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DOI:

[10.1177/0968344515572503](https://doi.org/10.1177/0968344515572503)

Document Version

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Citation for published version (APA):

Goodman, M. S. (2016). MI6's Atomic Man: The Rise and Fall of Commander Eric Welsh. *War in History*, 23(1), 100-114. <https://doi.org/10.1177/0968344515572503>

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MI6's Atomic Man:

The Rise and Fall of Commander Eric Welsh

Abstract:

This article recounts the life and career of Eric Welsh. A remarkable figure within MI6, Welsh started life as a scientist for a maritime paint company in Norway, but with war in 1939 his contacts and knowledge of the region brought him into direct contact with British intelligence. He rapidly became head of the Norwegian Section of MI6 and through the attacks on the heavy water plant in Vemork assumed responsibility for wartime and post-war atomic intelligence. His personality and dedication saw him rise to the pinnacle, but the flaws associated with these traits also led to his downfall and untimely death.

MI6's Atomic Man:

The Rise and Fall of Commander Eric Welsh

There can be fewer intelligence officers who have divided opinion amongst colleagues but who have achieved so much as Eric Welsh. Various a member of the Royal Navy, Royal Air Force, SIS, and a chemist working on maritime paint, Welsh seems to have employed a personal approach to all aspects of his work. Not prepared to suffer fools gladly, he was determined and single-minded in his approach. For Welsh, humour was as much the default position to all human interaction as was secrecy. This style afforded him great access and long-term friendships with a number of the leading physicists of the day, but it also ensured that he created enemies along the way, most notably the founder of scientific intelligence, R.V.Jones. Welsh's relatively aloof approach to his work provided notable successes, but it was recurring bouts of ill-health, combined with a fondness for drink, that eventually would prove his downfall.

This article explores the life of one of the most important but elusive British intelligence officers of the mid-twentieth century. With problems nationally and internationally, Welsh was exactly the sort of gregarious figure that British atomic intelligence needed. There was tension at home, particularly in the artificial division between atomic and scientific intelligence. More broadly there were difficulties in ensuring effective co-operation between the intelligence world, the scientific components of government, and the universities. In addition, Welsh proved to be a valuable link between the worlds of intelligence and atomic science on both sides of the Atlantic at a time when technical relations were suspended.

Eric Welsh was born on 31 August 1897 in Newbiggin, a small town on the Northumberland coast in the North East of England. His father worked for the Prudential insurance company but little else is known about his early years. In 1914 Welsh joined the maritime paint company International Paint.¹ Now a global corporation, it was started in the

DISCLAIMER: This paper is drawn only from released official records and published sources and the views expressed are mine in my capacity as an academic historian. They do not represent the views or carry the endorsement of the Government.

I am grateful to Keith Jeffery and Christian Bak for comments on an earlier draft of this article.

1880s by the Holzapfel brothers, German by birth but English by adoption. The company began with a shed in the docks at Newcastle, trying to get customers to buy its special waterproof paint. At the start of the twentieth-century it moved to larger premises in Gateshead, and it is highly likely that it is here where the teenage Welsh worked prior to being called up for the First World War.²

Eric Welsh kept a very brief diary through the latter half of the war. He seemingly joined the Officer Training Corps prior to being called up for entry in March 1916.³ At the tender age of 18½ Welsh described his profession as ‘chemist’s assistant’. Welsh at this point was seemingly slender of build: he was recorded as being 5’6” tall with a 34½” chest, with brown eyes, brown hair, and a fresh complexion. Given his work with maritime paint Welsh opted to join the Navy and within 10 days was sent for training. On his entry form under notes it is simply recorded ‘signals’. Presumably Welsh had some knowledge of this, as he was immediately sent to the Signal School in the Crystal Palace in London. Two months later he was sent to the Signal School in Chatham, Kent. Thereafter he was sent to a variety of shore based establishments, including HMS Victory VI and HMS Pembroke I, both of which seem to have offered further training. He passed out in late July, remarking in his diary that it was ‘jolly easy’.⁴ His first proper posting was to HMS Attentive III in August 1916, an armed patrol ship in Dover. Two months later Welsh was back in training on shore but in December returned to the patrol ship in Dover. From his service record it would appear that he remained with this ship for the next two years. His diary for 1917 and 1918 records such a momentous occasion as joining the 1st hunt in Edgbaston, and various references to hospital visits.

In July 1918 Welsh was discharged from the navy and transferred to the RAF.⁵ Quite why Welsh made this transition, and quite what he did in the RAF is a total mystery. He does not seem to have remained long in the RAF though, and is recorded as having left in June 1919. The same month Welsh, again for reasons unknown, left the UK to move to Bergen in Norway. Until his return to military service in 1940, Welsh spent the duration of the interwar

¹ A 1956 history of the company includes a plaque identifying Welsh as one of the individuals who had completed 25 years of service for the company. It lists his start of employment as 1914. *Seventy-Five Years of Paint-Making, 1881-1956*. I am grateful to the company archivist for a copy of this booklet.

² ‘It Began in 1881’. Available at:

[https://www.akzonobel.com/international/system/images/AkzoNobel It began in 1881 tcm46-14318.pdf](https://www.akzonobel.com/international/system/images/AkzoNobel%20It%20began%20in%201881%20tcm46-14318.pdf)

³ I am grateful to his late son, John Welsh, for allowing me access.

⁴ Diary entry for 24 July 1916.

⁵ Details on the preceding paragraphs taken from his ‘Enrolment Form’ in TNA: ADM 337/78 and ‘Sea Service’ in TNA: ADM 339/1.

period in Norway working for International Paint. He began as a chemist but rose to be Technical Director. One of his achievements was creating the yellow paint that used to adorn the inside of sardine tins at this time. Whilst in Bergen between the wars he mastered Norwegian, married a local girl and fathered three children.

Eric Welsh's life was, once more, upset by war. On 9 April 1940 the German military machine swept into Norway, with devastating effect. German troops landed in Bergen and that same day Welsh left the town with two British naval officers to ensure their safe passage out of the country. The following day he removed his family too. Immediately Welsh seems to have switched from being a scientist and corporate figure in a paint company, to a military man. Quite how this transformation took place with such vigour and speed is unknown. Welsh's son has questioned whether International Paint was somehow a cover for Welsh's real work in SIS. There is no evidence to confirm or refute this but on balance seems unlikely.⁶ The more likely explanation is that Welsh left active military service in 1919 but transferred to the Royal Naval Volunteer Reserve (RNVR). This would explain the speed by which Welsh left the military and moved to Norway and the contacts that he maintained; it would also justify his military rank of Lieutenant Commander in 1940.

That war would come to Norway cannot have been a surprise, even if the actual attack on 9 April was. Although it is not clear in what capacity Welsh, by his own account, had already made contact with the Norwegian military, he immediately set to work assisting local communities before requesting permission to 'be relieved from his services with the Norwegian army' so that he could make contact with British forces. Welsh managed to return to England on 29 April 1940 and reported to the Foreign Office, Admiralty and War Office. He attempted to join the RAF and Navy but was, in his words, rejected because he 'was in a scheduled occupation and registered as a scientific worker'. Instead, in December 1940, he was given a commission in the RNVR. Nonetheless, he spent the first two months of 1941 serving firstly on HM Minesweeping Flotilla, Newcastle, and then as liaison officer at HMS Baldur, a naval base in Reykjavik, Iceland. Welsh's life would change again in March 1941 when he was posted to Naval Intelligence.⁷

It appears unlikely that Eric Welsh actually served in Naval Intelligence for he was immediately recruited by the Secret Intelligence Service (SIS), or MI6, as it is better known.

⁶ Interview with John Welsh, 28 September 2009.

⁷ 'Lieut-Commander Eric Welsh, RNVR', Notes made by E. Welsh, 20 October 1943. I am indebted to Welsh's son, the late John Welsh, for allowing me to see his father's papers.

Given his linguistic abilities and local knowledge he was despatched to the Norwegian Section of SIS.⁸ Two months later, in May 1941, Welsh assumed responsibility for this section, eventually subsuming Iceland and the Faroes Islands into his brief. Welsh took over responsibilities from a fellow naval officer, Commander J.B.Newill. The Secretary in the Norwegian Section, Margaret Reid, has recalled something of Welsh's introduction to life in SIS. 'I was sorry for little Welsh', she said, he 'was not used to office routine, couldn't bring himself to make notes on a bit of paper or pass money through the accounts.'⁹ These rather relaxed traits would come to be representative of Welsh's approach to his work.

Welsh's appointment came at a crucial time. The previous year SIS's network in Norway had been largely wound up and there was a desperate need to establish new ones.¹⁰ Welsh was involved in a number of ways to restore SIS's eyes and ears on the ground. This firstly involved training willing recruits in England, then getting them into Norway covertly using a variety of fishing vessel from locations in Scotland, and then to communicate with them, passing on requirements and receiving reports.¹¹ In all these matters, it would seem, Welsh took an exceptionally personal approach. The agents in Norway referred to themselves as 'Welsh's gang' and, as one former member has recalled, Welsh's approach was very successful:

Lt.Cdr. Welsh executed his command in a wise and paternal manner. He required the agents to endure hazards and if need be severe conditions, but he did also the outmost effort [sic] to save agents who were chased or in distress. The agents had an immense respect for Lt.Cdr. Welsh and they were devoted to execute his orders.¹²

One of the first orders to be fulfilled concerned the German battleship Tirpitz. Working with Major Finn Nagell of the Norwegian Ministry of Defence Intelligence Office, Welsh created a network of resistance soldiers across the Norwegian coast whose task it was

⁸ Christian Bak asserts that Welsh was brought into SIS as the SOE/SIS naval operation to Norway from the Shetland Islands expanded and as its previous head moved to other tasks. Personal correspondence.

⁹ Reid to Jan-Hermann, 6 November 1970. Margaret Reid Papers, Brotherton Library, University of Leeds: MS 708.14.

¹⁰ K.Jeffery. *The History of MI6*. (Bloomsbury: London, 2010). p.374.

¹¹ For examples, see the various wartime experiences of Oluf Reed-Olsen (Papers at the Imperial War Museum) and various correspondence in folder SISA, Norwegian Home Resistance Museum.

¹² 'Secret Intelligence Operations in Occupied Norway During World War II – Reporting of German Naval Forces and Merchant Ships', Captain O. Snefjella. I am indebted to John Welsh for a copy of this memoir.

to monitor the movement of German ships. One of those spotted was the Tirpitz, one of the two largest battleships built by the German navy at this time. It had been despatched to Norway in late 1941 to act as a powerful and effective deterrent against an Allied attack and to control the passing of ships to and from the Soviet Union. From Norway's coastlines, Welsh's spotters tracked the ship and reported its movements. Subject to a number of different operations, the Tirpitz was finally sunk in 1944.

Welsh's greatest wartime involvement however, concerned the German atomic bomb. From the outbreak of war concerned scientists had contacted the British Prime Minister and American President to warn them about the potential dangers of atomic weapons. The beginnings of the Manhattan Project therefore owe its origins to a concern that the Germans might develop such a weapon. The occupation of Norway provided the Germans with a key process in the manufacture of the raw materials necessary for a bomb – the heavy water plant in Vemork. Concealed in a deep mountain cleft where the sun is only visible for six months of the year, this inhospitable venue was used because great pipes fed down from the mountain to the factory, providing water to run the plant.

Whilst Welsh proved to be an adept officer at stimulating loyalty amongst his agents, it was his knowledge of Norway and science that enabled him to enhance his position within SIS. One of his first tasks in taking over the Norwegian Section was to meet Leif Tronstad, a pre-war Professor of chemistry and a member of the British network in Norway. In late 1941 Tronstad escaped to England and briefed SIS on the heavy water plant and about German efforts to harness atomic energy. Rather fortuitously, Welsh was already aware of the Vemork heavy water plant, having provided special waterproof paint for its flooring prior to the outbreak of war.

In response to Tronstad's information Welsh suggested that the plant be destroyed or sabotaged.¹³ The first attempts were undertaken in late 1942, but ended with the capture and execution of the saboteurs. Undeterred, over the succeeding years further efforts were tried, resulting in the successful commando attack in 1943, the raid by the US Air Force (USAF) later that year, and the sinking of a ferry carrying barrels of heavy water in 1944.¹⁴ For his

¹³ Jeffery. *MI6*. p.375.

¹⁴ A great number of books exist on these raids. See, for instance, T.Gallagher. *Assault in Norway: Sabotaging the Nazi Nuclear Program*. (London: Lyons Press, 2002); also P.F.Dahl. *Heavy Water and the Wartime Race for Nuclear Energy*. (London: Taylor & Francis, 1999).

wartime efforts in Norway Welsh was awarded a 'Knight First Class of the Royal Norwegian Order of St Olav' by the King of Norway, and an OBE from King George VI.¹⁵

His involvement with atomic matters in Norway meant that Welsh was read into and involved with one of the most secret aspects of the war. Atomic information was held on a similar compartmentalised basis to the hugely sensitive signals intelligence efforts at Bletchley Park. One of Welsh's many attributes was a dogged determination to control everything that passed through his hands. From the earliest stages of the war SIS had appointed its first scientific officer on attachment from the Air Ministry. Dr R.V.Jones, an Oxford physicist, was integral to the efforts to understand and thwart German advances in science. Ordinarily atomic matters would have fallen within his remit, but it was kept separate given the monumental secrecy attached to it, and so it was that Welsh became responsible for SIS's efforts to monitor the German atomic bomb programme. A large component of this was in Norway, but by no means was all of it.

British intelligence first made serious efforts to monitor German advances at the end of 1941.¹⁶ Welsh's involvement with atomic matters was three-fold: through SIS he was intimately concerned with efforts to gather intelligence, but he was also responsible for the production of assessments, and efforts to thwart progress. In 1941 Welsh recruited his best conduit of intelligence, the science publisher Paul Rosbaud, who was influential in obtaining information from Germany.¹⁷ At the end of the war Welsh would help exfiltrate Rosbaud from the Russian sector in Germany. Rosbaud brought with him a collection of books and, accompanied by German speaking British military officer Robert Maxwell, started Pergamon Press.¹⁸

Through his network Welsh, and British intelligence more broadly, seem to have become convinced by 1943 that German efforts would not reach fruition within the timetable of the war. All of the leading figures were targeted, from its scientific head Werner Heisenberg downwards, as were the major locations of research. From late 1943 the US

¹⁵ *Norges Statskalender: 1947*. p.1050. I am grateful to Egil Vindorum, Head of Chancellery, The Royal Norwegian Order of St. Olav, for this information: email to author, 28 April 2004. On the OBE, see *Supplement to the London Gazette*, 10 June 1944. p.2670. Welsh is described as being 'employed in a Department of the Foreign Office'.

¹⁶ 'T.A.Project, Enemy Intelligence', Report by M.W.Perrin and R.R.Furman, 28 November 1944. TNA: CAB 126/244. 'T.A.' referred to Tube Alloys, the British codename given to the atomic bomb.

¹⁷ For more see A.Kramish. *The Griffin: The Greatest Untold Espionage Story of World War II*. (Boston: Houghton Mifflin Company, 1986). Some of Kramish's content and conclusions needed to be treated with care.

¹⁸ R.W.Cahn, 'The Origins of Pergamon Press: Rosbaud and Maxwell', *European Review* 2:1 (January 1994), pp.37-42.

became far more involved in the intelligence picture, with Welsh becoming the main point of contact for General Groves' (Groves as head of the Manhattan Project but also responsible for intelligence matters) team. This would become crystallised through a joint committee on 'T.A. Project, Enemy Intelligence' and through the ALSOS missions.¹⁹ ALSOS, the Greek for Groves, were scientific intelligence missions designed to follow the conquering armies through Europe, gathering scientists and scientific papers and attempting to gauge German progress. As part of the nuclear component of ALSOS, Welsh was involved in dismantling the German nuclear pile at Haigerloch. The aftermath of this was Welsh's involvement, albeit at a distance, with the German members of the 'uranium club', the leading atomic scientists, including Heisenberg, who were interned at a large country house in Cambridgeshire.²⁰

Welsh's other great wartime involvement, related to this work and assisted no doubt by his knowledge of Scandinavia and atomic matters, was his intimate involvement with perhaps the most famous physicist at that time, the Nobel prize winner Niels Bohr. Welsh had helped mastermind his escape from occupied Denmark in 1943 and, once in London, became Bohr's minder.²¹ This continued after Bohr travelled to the US, where Welsh acted as courier and censor in all messages sent back to his wife in England.²² Bohr's son, Aage, has recalled how his father 'enjoyed discussing [matters] with Welsh and appreciated his directness and sense of humour...he remained for us a personal connection to the Intelligence service, which turned into a friendship'. Aage Bohr's memory of Welsh highlights the important characteristics that he brought to his work: affinity with contacts, a humorous presence but serious undertone, and way in which Welsh ensured that he was central to everything.²³

By the latter stages of the war Welsh, now approaching his fifties and rotund in appearance, began to suffer from thrombosis in both legs. His son has recalled that although Welsh had never been a heavy drinker beforehand, to alleviate the pain he took to drinking whisky. The thrombosis was such that he often found it difficult to walk from SIS offices in

¹⁹ On the former, see details in TNA: CAB 126/244.

²⁰ M.A.McPartland. *The Farm Hall Scientists: The United States, Britain, and Germany in the New Atomic Age, 1945-46*. (PhD Thesis, George Washington University, 2013). I am grateful to Dr McPartland for a copy of her unpublished thesis. For more on Farm Hall see C.Frank. *Operation Epsilon: The Farm Hall Transcripts*. (Bristol: Institute of Physics, 1993); and J.Bernstein. *Hitler's Uranium Club: The Secret Recordings at Farm Hall* (New York: Springer, 2001).

²¹ See details see TNA: AB 1/40.

²² For more details see TNA: CAB 126/39.

²³ Letter from A.Bohr to author, 10 January 2003.

Broadway to the Thatched House Club on St. James Street.²⁴ In his correspondence with Niels Bohr, it is clear that Welsh was quite unwell in late 1944, though it is unclear what his symptoms were.²⁵

Welsh excelled at his wartime intelligence work. He forged close, personal friendships with many of the scientists he interacted with. He instilled a great sense of loyalty amongst his Norwegian agents, many of whom saw him as a father figure. Even R.V.Jones, who he would famously fall out with in the post-war world, complimented his wartime efforts.²⁶ His love for Norway clearly affected him too. His son has recalled that he was initially against the USAF bombing of Norsk Hydro for fear that it would kill innocent Norwegians (Germans were another matter entirely), and remained affected by having to send men out to Norway. In fact, he even considered leaving government service to return to Norway in 1945 but the pull was too much.²⁷ SIS needed Welsh and Welsh needed SIS.

Eric Welsh flourished professionally in the post-war world.²⁸ From 1945 until his death nine years later he had two roles: one overt, the other covert. The former was to head the Directorate of Atomic Energy (Intelligence) (or D.At.En.(In)) in the Ministry of Supply. This was an analytical body responsible for the collation and interpretation of reports but not the actual collection of information. Welsh's organisation passed its reports to the Joint Intelligence Committee, where they would be deliberated and passed up to the Chiefs of Staff. As it was not directly involved in collecting information the unit was reliant on tasking front-line organisations.

The main body of the unit existed overtly. Although this does not mean that its existence was admitted to, or that its activities were open to other government departments, it was located less secretly within the Ministry of Supply. This small body comprised less than ten people (excluding secretaries) and included a liaison officer with GCHQ, a collator, various scientific figures including a physicist and a geologist, a liaison with the Americans,

²⁴ Interview with John Welsh, 28 September 2009. See also C.I.Campbell. *A Questing Life: The Search for Meaning*. (Lincoln: iUniverse, 2006). p.80 Campbell was a US intelligence officer working on atomic matters.

²⁵ Bohr to Welsh, 22 August 1944. Niels Bohr Archive, Denmark: Political Correspondence, 3.2.

²⁶ This is taken from notes of David Irving's interviews with Jones in the mid-1960s. American Institute of Physics, Centre for the History of Physics, Niels Bohr Library, College Park, MD: David Irving Collection, Material Gathered for his Book, 'The German Atomic Bomb.'

²⁷ Interview with John Welsh, 28 September 2009.

²⁸ For more details on all aspects of the proceeding material see M.S.Goodman. *Spying on the Nuclear Bear: Anglo-American Intelligence and the Soviet Bomb*. (Stanford: Stanford University Press, 2007).

and several seconded RAF officers. Welsh, described by his secretary, Sybil Conner, as ‘a great character’, remained *primus inter pares*.²⁹ Unsurprisingly, perhaps, those in the unit proudly referred to themselves as the ‘slaves.’ There were annual Christmas parties held at the nearby Adelphi, with special prizes for games and dancing.³⁰ The unit was located on the fourth floor of Shell Mex House on the Strand, and its home was referred to as ‘the Cage’, because of its secure grille-like housing.³¹ To enter an armed guard had to unlock the entry gate, positioned within a network of horizontal and vertical bars.³² In fact by the early 1950s this had begun to cause some problems, for the ‘close checking at the gate’ had created ‘delays’ in admitting visitors to the inner sanctum.³³

Welsh, however, also wore another ‘hat’ as he remained an SIS officer. Atomic intelligence within SIS was referred to as ‘Tube Alloys Liaison’ or TAL. Within an extremely secretive organisation, TAL was one of the most clandestine aspects, so surreptitious that ‘operational officers had only the vaguest understanding of it.’³⁴ Just how secret TAL was is exemplified by the following anecdote from a former TAL member: Welsh often attended the meetings of SIS Directorate heads. At one meeting he was quietly asked by one colleague which Directorate he headed as he was never introduced, he replied that it was too secret to mention. Given the sensitivities, Welsh himself had a direct line of access to ‘C’, the Chief of SIS. Similarly, because TAL had its own budget, Welsh could exert a level of influence over the process of selecting intelligence targets for which information was desired.

Although having no formal scientific qualifications, Welsh incorrectly liked to refer to himself as the only SIS officer with a science degree.³⁵ He maintained excellent personal relations with atomic scientists whom he called upon for assistance in scientific evaluations, and by the time of his death his network of contacts was immense. As one former colleague has recalled, Welsh had an almost ‘feminine intuition for things’, and often followed his hunches. A very secretive figure, Welsh wrote everything down in a little black book, much

²⁹ Letter from Conner to author, 16 November 2004.

³⁰ See various correspondence in TNA: AB 8/27.

³¹ Lt-Gen Sir F.Morgan. *Peace and War: A Soldier's Life*. (London: Hodder and Stoughton, 1961).

³² Interview with Charles Perrin, son of Sir Michael Perrin, 17 May 2004.

³³ ‘Memorandum by R.E.France [Assistant Secretary/Atomic Energy (S)1]’, 9 May 1953. TNA: AB 8/27.

³⁴ Email from P.H.J.Davies to author, 25 August 2003.

³⁵ N.West. *MI6: British Secret Intelligence Service Operations, 1909-1945*. (London: Weidenfeld and Nicolson, 1983). p.163. Also S.Dorril. *MI6: Fifty Years of Special Operations*. (London: Fourth Estate, 2000). p.134. It is unclear why exactly Welsh took this line.

to the consternation of colleagues who could never get near it. Upon his death in 1954 it is rumoured that Special Branch raided his house but found nothing.³⁶

Given his experience, contacts, and the fact that the structure was to remain intact, it was perhaps natural that Welsh should therefore retain his command of post-war atomic intelligence. Those who worked with Welsh commend his personal qualities as head of the Directorate,³⁷ while those who opposed his control saw his leadership as calamitous, relating the fate of atomic intelligence to his inabilities as commander.³⁸ One of Welsh's major critics was R.V.Jones, the wartime head of scientific intelligence. At the end of the war Jones had tried – unsuccessfully – to absorb atomic intelligence into scientific intelligence and thus into his jurisdiction. Indeed, there are famous examples of Jones and Welsh having to be kept apart at Chiefs of Staff meetings.³⁹ For Welsh, the key determinant was his success in tackling the greatest priority of the day: predicting when the Soviet Union would break the American atomic monopoly.

A variety of efforts were undertaken to gather intelligence but, from the outset, the immense difficulty of the task was recognised. The atomic programme was one of the most sensitive aspects of a very secretive, highly compartmentalised machine. In 1948, however, an opportunity presented itself that was too good to miss: there was a chance to sabotage it. By 1948 TAL had a well-placed source within the Bitterfeld plant.⁴⁰ Welsh's plan – codenamed Operation SPANNER – was given blessing in London by 'C', the Chief of SIS. Welsh had been concerned about the details of the plan leaking as a result of what he called 'American clumsiness'.⁴¹ As we know now there were, in fact, undisclosed Soviet agents but these were closer to home, operating within British intelligence both in London and Germany. Welsh's plan was protected from these individuals by his direct line of communication with 'C' himself. Welsh aimed to use his agent to introduce some boric acid to the calcium production process thereby, in his words, 'buggering the works'. However,

³⁶ I am grateful to various former members of British atomic intelligence for interviews and correspondence, particularly one interview with a former member of D.At.En.(In), 21 February 2003.

³⁷ W.B.Mann. *Was There a Fifth Man? Quintessential Recollections*. (Oxford: Pergamon Press, 1982). p.62.

³⁸ A.Cavendish. *Inside Intelligence: The Revelations of an MI6 Officer* (London: HarperCollins, 1997). p.192. Also R.V.Jones. *Most Secret War: British Scientific Intelligence 1939-1945*. (London: Hamish Hamilton, 1978). pp.308-9.

³⁹ For example 'H.Parker to Brownjohn', 24 October, 1953. TNA: DEFE 7/2105.

⁴⁰ This was an I.G.Farben calcium plant, suspected to be used in the production of uranium for the Soviet nuclear weapons programme.

⁴¹ This was a reflection of similar concerns in London in the immediate post-war period, when there were serious (albeit unfounded) doubts about US security. More detail is in M.S.Goodman. *The Official History of the Joint Intelligence Committee, Volume I: From the Approach of War to the Suez Crisis*. (London: Routledge, 2014).

before the plan could be put into action production at the plant stopped. Although at the time this produced some concern that the plan had leaked, it is now known that this was due to the testing of the first Soviet atomic bomb, and so Welsh's sabotage plan was never launched.⁴²

From the outset Anglo-American relations were central to Britain's atomic intelligence efforts. Unsurprisingly Welsh positioned himself at the centre of matters. In 1946 the US passed the McMahon Act, designed to end the technical exchange of atomic information. Although the greatest impact was felt amongst atomic scientists, it was also shared in intelligence circles. Yet, in spite of this, the McMahon Act was cunningly circumvented by Welsh, who was able to procure significant information and, vitally, resurrect relations with Britain's most cherished partner. Despite official limitations on what information could be given to the British, certain unofficial lines of access remained. Considerable ingenuity was shown by the British for as Arnold Kramish, a former senior staff member of the Atomic Energy Commission (AEC) with responsibility for intelligence liaison with the British has testified, Welsh would often bring a selection of Swiss watches which he would offer in exchange for snippets of information. Indeed Welsh, who visited the US with some regularity, was increasingly fond of a few drinks and at such gatherings in Washington was 'very good at getting stuff out of scientists.'⁴³ Although Kramish rejected such offerings, some of his colleagues were less inhibited. The Deputy of the AEC intelligence unit was Malcolm Henderson and who, according to Kramish, 'had a big mouth and was most indiscreet'. Henderson was eventually sacked for taking home Top Secret papers, but before his impromptu removal he became 'one of Eric's best "American Spies".'⁴⁴ By 1949 intelligence figures in Whitehall were discussing the 'special relationship' that existed between Welsh's unit and its American counterpart, and certainly this description was wholly warranted.⁴⁵

To assist matters Welsh had, within his team, an officer based in Washington, DC. According to Dr Wilfrid Mann, although he occupied the exalted position of atomic intelligence liaison with the Americans, his 'sole job' was to notify Eric Welsh and SIS if and

⁴² H.Lowenhaupt, 'Chasing Bitterfeld Calcium', *CIA Studies in Intelligence* 17:1 (1996). All the preceding information on the plant comes from this eyewitness account.

⁴³ Email to author from Dr Arnold Kramish, 14 January 2003.

⁴⁴ Email to author from Dr Arnold Kramish, 21 March 2003.

⁴⁵ 'Organisation of Scientific Intelligence – Deficiencies of the Present Organisation', B.Blount [head of scientific intelligence], October 1949. TNA: DEFE 40/26.

when the US detected a Soviet atomic bomb test.⁴⁶ On 3 September 1949 a diverted American WB-29 (weather B-29) flying between Japan and Alaska collected routine atmospheric samples at 18,000 feet. These revealed an unmistakably higher-than-normal radioactive content, and these became known as Alert 112 – the 112th time such an occurrence had arisen. All previous alerts had proved to be the result of natural phenomena (for example, volcanoes or natural increases in radioactivity), and although it was initially suspected this would once more be the case, ultimately it proved to be the real thing.⁴⁷ To investigate further, additional samples were collected on a 5 September flight over Japan. Analysis at 3.30 in the morning of 7 September proved that the samples were artificial – that they had been injected into the atmosphere by a non-natural occurrence and so, on 10 September 1949, the British were informed.⁴⁸

Sir Michael Perrin, one of Welsh's colleagues on the scientific side but who was also part of the intelligence effort, has recalled how 'on 10th September I had a telephone call from the US Embassy to go for a top secret 'telex' conference and to bring Commander Welsh of MI6 with me.'⁴⁹ The Americans asked Welsh if he could arrange a flight to collect further samples. Welsh immediately contacted 'C' and the RAF.⁵⁰

The first British confirmation came from a UK-based flight leaving on the evening of 10 September. Further flights flown over the next few days established this.⁵¹ Wilfrid Mann learned about the news at 11.30 on the evening of 14 September. 'I had one foot in the bathtub', he recalls, 'when the telephone rang with a request that I go down to the War Room near the White House.'⁵² Despite his role therefore, Mann was far from being the first Briton to learn about the Soviet bomb. At 3am (US time) on 15 September a further telex conference began with Perrin and Welsh at the American Embassy in London. Returning to his office in the British Embassy, Mann sent a series of telegrams through the secure SIS link. With the help of the SIS liaison officer at the Embassy, Kim Philby, Mann spent three to four days in extended communication with London, sending Top Secret messages to Welsh and

⁴⁶ Mann Interview with C.Ziegler, 1990. I am grateful to Professor Ziegler for providing some details of the interview.

⁴⁷ See the 9 September 1949 memo by DCI Hillenkoetter in Harry S. Truman Presidential Library, Kansas, MO [hereafter HST]: PSF: Intelligence File, Box 250.

⁴⁸ D.L.Northrup and D.H.Rock, 'Detection of Joe 1', *CIA Studies in Intelligence* (Fall 1996), p.30.

⁴⁹ 'Letter from Perrin to R.C.Williams', n.d. but c.1984. American Institute of Physics, Centre for the History of Physics, Niels Bohr Library, College Park, MD: Robert C. Williams Papers, Box 2, Folder 1.

⁵⁰ 'Letter from Perrin to R.C.Williams', 14 August 1984. Williams Papers, Box 2, Folder 1.

⁵¹ 'An Interim Report', Penney. HST: PSF: Subject File, 1945-53, Box 173.

⁵² W.B.Mann, 'Sixty Years In and Out of Physics.' I am grateful to Kris Mann for a copy of her father's 1990 lecture.

even more sensitive messages to 'C'.⁵³ One of the messages to 'C' advised him that he should inform the Prime Minister of the news.⁵⁴ Accordingly, on 17 September Perrin accompanied 'C' to Chequers to tell Prime Minister Clement Attlee 'that there was evidence that "Joe 1" had taken place.'⁵⁵

That same day Dr William Penney (the head of Britain's scientific efforts to build an atomic bomb) and Eric Welsh arrived in the US complete with samples collected by the RAF. They had flown across the Atlantic to take part in a conference with American intelligence analysts to investigate and deliberate the intelligence regarding the Soviet bomb. Their evidence also conclusively pointed to an atomic explosion, and Penney's subsequent report was so sensitive that even he could not read a proof copy.⁵⁶

Whilst in the United States the 'strain' had proven 'too great' for Welsh, and in September 1949 he suffered a heart attack. In his memoirs Wilfrid Mann commented that the attack was not too severe.⁵⁷ This was not immediately clear to his colleagues at the time though: in London Welsh's secretary, Julia Alloway, recorded the event in a letter to Sam Goudsmit, the wartime scientific head of the ALSOS Mission: 'you will remember when I saw you I said that he was not very well. The doctors took a more serious view, and diagnosed coronary thrombosis and prophesied death; this week they say indigestion and a long life!'⁵⁸ Mann recalls in his memoirs that he 'is almost certain' that Philby visited Welsh in hospital at this time.⁵⁹

Welsh was flown back to the UK by the United States Air Force. An intensely private individual, Welsh was keen to maintain an aura of mystery about his role in Government. He must have been shocked, therefore, to discover that whilst in transit a newspaper article appeared in England discussing how a 'Mystery Navy man flies home on a stretcher.' Fortunately the article continued, 'to all questions officials replied that the Commander's

⁵³ A.Cave Brown. *Treason in the Blood: H.St.John Philby, Kim Philby, and the Spy Case of the Century*. (London: Robert Hale, 1994). p.400.

⁵⁴ Mann, 'Sixty Years.'

⁵⁵ 'Perrin to Williams', 14 August 1984. Williams Papers. See also H.Montgomery Hyde. *The Atom Bomb Spies*. (London: Sphere, 1980). pp.143-4. 'Joe-1' was the codename given to the Soviet test.

⁵⁶ Mann. *Quintessential Recollections*. p.68. Mann had helped draft it.

⁵⁷ Mann. *Quintessential Recollections*. p.69.

⁵⁸ 'Alloway to Goudsmit', 3 October 1949. Goudsmit Papers, Box 23, Folder 254. See also the correspondence at Churchill College Archives, University of Cambridge: Sir James Chadwick Papers, Box CHAD IV 11/54.

⁵⁹ Mann. *Quintessential Recollections*. p.70.

name could not under any circumstances be disclosed and that he came under the category of “top secret”.’⁶⁰

In recovering from his heart attack Welsh was back at work by November 1949. Despite suffering from recurring bouts of ill health, including pleurisy, he continued working.⁶¹ The doctors in SIS urged him to take time off and slow down.⁶² By this point it had been agreed by the British and Americans that the Soviet test had unquestionably been an atomic detonation, probably caused by a plutonium bomb.⁶³ In fact the bomb was remarkably similar to the wartime device exploded over Nagasaki and to the first one that Britain would test in 1952. In a post-mortem of the British intelligence failure to forecast the Soviet atomic test in 1949, it was observed by members of the scientific intelligence community that ‘in the last year or so a number of reports dealing with Russian progress in the development of atomic weapons had been largely discounted because they were low grade. It is now assumed that many of these reports were truer than was at first thought.’ Accordingly it was felt necessary to have an evaluation by Welsh’s unit as to the ‘reasons for the Russian success.’⁶⁴

Welsh strongly associated the test with espionage. In a communication to Wilfrid Mann in Washington, he mentioned how the latest information indicated that the Soviet bomb ‘was stolen from Leslie Groves’. Indeed, Welsh was left in no doubt as to the particular source of this information: referring to Perrin’s meetings with the atomic scientist Klaus Fuchs, he mentioned that it was ‘confessed to some of our experts’.⁶⁵ Although some questions were asked of Welsh’s unit these never resembled an in-depth intensive evaluation of Britain’s atomic intelligence apparatus, something that would not happen until 1954. Despite failing to predict the primary reason for his organisation’s existence therefore, Welsh was not castigated.

⁶⁰ Cited in Mann. *Quintessential Recollections*. p.69.

⁶¹ ‘Welsh to O.Frisch’, 18 February 1954. Trinity College Archives, University of Cambridge: Otto Frisch Papers, Box F.138.

⁶² Interview with John Welsh, 28 September 2009.

⁶³ ‘BJS to P.M.’, 19 September 1949. TNA: FO 115/4477.

⁶⁴ ‘JS/JTIC(49)32nd Meeting’, 28 September 1949. TNA: DEFE 41/73. It was therefore considered necessary to re-evaluate Soviet progress in other fields of defence research and development.

⁶⁵ ‘Welsh to Mann’, 30 December 1949. Emphasis in original. I am indebted to Professor Kris Mann for allowing me access to her father’s private papers, which includes considerable correspondence between Mann and Welsh. Fuchs had confessed to Perrin.

Eric Welsh continued to head both the overt and covert aspects of atomic intelligence, retaining responsibility for everything from defining collection targets to detailed, scientific analysis of Soviet test debris. In the 1952 New Year's Honours he was awarded a CMG.⁶⁶ Welsh was, in fact, a very shrewd civil servant. He was able to repel all attempts to unseat him through increasing the prestige, purview, range of activities and efficiency of his unit, so that any proposed alternative to his control would be untenable. He was supported in his position by those in Whitehall who believed that atomic relations with the Americans would be harmed if British atomic intelligence were not kept separate from the conventional scientific intelligence organisation.

It was during this period, from 1950 to 1954, that the origins were laid for what would turn out to be the cornerstones of the Anglo-American atomic intelligence 'special relationship' of the 1950s. Through various operations Britain was able to retain a vital foothold in the American nuclear weapons programme. Crucially this was a genuine two-way street, based not only on what information the British could learn from the Americans, but from the value and importance the Americans attached to British views.⁶⁷

Strengthening Welsh's position was the fact that the Americans appeared to be on Welsh's side. During his visit to the US in late 1950 Dr Bertie Blount, the head of British scientific intelligence, had attempted to discuss British and American estimates of the Soviet nuclear weapons stockpile but without success. Though the Americans had themselves been willing to discuss the matter with Blount, they had first inquired through Wilfrid Mann whether Blount was cleared and authorised to discuss the matter. The response from London, no doubt originating from Welsh, was 'negative.'⁶⁸

In 1954, with the transfer of the civilian and military aspects of atomic energy out of the Ministry of Supply, atomic intelligence underwent a comprehensive evaluation, conducted by Admiral Sir Charles Daniel. Central to his review were Welsh's organisations and the critical role of Welsh himself. His 'overt' body in the Ministry of Supply was under the overall command of Sir Frederick Morgan. In his evaluation Morgan was quite unequivocal in his opinion:

⁶⁶ *Supplement to the London Gazette*, 1 January 1952. p.5.

⁶⁷ Details are in Goodman. *Spying on the Nuclear Bear*.

⁶⁸ ANCAM 391 'BJSM to Cabinet Office', 20 November 1950. TNA: CAB 126/338.

The peculiar virtue of this small body of people lies in its leader, Lieutenant Commander Eric Welsh, who is not only a natural born genius of precisely the type required for the work in hand but who has, over the years, built-up a truly astonishing network of personal contacts up to the highest, not only in this country but in the United States of America and in Canada...the ramifications of Commander Welsh's activities are world wide and he seems able to command the services of practically anyone.

In offering his opinion of the past record of Welsh's Unit, Morgan maintained that 'considering the enormous difficulties of obtaining secret intelligence on any target in Russia, the results we have obtained on atomic energy are comparatively good.' Thus, in making his recommendations, Morgan concluded that 'it could be disastrous to British Atomic Intelligence if Welsh's background, experience or contacts in this subject were lost.'⁶⁹

However, Morgan continued, 'here is a key man if ever there was one which is partly, of course, a matter for congratulation but also a grave potential source of weakness.'⁷⁰ In this Morgan had identified the primary concern of those asked to offer their opinions on Welsh: that no-one was totally clear on what Welsh spent his money on or what he precisely he did – this was certainly the view expressed by William Penney.⁷¹ It also highlighted the fact that Welsh was something of a one man band. In fact Claud Wright, the Assistant Secretary to the Minister for Defence, warned Daniel that Welsh 'serves too many masters', and that 'in the political and negotiating fields his influence is probably very dangerous and he must be brought under control.'

In his briefing, Daniel was also informed that part of the problem he would face in his evaluation was the fact that Welsh 'insist[ed] on treating the whole of AEI [Atomic Energy Intelligence] as a special mystery.'⁷² One explanation for this mysticism was provided by a former member of his team, who emphasised how Welsh 'had a feeling about something and followed it.' This was put more powerfully once more by Morgan, who commented on how Welsh's 'training and common sense tell him where to plant the goods and so far this seems to have been done with remarkable accuracy.'⁷³ The subsequent report concluded that, in

⁶⁹ 'Morgan to Brownjohn', 21 September 1953. TNA: DEFE 7/2105.

⁷⁰ 'Morgan to Brownjohn', 21 September 1953. TNA: DEFE 7/2105.

⁷¹ 'Note by W.G.Penney for Adm Daniel', 20 December 1953. TNA: DEFE 19/38.

⁷² 'Wright to Daniel', 5 December 1953. TNA: DEFE 19/38.

⁷³ 'Morgan to Brownjohn', 21 September 1953. TNA: DEFE 7/2105. Interview with a former member of AEIU, 21 February 2003.

fact, the organisation should remain under Welsh, though a high-level committee was to be instigated, in part to control his power.⁷⁴

Known to many as a keen drinker, by mid-1954, just as the new changes in structure were taking place, Welsh had started to have ‘difficulty in keeping himself on his feet.’⁷⁵ On Sunday 21 November 1954, Eric Welsh died from a heart attack. His death certificate lists ‘alcoholism’ as a cause, a problem it seems he had suffered from for some time. In keeping with his sense of secrecy, only the briefest of obituaries appeared in *The Times*, listing his awards but not mentioning his work or why he had received them.⁷⁶ Within Whitehall and Washington Julia Alloway wrote to many of Welsh’s contacts to inform them of the news. Tributes to Welsh and his work quickly followed. Wilfrid Mann described him as one of the ‘outstanding secret intelligence officers of the middle decades of this century.’⁷⁷ Goudsmit who had worked with Welsh during the war and who had remained in contact since remarked how ‘few people would understand how great a loss it is...no one can take his place’.⁷⁸

The death of Welsh in many respects was not a momentous event simply because by late 1954, his organisation which he had built and defended since the end of the war, was both comprehensive and successful. His legacy was intact. Welsh’s successor seems to have merely maintained his hard work. It was thus through this organisation and the links it maintained in the lean years of atomic collaboration that, in 1958, Britain could ultimately achieve what had always been desired since 1946 – resumption of technical relations with the US.

Eric Welsh was a unique intelligence officer. His leadership characteristics of humour, personality, secrecy, personal affiliation with agents, and a natural inclination to take charge of everything ensured that he remained liked and admired with a loyal staff. Yet, as

⁷⁴ For more detail see M.S.Goodman, ‘The Daniel Report on Atomic Intelligence’, *Intelligence and National Security* 18:3 (2003), pp.154-67.

⁷⁵ ‘Alloway to Goudsmit’, 23 November 1954. Goudsmit Papers, Box 23, Folder 254.

⁷⁶ *The Times*, 23 November 1954.

⁷⁷ Mann, ‘Sixty Years’.

⁷⁸ ‘Goudsmit to Alloway’, 4 January 1955. Goudsmit Papers, Box 23, Folder 254.

revealed in the enquiry into his organisation in 1954, these same traits and general aloof nature ensured that he was not entirely trusted as a government employee. He retained a natural affinity for Norway and could never quite forget the sacrifices that had been made during the war. His health was omnipresent in his work, as was his increasing fondness for alcohol and, ultimately, these would prove to be his downfall.