* and her crew also had a share:

AE2 was in commission as a unit of His Majesty's Australian Fleet for exactly fourteen months. During that time she traversed 35,000 miles, of which the greater portion was under war conditions. The first submarine to travel half-way round the world, she all but completed the return journey. The first submarine to pass the Dardanelles, to her fell the honour of proving this aforethought impossibility possible.^{xxvii}



LCDR Henry Stoker

Graham Seal

SELECT REFERENCES

Bean C. E. W., *The Story of Anzac: The First Phase (The Official History of Australia in the War of 1914-18, vol. 1),* Angus & Roberston, Sydney, 1921.
Brenchley F & E. *Stoker's Submarine*, HarperCollins, Sydney, 2001.
Fewster, K, Basarin H & Basarin, V, *Gallipoli: The Turkish Story*, Allen & Unwin, Sydney, 2003 (originally published 1985).
Foster, J., *AE1: Entombed But Not Forgotten*, Australian Military History Publications, Loftus, 2006.
Frame, T & Swinden, G., *First In, Last Out: The Navy at Gallipoli*, Kangaroo Press,

Kenthurst, 1990.

Frame, T., The Shores of Gallipoli, Hale & Iremonger, Sydney, 2000.

Jose, A. W., The Royal Australian Navy (The Official History of Australia in the War of

1914-18, vol. 9), Angus & Robertson, Sydney, 1928.

Robertson, J., Anzac and Empire: The Tragedy and Glory of Gallipoli, Hamlyn

Australia, Port Melbourne, 1990.

Smith, T., *Project AE2: Investigation of the HMA AE2 Submarine Wreck Site, Turkey, October 1988*, NSW Heritage Office.

Stoker, H., Straws in the Wind, Herbert Jenkins, London, 1925.

White, M., Australian Submarines: A History, AGPS, Canberra, 1992.

APPENDICES

1 Technical specifications of E class submarines

Type: E Class Submarine Displacement: 660 tons (surfaced), 800 tons (submerged) Length: 181 feet Beam: 22 feet 6 inches Draught: 12 feet 6 inches Builder: Vickers Ltd, Barrow-in-Furness, England Laid Down: 14 November 1911 Launched: 22 May 1913 Machinery: 2 sets of 8 cylinder diesel engines, battery driven electric motors Horsepower: 1,750 (surfaced), 550 (submerged) Speed: 15 knots (surfaced), 10 knots (submerged) Armament: 4 x 18-inch torpedo tubes Complement: 35

2 Crew List of AE2 at time of her scuttling

OFFICERS

Lieutenant-Commander Henry Hugh Gordon Dacre Stoker DSO. RN

Lieutenant Geoffrey Arthur Gordon Haggard DSC. RN

Lieutenant John Pitt Cary [MID] RN

RATINGS

Chief Petty Officer Harold Abbott DSM. RN No. 8268

Chief Petty Officer Charles Vaughan (MID) RAN

Chief Engine Room Artificer 2nd Class Harry Burton Broomhead DSM. Ex-RN No. X278

Chief Stoker Charles Varcoe ex-RN No. 8275*

Petty Officer Cecil Arthur Bray RAN No. 7296

Petty Officer Stephen John Gilbert (Ex-RN) RAN No. 8053*

Engine Room Artificer Class I Peter Fawns (Ex-RN) RN No. 8285

Leading Seaman Charles Holderness RN No. 8270

Leading Seaman George Henry Nash RAN (Ex-RN) No. 8056

Leading Signalman Albert Norman Charles Thomson RN No. 8271

Leading Stoker John Kerin RAN No. 7391

Able Seaman John Harrison Wheat RAN No. 7861

Able Seaman Benjamin Talbot RAN (Ex-RN) No. 8221

Able Seaman Alexander Charles Nichols RAN No. 7298

Able Seaman Albert Edward Knaggs RAN (Ex-RN) No. 7893*

Able Seaman William Thomas Cheater (Ex-RN) RAN No. 7999

Able Seaman Lionel Stanley Churcher (Ex-RN) RAN No. 7970

Telegraphist William Wolseley Falconer RAN No. 1936

Stoker James Cullen RAN No. 2826

Stoker Horace James Harding RAN No. 7216

Stoker William Brown Jenkins RAN No. 2080

Stoker Charles George Suckling RAN No. 214X

Stoker Thomas Henry Walker (Ex-RN) RAN No. 8289

Stoker Michael Williams RAN. No. 2305 *

Stoker Thomas Wishart RN. No. 8277

Engine Room Artificer 1st Class James Henry Gibson RN. No. 8273

Engine Room Artificer 2nd Class Stephen Thomas Bell [MID]. RN No. 8272

Stoker Petty Officer Herbert Alexander Brown DSM RAN (Ex-RN) No. 8096

Stoker Petty Officer Henry James Elly Kinder [MID], RAN No. 7244

* = Died as Prisoners of War

SOURCES: White, pp. 227-229 from AA: MP 124/6 File No 507/201/237

Defence (Navy) Series 1923-38 and WA Maritime Museum

http://www.museum.wa.gov.au/collections/maritime/submarine/crewlistAE 2.asp accessed April 2007.

ⁱ Six extra crew were taken aboard each submarine to allow four instead of three watches, White, M., *Australian Submarines: A History*, AGPS, Canberra, 1992, p. 16. ⁱⁱ See Eken, J., 'Technical Detail of the E Class Submarine', Appendix 1 of White, p.

^{222.}

ⁱⁱⁱ Marsland, J., Diary, extracts reproduced in *Naval Historical Review*, December 1974, p. 57. Marsland was on board *AE2* at this time, though was later lost with the *AE1*.

^{iv} White, p. 25

^v Marsland, J., Diary, extracts reproduced in *Naval Historical Review*, December 1974, p. 59.

^{vi} There have been many theories put forward regarding the fate of AE1, most knowledgeably perhaps by Stoker. Certainly as Peter Smith, Honorary Curator of the Spectacle Island Submarine Archives points out, AE2 was carrying several more engine room crew than usually required at the time of her disappearance, suggesting some serious problems in this area. Personal communication January 2007. See also research notes on AE1's trimming and inclining experiments in December 1913, prepared by Peter Smith and drawn from Submarine Sketch Book No 4 by Mitchell, O J.,

Shipdraughtsman, Submarine Design Office, Admiralty, London, dated to 1918, Submarine Historical Collection, Spectacle Island. These tests showed problems with the 'Y' internal main ballast that may or may not have been subsequently corrected.

^{vii} Primarily by Commander John Foster RAN (Ret'd), whose book *AE1: Entombed But Not Forgotten*, Australian Military History Publications, Loftus, 2006, details the search for *AE1* and her crew. In February 2007 HMAS *Benalla*, with Foster aboard, made a likely sonar identification of *AE1*'s last resting place. A man-made object of approximately the right size and shape was discovered at 65 metres in an undisclosed location. Final confirmation that the feature is *AE1* requires further investigation of the site, with a remotely operated submersible to photograph the object.

^{viii} The memorial plaque to *AE1*'s company at Bita Paka War Cemetery near Rabaul, New Britain contains a number of errors: J A Marsland appears as 'Mareland', R Smail appears as 'Snail', J J Maloney appears as 'J F', (his surname may also be misspelled) and G Hodgkin appears as 'Hodgskin', though it appears that there may have been an attempt to remedy this. These observations have been made from photographs and there may be other discrepancies. A thorough check of the relevant primary source records may ascertain the correct details.

^{ix} Knaggs, A., Diary, Dec 23 1914, Submarine Historical Collection, Spectacle Island. (Copy AWM PR85/096). Due to a fire on one ship and the superior speed of two others which steamed ahead, *AE2* eventually escorted only 17 transports to Egypt.

^x From Stoker's official report made after his release and reported in Jose, A. W., *The Official History of Australia in the War of 1914-18*, vol. 9, *The Royal Australian Navy*, Angus & Robertson, Sydney, 1928, pp. 240ff.

^{xi} See White, p. 53 for what is apparently a contemporary Turkish report of the incident, supplied to White by the Turkish government via the Australian embassy after a request by White.

^{xii} Knaggs, A., Diary, April 25, 1915.

^{xiii} Wheat, J H, Diary p. 9

^{xiv} Hamilton to Birdwood, April 26, 1915 in Bean C. E. W., *The Story of Anzac: The First Phase (The Official History of Australia in the War of 1914-18, Vol. 1),* Angus & Robertson, Sydney, 1921, p. 461.Whether this was the deciding factor in not disembarking the troops is debatable, but there is no doubt that the news was an important morale boost.

^{xv} Knaggs diary April 30, 1915.

^{xvi} There have been numerous speculations as to why this occurred. The most generally accepted explanation, based on Stoker's own report, is that the submarine's bow entered a layer of water much denser than that surrounding it, an apparently common phenomenon in the Sea of Marmara, see White, pp. 66ff.

^{xvii} Riza, Captain & Dulger, B., *How I Sank the AE2 Submarine in Marmara Sea*, unknown publisher, Istanbul, 1947 (trans. Dr G Izmir), quoted in Brenchley F & E. *Stoker's Submarine*, HarperCollins, Sydney, 2001, pp. 91ff.

^{xviii} These were fitted to later E class boats, to good effect.

^{xix} Stoker's official report of October 16, 1914 at AA: Dept of Navy MP472/1 File No 16/14/8314 General Correspondence 1910-1921.

^{xx} Stoker, H., Straws in the Wind, Herbert Jenkins, London, 1925, p. 140.

^{xxi} Stoker renders this as 'Kara Burnu Point' in his report.

^{xxii} White, p. 69.

xxiii Stoker, Straws in the Wind, p. 98.

^{xxiv} The citation for Stoker's DSO read ''In recognition of his gallantry in making the passage of the Dardanelles in command of HM Australian submarine AE 2 on 25 April 1915'. First Lieutenant Haggard received the Distinguished Service Cross, Lieutenant Cary was Mentioned in Despatches (as was Stoker), while three other crew members received the Distinguished Service Medal.

^{xxv} Lushington, R., *Prisoner With the Turks, 1915-1918*, London, 1923, quoted in Robertson, J., *Anzac and Empire: The Tragedy and Glory of Gallipoli*, Hamlyn Australia, Port Melbourne, 1990, p. 218. See also 'Memorandum Concerning the Treatment of British Prisoners of War in Turkey by American Consul Nathan', Prime Minister's Department, Correspondence File SC series (first system): 'Prisoners of War, Agreement with Turkey', 1915-17, Commonwealth Archives Office CP 447/1, item SC 311.

^{xxvi} Stoker, p. 304. ^{xxvii} Stoker, p. 140.