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Where Her Majesty's weapons were

By Richard Moore

The history of the worldwide deployment of U.S. nuclear weapons, revealed in the Bulletin ("Where They Were," November/December 1999, and "How Much Did Japan Know?" "Iceland Melts," January/February 2000), generated a great deal of interest.

But the United States was not the only country to store nuclear weapons overseas during the Cold War. Official British documents declassified under the 30-year rule show that Britain made similar deployments, although the British government never drew attention to its nuclear weapons movements abroad.¹

Britain's nuclear weapons program

Britain faced a number of serious difficulties at the end of World War II—a shattered economy, imperial and post-imperial defense problems, an uncertain relationship with the United States, and the threat of a new war in Europe against the Soviet Union. British scientists had made a modest and—in places—valuable contribution to the wartime Manhattan Project, and the government believed that in the unpredictable post-war world there was likely to be a requirement for British nuclear weapons.

By the time a British atomic device was delivered and tested in 1952, some of the uncertainty had disappeared. Britain was a member of NATO and had made its first peacetime commitment of troops to the European continent. NATO's plan in case of war envisaged an immediate atomic air offensive against the Soviets, but also, since the offensive might not be decisive, it included a follow-on "broken-backed" phase of operations. This was NATO's official strategy when in July 1955 the Royal Air Force (RAF) achieved a practical atomic bombing capability, and later when U.S. nuclear weapons some of which were stored in Germany under U.S. custody—began to be made available to the RAF and the British Army.²

The United States and the Soviet Union had both tested thermonuclear weapons, however, and the prospect of nuclear warfare began to look increasingly grim. Partly as a result of the 1957 Defence White Paper announced a change of emphasis in British nuclear strategy: in the future there would be far greater reliance on strategic nuclear deterrence than on tactical fighting. British politicians began to see the threat of "massive retaliation" as the only affordable and meaningful basis for defending a great power. They had also concluded after the Suez crisis of 1956 and the launch of Sputnik in 1957, that they could not rely on U.S. political and military support as a matter of course. They wanted an independent British deterrent.

New strategic systems were introduced in the following years. Stand-off weapons replaced free-fall bombs, and by the end of the 1960s American Polaris missiles were deployed on British submarines (they were replaced by Tridents in the 1990s). These hardware decisions created a minimum, second-strike deterrent capable of destroying Moscow, perhaps a handful of other Soviet cities, in the event of a direct nuclear attack on Britain. Despite the political requirement for independence, these weapons also increased British technical reliance on the United States.

No strategic system was ever deployed in a country outside the United Kingdom, but government alliance commitments in the Middle East and Southeast Asia, the 1957 White Paper's conclusions on deterrence applied outside Europe as well. In 1960 and 1961,

British tactical nuclear weapons began to be deployed overseas on Royal Navy aircraft carriers, and at RAF Akrotiri in Cyprus. In 1962, Prime Minister Harold Macmillan personally authorized the storage of nuclear weapons at RAF Tengah in Singapore. Facilities were introduced for handling nuclear weapons in transit in a number of other countries.

Declassified documents show that the British government was very conscious of the political problems posed by nuclear weapons overseas. The bombs stored in Germany and Cyprus were nevertheless replaced by new British weapons at the end of the 1960s, as nuclear-armed navy surface ships continued to exercise worldwide. British nuclear weapons also continued to be taken to the United States for testing. Overseas deployment of tactical nuclear weapons were reduced in the 1970s, but ceased only in 1998.

Testing

The most conspicuous British nuclear weapons overseas were those destroyed in atmospheric tests between 1952 and 1958. There was never any possibility that nuclear weapons would be tested in Britain itself—a small and densely populated island. Instead, when plans began to be made for Britain's first atomic test, Australia, Canada, southern Africa, and British Somaliland were all suggested as test sites. Serious thought was also given to asking the United States for facilities in Nevada, although the U.S. government put an end to its close wartime cooperation with British atomic scientists.

Eventually the Monte Bello Islands off northwestern Australia were selected for the first, which took place in October 1952. The device, mounted in the hull of a navy frigate, the HMS *Plym*, sailed to Australia via Gibraltar, Sierra Leone, South Africa, and Mauritius. Fissile material was flown separately by way of Cyprus, Sharjah, Ceylon, and Singapore. As far as it is possible to determine, the bombs and fissile material for subsequent atomic tests in Australia in 1953, 1956, and 1957 took similar—and separate—routes by air.

In 1957 and 1958, Britain's last two series of atmospheric nuclear tests took place over Malden and Christmas Islands in the Pacific. The British government called these bombs "megaton" weapons, a term that appears to have been chosen deliberately to obscure their nature. Historians still do not know whether British scientists discovered independently how to create a two-stage hydrogen bomb, although it is now clear that the 1957 tests included at least one failed attempt at a thermonuclear design. "We haven't quite got it right," said Bill Cook, the deputy head of Britain's nuclear weapons program, after the 1957 failure.

Some of these tests were live drops from Valiant aircraft, although the devices were not operational weapons but experimental warhead assemblies in Blue Danube ballistic containers. Again the bombs and fissile components traveled separately by air, this time over a westerly route, stopping in Canada at Goose Bay and Nainital, and in Honolulu, Hawaii. Subsequent British nuclear weapons tests, between 1962 and 1991, were conducted underground at the Nevada test range.

The Far East

Policy-makers saw Britain's nuclear force as an important contribution not only to NATO but also to the South East Asia Treaty Organization (SEATO), created in 1954.⁵ In a 1957 report to the Chiefs of Staff concluded that nuclear weapons would have to be used if a war broke out between the SEATO powers and China, and although the Chiefs themselves were a little uncomfortable with this conclusion, planning went ahead.⁶

A 1957 Air Ministry report found that British Valiant, Vulcan, and Victor aircraft (known as "V-bombers") carrying the Blue Danube bomb would be unable to reach the Far East because of short runways and limited facilities at key airfields along the route. The report recommended developing Gan, an island in the Maldives, as a staging post for bomber reinforcements, and Tengah, an existing RAF base in Singapore, as a temporary base for V-bomber squadrons.⁷

In 1957 V-bombers began to make familiarization flights to the Far East without nuclear weapons on board, and in 1958 it was decided to construct a permanent storage facility.

nuclear weapons at Tengah. By 1960 the RAF was involved in drawing up nuclear war plans for SEATO and had made plans to move 48 Red Beard tactical nuclear weapons to Tengah in 1962. Three squadrons of V-bombers would be based there, capable of dropping Red Beard weapons from high altitude, together with one squadron of smaller Canberra aircraft, which would use a low-altitude bombing system, or "toss bombing" tactic. In September 1960, a dummy Red Beard weapon was flown for the first time by RAF transport aircraft to Singapore, via El Adem, in Libya; Khormaksar, in present-day Yemen; and Gan. Special equipment to handle nuclear weapons had been deployed to these airfields, and also to Embakasi, Kenya, and Butterworth, a Royal Australian Air Force base in Malaya.⁸

The political problems of moving live nuclear weapons overseas were already clear. As early as 1957 a storm was created when Minister of Defence Duncan Sandys seemed to announce, at a press conference in Australia, that nuclear weapons would be stored in Malaya and Singapore.⁹ In July 1961 Britain's High Commissioner in Singapore, Lord Selkirk, advised that even the presence of dummy weapons in the Far East would be politically sensitive.

Nevertheless, on August 17, 1962, Prime Minister Macmillan authorized the RAF to drop both live and dummy weapons to Tengah. The live weapons were to be held at all times in their special storage area, but in November 1963 permission was granted to train with dummy weapons in the open.

Militarily, the justification for these deployments was still the possibility of limited war between the SEATO powers and China. Politically, by making a nuclear contribution to SEATO, Macmillan was trying to gain a measure of influence over U.S. nuclear policy in a region where Britain and the United States had historically been at odds; he was concerned, like a number of post-war British prime ministers, by the risk of U.S. nuclear belligerence in Korea, Taiwan, or Indochina. Macmillan's ministers had convinced him that British deployments, by contrast, carried no risk. But Malaysian Prime Minister Tunku Rahman, although generally pro-British, was not informed. (Singapore had recently won independence from Britain as part of the Federation of Malaysia.) The British government had made a visible military commitment to SEATO, choosing to do so through the relatively inexpensive medium of a squadron of nuclear-capable aircraft, but it was coy about admitting, even privately, to the actual presence of nuclear weapons.¹⁰

The planned V-bombers were never sent permanently to the Far East. Instead, four were dispatched to Tengah and Butterworth between 1963 and 1966 during the "confrontation" between Britain and Indonesia. These aircraft would have been tasked with the confrontation had escalated, with conventional bombing of Indonesian airfields.¹¹ Throughout the 1960s V-bombers were also sent to the Far East on SEATO nuclear reinforcement exercises. In addition, the Canberra squadron at Tengah began low-altitude nuclear bombing exercises at the end of 1963. This squadron remained in the Far East until 1970, although it is not clear that it necessarily remained nuclear-equipped.¹² Some of the targets assigned to these British aircraft, in case of conflict between the SEATO powers and China, appear to have been in Burma (a neutral country), through which Chinese forces were expected to advance.¹³

The Royal Navy

The navy took delivery of its first tactical nuclear weapons—Red Beards, to be carried by Scimitar aircraft on navy carriers—in 1959. Clearance for the Scimitar to take off with nuclear weapons—"only in conditions of an extreme operational emergency"—was received in August 1960.¹⁴ Although the navy originally viewed the Red Beard as a weapon for sinking ships in the North Atlantic, by the time it entered service, it seemed most likely to be used in a limited war in the Far East.

The aircraft carriers *Victorious* and *Hermes* sailed for Singapore at the end of 1960, and for the next 10 years the operational lives of the navy's carriers revolved around deployment east of Suez, where they took their place in SEATO war planning and nuclear targeting. Arrangements were in place to embark and disembark nuclear weapons at the Singapore naval dockyard for transport to nearby RAF airfields if necessary, but the weapons ap

to have been stored on board ship. The fissile components were stored away from the assemblies, and permission to join the two was never given in peacetime. In 1966, the Chiefs of Staff were told that there were "no naval nuclear stockpiles overseas."¹⁵

Like its U.S. counterpart, the Royal Navy has always followed a "neither confirm nor deny" policy on the presence or absence of nuclear weapons on its ships. By 1966, the governments of Ceylon and New Zealand had already expressed unease at the possibility of Royal Navy ships carrying nuclear weapons into their ports. In fact, the navy had or about 25 nuclear weapons. Only five aircraft carriers, two armament stores ships, and the very end of the 1960s) two *Tiger*-class anti-submarine cruisers, had been equipped to carry the weapons.¹⁶ A second-generation British tactical nuclear weapon—the WE17 which could be used as a depth charge as well as a bomb—replaced the navy's Red B around 1970, and published sources suggest that a greater number and variety of warships later became nuclear-capable.

Plans were also made during the late 1960s to base British Polaris submarines east of Suez, but this never took place.¹⁷ After the navy's withdrawal from Singapore in 1971, attention and deployments were focused once again on the North Atlantic. Naval tactical nuclear weapons were withdrawn in 1992, and although four Trident-armed submarines remain, they do not make overseas visits or deployments.

Cyprus

Britain's commitments to the Baghdad Pact (later the Central Treaty Organization, or CENTO), which it joined in 1955, led to the deployment of nuclear weapons in Cyprus in the 1960s and 1970s. As in the Far East, British planners saw nuclear weapons as a relatively cheap way to contribute to allied defense in the region.¹⁸ Unlike in the Far East, however, it was thought that the weapons would only be used in a global war between the Soviet Union and the Western allies. The risk of escalation, if limited nuclear war were to break out in the Middle East, would be far too great to plan for any such conflict. We can be grateful that British Chiefs of Staff rejected advice in a 1956 report—not long before the Suez crisis—that nuclear weapons should be employed in a limited war against Egypt.¹⁹

Plans were made in 1956 to develop Akrotiri, the RAF airfield on Cyprus, as a forward base for V-bomber detachments and a permanent home for Canberras, which began to arrive there in 1957. These plans included nuclear weapons storage. By 1960, facilities were available for 16 Red Beards to be brought to Akrotiri in a crisis and stored temporarily. On November 28, 1961, a permanent storage facility opened for 32 Red Beards at nearby Cape Gata.²⁰

Cyprus had won its independence in 1960, but Britain retained (and still retains) two sovereign bases. Akrotiri and Cape Gata were therefore still technically on British soil. This did not mean there were no political sensitivities: The Cypriot government under Archbishop Makarios was neither especially pro-British nor a member of CENTO. A British Air Ministry official wrote in 1960 that "all possible measures should be taken in Cyprus to conceal the arrival and storage of [nuclear] bombs . . . whether they be inert or dummy or real McCoy."²¹

Akrotiri's Canberra squadrons received new Mk-15 and Mk-16 aircraft in 1961 and 1962, which point to a full low-altitude nuclear bombing capability can be said to have become available.²² The military justification for the deployment remained CENTO's plans for war. Politically it was important, as it was in the case of Singapore, to make a relatively inexpensive and risk-free contribution to alliance defense. In early 1969, the Canberras were replaced by Vulcans carrying the new WE177 bomb. These aircraft occasionally made dispersal flights to Masirah, Oman, and Muharraq, in Bahrain, where it seems likely that handling facilities for nuclear weapons in transit were created.²³ The Vulcans were withdrawn in January 1975, however, shortly after the Greek-Turkish war on Cyprus. Although RAF nuclear-capable aircraft continued to use Akrotiri from time to time, it is likely that for safety and security reasons the British government withdrew any remaining nuclear weapons from the island at that time.

West Germany

In common with other allied forces deployed in Europe during the Cold War, the British arrangements for access to U.S. tactical nuclear weapons in the event of war. The RAF regarded these arrangements as part of "Project E," under which U.S. weapons were available to Britain's home-based V-bombers. Militarily, this was in the context of NATO plans for global war. Politically, Project E was part of a package of nuclear cooperation agreements between Britain and the United States made possible by the 1958 revision of the McMahon Act, which had previously restricted U.S. nuclear sharing with the allies. The West German government was not a party to the Project E agreement, but was aware and content with, this and other visible signs of the U.S. nuclear commitment to Europe. RAF Canberras based in West Germany at Geilenkirchen, Wildenrath, Bruggen, and Laarbruch, and British Army Corporal missiles based at Dortmund, were given new status and facilities for U.S. nuclear weapons, under U.S. custody, during 1958-59, and the Canberras began to train for low-altitude delivery of U.S. Mk-7 bombs.²⁴

In the late 1960s, the Canberras also received U.S. Mk-43 bombs, for which they could make a wider range of delivery profiles. In 1969, however, Project E came to an end in Germany. The WE177 was probably now available to replace the U.S. weapons, and it seems correct that it was stored in Germany by 1972, when the Canberras were replaced by newer F-4 Phantom II Buccaneers. The WE177 was also later available to German-based Jaguar and Tornado aircraft, and was not withdrawn from service until 1998.²⁵

An historical footnote

British nuclear weapons were deployed overseas in limited numbers, in circumstances constrained by political sensitivities. A total of perhaps 75 weapons—in Cyprus, with the Canberras in Singapore, and with the Royal Navy worldwide—was trifling compared to deployments by the United States.

Was Britain wrong to make even these limited deployments? In the atmosphere of the Cold War, they seemed to make sense. Britain was committed to nuclear war plans drawn in conjunction with its allies. The alternative to nuclear weapons—larger conventional force commitments—might have been more visible and destabilizing, and safety arrangements appear to have been adequate. In particular, permission for aircraft to take off with live nuclear weapons in peacetime appears never to have been granted.

Although the British government's efforts to hide its nuclear deployments did not approach the efforts taken by the United States during the Cold War, it is not clear that local governments, as opposed to locally based British diplomats, were fully informed at the time.

No serious political or military incident resulted from the deployments, and no nation in the alliance now puts as much emphasis on war-fighting with forward-deployed nuclear weapons. Therefore, we can now, fortunately, look upon these Cold War adventures as a historical footnote.

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Notes

1. There is not yet a completely satisfactory history of British nuclear weapons. Books by John Simpson, *The Independent Nuclear State*, 2nd ed. (London: Macmillan, 1986); Humphrey Wynn, *Raf Strategic Nuclear Deterrent Forces* (London: HMSO, 1994); and Robert S. Norris, Andrew S. Burrows, and Richard W. Fieldhouse, *British, French and Chinese Nuclear Weapons*, vol. V, *Nuclear Weapons Databook* (Oxford: Westview, 1994) are useful. Margaret Gowing, *Independence and Deterrence*, 2 vols. (London: Macmillan, 1974), and Brian Cathcart, *Test of Greatness* (London: John Murray, 1994) end their accounts in 1952. Useful background material on strategy and politics is included in A. J. Pierre, *Nuclear Politics* (Oxford: Oxford Press, 1972), and in a number of more recent books, the most comprehensive of which is John Baylis, *Ambiguity and Deterrence* (C

Clarendon Press, 1995).

2. Wynn, p. 98.

3. Cathcart, pp. 146-49, 185, 210-11; various papers of the Deputy Chief of Naval Staff 1949-52, in London Public Record Office (PRO), file ADM 116/6087.

4. Air Vice-Marshal Wilfrid E. Oulton, *Christmas Island Cracker* (London: Harmsworth, 1987), p. 356.

5. Martin S. Navias, *Nuclear Weapons and British Strategic Planning* (Oxford: Clarendon Press, 1991), pp. 47-51.

6. Joint Planning Staff report JP(56) 115(Final), 26 June 1956, PRO, file DEFE 6/36.

7. Air Ministry Report, 19 May 1957, PRO, file AIR 2/13738.

8. Various Air Ministry papers, 1957-60, PRO, files AIR 2/13736, 13737, 13738, 13774, 13775; also Wynn, pp. 442-43.

9. Phillip Darby, *British Defence Policy East of Suez 1947-68* (Oxford: Oxford Press, 1987), p. 121.

10. Various papers for the Prime Minister on RAF deployments in the Far East, 1962-63, file prem 11/4475.

11. Various Air Ministry papers, 1960-65, PRO, files AIR 2/13737 and AIR 20/11515; Wyn 444-48; Andrew Brookes, *Handley*

Page Victor (London: Ian Allan, 1968), pp. 91-92.

12. Ken Delve, Peter Green, and John Clemons, *English Electric Canberra* (Leicester: Midland Counties, 1992), p. 106.

13. Chiefs of Staff Report COS. 339/63, 4 Oct 1963, PRO, file DEFE 5/143.

14. Controller Air clearance document AV/521/033, 4 March 1961, PRO, file ADM 1/278.

15. Chiefs of Staff report COS. 14/66, 28 Jan 1966, PRO, file DEFE 5/165; Air Ministry report Jan 1961, PRO, file AIR 2/13737; also various Defence Ministry papers in PRO, files DEFE 5/165 and 1676.

16. Chiefs of Staff report COS. 14/66, 28 Jan 1966, PRO, file DEFE 5/165; Air Ministry note Nov 1967, PRO, file AIR 20/11515.

17. Chiefs of Staff Report COS. 11/66, 24 Jan 1966, PRO, file DEFE 5/165.

18. Navias, pp. 39-47.

19. Minutes of Chiefs of Staff meeting COS. (56)63rd, 29 Jun 1956, PRO, file DEFE 4/88.

20. Wynn, Ch. 9; various Air Ministry papers, 1956-61, PRO, files AIR 2/13678, 13736, and 13774.

21. Air Ministry note, 10 March 1960, PRO, file AIR 2/13736.

22. Delve, et al., p. 79.

23. Wynn, p. 546.

24. Ibid., pp. 59-64; various Air Ministry papers, 1958-59, pro, files air 2/13702 and 13

25. Wynn, p. 262; Paul Jackson, "Bin the Bomb," *Raf Yearbook 1999*, pp. 21-24.

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