

# ‘TIME IS NO LONGER OUR ALLY’ RAF BOMBER COMMAND, DETERRENCE AND THE TRANSITION TO WAR, 1955-62

By Mr Clive Richards

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**Abstract:** In the decades following the Second World War, successive British governments adopted a defence posture based upon deterrence. Prior to 1968, primary responsibility for delivering the UK’s nuclear deterrent was vested in RAF Bomber Command. However, the credibility of the latter in this role was dependent upon three factors: the ability to disperse and protect the bomber force in time of war, in order to complicate any attempt by an enemy to destroy it before it could be launched; the development of robust transition to war procedures; and the maintenance of a proportion of Bomber Command at a high state of peacetime readiness, capable of retaliating in the event of a surprise pre-emptive attack. This paper examines the measures put in place during the latter part of the 1950s and early 1960s to achieve these three objectives, and the degree to which they were implemented in practice during one of the Cold War’s moments of greatest danger – the Cuban Missile Crisis of October 1962.

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**Disclaimer:** The views expressed are those of the authors concerned, not necessarily the MOD.

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## INTRODUCTION

*Now...there is in existence a weapon of small bulk capable of being conveyed on to a distant target with inevitable catastrophic results. We can set no bounds to the possibilities of airplanes flying through the stratosphere dropping atomic bombs on great cities. There are possible developments of the rocket for a similar purpose. I understand that the power of the bombs delivered on Nagasaki may be multiplied many times as the invention develops. I have heard no suggestion of any possible means of defence. The only deterrent is the possibility of the victim of such an attack being able to retort on the victor. In many discussions on bombing in the days before the war it was demonstrated that the only answer to the bomber was the bomber. The war proved this to be correct. This obvious fact did not prevent bombing but resulted in the destruction of many great centres of civilisation. Similarly if mankind continues to make the atomic bomb without changing the political relationships of States sooner or later these bombs will be used for mutual annihilation.*

So reflected Prime Minister Clement Attlee in a draft letter to President Truman, circulated to members of the War Cabinet committee established to consider the question of atomic energy – GEN 75 – for comment on 6 September 1945.<sup>1</sup> Just one month earlier, the first atomic weapon to be used in anger had detonated over the Japanese city of Hiroshima. Recent biographers have pointed to Attlee's conviction 'that the only way to respond to a nuclear attack was with a nuclear attack' and 'that belligerents would almost always use the most extreme weapon available'.<sup>2</sup> For Bew, his belief in 'the overriding importance of 'deterrence' to the future of British foreign policy' marked out Attlee as a man 'ahead of his time.' However, 'the conclusion that he drew from this was a depressing one. The only response to an atomic bomb on London – or the only deterrent – was the expectation that Britain would not let such an attack go unanswered'.<sup>3</sup>

Subsequent political leaders shared Attlee's 'brutally realistic assessment' that the security of the UK – and, indeed, that of the West in general – relied not only upon the acquisition of atomic (and, later, thermonuclear) weapons, but also upon the ability to demonstrate to any aggressor that these weapons would be used *in extremis*. For more than two decades, the duty of exercising this deterrent capability was shouldered primarily by the Royal Air Force. 'With the advent of air power as the dominant factor in war, its effect can be felt immediately by the people' stated the Air Officer Commanding-in-Chief (AOC-in-C) of RAF Bomber Command, Air Marshal Sir Hugh Lloyd, in his contribution to a special issue of the journal *Flight* published in July 1950 to mark that year's RAF Display:

We, as a nation, refrain from striking the first blow. Hence it is vital that we should be capable of immediate reprisal – a reprisal so devastating in its results as to

deter any enemy. But in the launching of it time is no longer our ally; there must be instant action, like that of a fire brigade.<sup>4</sup>

Lloyd's comments were followed by an outline of the activities of Bomber Command, in which the anonymous author emphasised that 'the best contribution to lasting peace' that those serving in the Command could 'make as individuals is to be highly efficient and fully prepared, for...the very existence of a powerful retaliatory striking force is one of the strongest deterrents to a potential aggressor.'<sup>5</sup> However, at the very time that these words were written, Bomber Command lacked the means to deliver the devastating reprisal advocated by its AOC-in-C. The absence of atomic weapons from the Command's arsenal – together with the growing obsolescence of the Avro Lincoln and Boeing Washington piston-engined heavy bombers that (alongside the English Electric Canberra) comprised its comparatively meagre front line – were reflected in the Directive issued to Lloyd by the Air Ministry following his appointment in February 1950. Rather than striking vital centres within the USSR itself, this document focussed Bomber Command's activities in the event of war upon attacking 'those targets whose destruction will do most to reduce the scale of attack by land and air on Western Europe and the UK.'<sup>6</sup> Lloyd was charged with ensuring that Bomber Command was



Yesterday's bomber: Boeing Washingtons of No 115 Squadron over the North Sea en route to the bombing range at Heligoland.

able 'to engage at short notice land and coastal targets within the effective radius of action of your forces':

Your principal effort is likely to be directed against targets within 250 miles of the RHINE so that full advantage can be taken of maximum bomb-loads and navigational aids to bombing. In view of the limited strength of your force, your aim should be to develop the utmost possible accuracy, thereby reducing the number of aircraft required to destroy each target.<sup>7</sup>

It was only later in that decade, with the entry into service of British atomic and thermonuclear weapons and aircraft capable of carrying them to targets deep in the Soviet Union (the Vickers Valiant, Avro Vulcan and Handley Page Victor – known collectively as the 'V-Force'), that Bomber Command would assume a central role in British strategy. In a memorandum relating to the Air Estimates for the 1955-56 financial year, the Secretary of State for Air stressed the need for 'the Royal Air Force together with the United States Air Force' to 'provide the main deterrent to aggression...by the threat of overwhelming nuclear striking power. The primary task which now confronts the Royal Air Force', this Command Paper continued, was 'to build up the "V" bomber force, with its nuclear potential, to a state of high efficiency and preparedness':

The next twelve months will see the "V" bombers beginning to come into service. But much more is involved than re-equipment with modern aircraft. We must select personnel of the highest quality and train them specially. We must provide the basis required in peace and war, bearing in mind that the "V" bomber force must be capable of completing its mission even though a surprise attack might first have been launched upon this country. We must perfect methods of operation which would ensure success however difficult the conditions.<sup>8</sup>

The retaliatory nature of Bomber Command's stance posed a fundamental issue – the danger of Soviet pre-emption. 'It should be obvious', US strategist Bernard Brodie contended in his 1959 RAND study *Strategy in the Missile Age*, 'that what counts in basic deterrence is not so much the size and efficiency of one's striking force before it is hit as the size and condition to which the enemy thinks he can reduce it by a surprise attack – as well as his confidence in the correctness of his predictions.'<sup>9</sup> Brodie went on to stress that adoption of a deterrent posture 'dictates primary concern with the survival of a retaliatory force of sufficient size following enemy attack.'<sup>10</sup> The notion that the airfields housing the RAF's own bomber fleet would be the primary targets of any Soviet nuclear assault was not lost on the British Government. In an assessment of 'The form and scale of attack to which the United Kingdom would be exposed in the event of general war', prepared in 1955, the Joint Intelligence Committee included the destruction of 'airfields from which nuclear attacks could be launched against the Soviet Union' as one of the

‘Enemy’s Aims within the United Kingdom’; the likely form of attack on these targets being an ‘A-bomb from aircraft at optimum height.’<sup>11</sup>

It was expected, therefore, that if the V-Force was to function as a deterrent, it was essential that it be seen to maintain a credible second-strike capability. This paper will consider some of the difficulties inherent in establishing such a posture, and the steps taken by the RAF to overcome them. It will then go on to determine the success of these measures, as indicated by Bomber Command’s response to one of the most dangerous periods of the Cold War – the Cuban Missile Crisis.

### **AIR DEFENCE AND THE V-FORCE**

One obvious method of ensuring the continued survivability of the V-Force in the face of a Soviet bomber attack was to shield it behind a stout air defence system. By the mid-1950s, the ability of the RAF to extend – and the UK to afford – an impenetrable air umbrella over the whole of the UK had come under serious question. One politician who ‘was exceedingly doubtful of the value of RAF Fighter Command in Britain, however valuable such squadrons might be overseas’ was the Chancellor of the Exchequer between December 1955 and January 1957, Harold Macmillan. ‘Everyone really knows’, Macmillan confided in his diary on 29 January 1956, ‘that there is *no* defence [against nuclear attack] yet we go on wasting immense [sums] on the design, development and production of ‘fighters’ – up to 1962 and further. This is a great burden on industry, as well as on the Exchequer.’<sup>12</sup> Macmillan continued to question the necessity of a manned fighter force on succeeding Eden as Prime Minister in January 1957. Following a restricted meeting of the Cabinet Defence Committee on 20 November 1957 to consider ‘what is Fighter Command for?’ Macmillan noted that ‘A huge sum of money is spent on it, but I don’t believe they could protect us from Russian bombers – at least enough w[oul]d get through to destroy the island’.<sup>13</sup>

The Prime Minister’s concerns with regard to the effectiveness of Fighter Command were shared, to a degree, by the Air Staff. A paper presented to the Air Council Standing Committee (ACSC) in June 1956 by the Vice-Chief of the Air Staff, Air Chief Marshal Sir Ronald Ivelaw-Chapman, conceded that the UK air defence system ‘would be incapable of preventing widespread devastation of the United Kingdom’. Nevertheless, this paper went on to argue that ‘The air defence of the United Kingdom forms an essential part of the deterrent’, for three reasons: ‘it provides the warning essential to prevent the enemy being able to destroy our striking force (and any units of the American striking force based in the United Kingdom) on the ground before they can strike back’; ‘it compels the enemy to devote considerable effort and resources to the development of a striking force capable of operating successfully in the face of it’; and ‘it could increase the time required by the enemy successfully to attack individual targets such as the airfields on which our striking force is based and thus make it even more difficult for him to destroy these forces before they could counter-attack.’<sup>14</sup>

The impossibility of guaranteeing that every Soviet bomber despatched to strike a UK target would be intercepted and destroyed was a key premise of one of the most controversial documents in the history of postwar British defence policy; 'Defence: Outline of Future Policy', a White Paper presented to Parliament in April 1957. From the outset, this document was linked inextricably to the politician chosen by Macmillan to serve as his first Secretary of State for Defence, Duncan Sandys, and it reflected the desire of both men 'to revise not merely the size, but the whole character of the defence plan.'<sup>15</sup> With regard to the air defence of the UK, the White Paper was trenchant. 'It must be frankly argued', it stated,

that there is at present no means of providing adequate protection for the people of this country against the consequences of an attack with nuclear weapons, though, in the event of war, the fighter aircraft of the Royal Air Force would unquestionably be able to take a heavy toll of enemy bombers, a proportion would inevitably get through. Even if it were only a dozen, they could with megaton bombs inflict widespread devastation.<sup>16</sup>

Although it was clear from 'Defence: Outline of Future Policy' that Fighter Command would no longer be required to prepare for a second Battle of Britain, the text of the former nevertheless echoed to a degree the arguments advanced by Ivelaw-Chapman in favour of maintaining the UK's air defences, albeit on a much-reduced scale. 'Since peace so largely depends upon the deterrent fear of nuclear retaliation', the White Paper went on,

it is essential that a would-be aggressor should not be allowed to think he could readily knock out the bomber bases in Britain before their aircraft could take off from them. The defence of the bomber airfields is therefore an essential part of the deterrent and is a feasible task. A manned fighter force, smaller than at present but adequate for this limited purpose, will be maintained and will progressively be equipped with air-to-air guided missiles. Fighter aircraft will in due course be replaced by a ground-to-air guided missile system.<sup>17</sup>

For the Chief of the Air Staff (CAS) between January 1956 and December 1959, Marshal of the Royal Air Force (MRAF) Sir Dermot Boyle, the White Paper represented 'the most important and also far reaching event for the Air Force during my time as CAS'. Sandys 'rewrote the Defence White Paper overnight...and refused to listen to advice to the contrary', Boyle later recalled; 'I fought him in every legitimate way I could with very little effect, except that he finally agreed to the building of the TSR2, whose reconnaissance element had to be stressed, since he admitted that reconnaissance work could best be done by manned aircraft'.<sup>18</sup> It has subsequently been criticised roundly by many in the UK military aviation community. 'To this day', Brookes observed in 2007, 'it is common for even senior RAF speakers to heap opprobrium

on Sandys and to imply that he tried singlehandedly to impose over-inflated policies on the RAF.’<sup>19</sup>

It is certainly the case that the White Paper had profound ramifications for RAF Fighter Command. While the Command’s control and reporting system was to be retained and reshaped to serve as ‘an effective warning system for the defence of the deterrent’, the number of fighters that it would control dwindled rapidly.<sup>20</sup> ‘Our fighter strength has already been considerably reduced’ the Secretary of State for Air, George Ward, reported to Parliament in his memorandum to accompany the 1958-59 Air Estimates, ‘and the planned rundown will be completed during the coming year. This smaller force of fighters will be needed to deal with manned aircraft, especially at longer range, to prevent reconnaissance, to investigate unidentified movements and to deal with the stand-off bomber and jammer, so long as these threats continue.’<sup>21</sup> Between 1956 and 1958 the Command’s strength fell from approximately 600 aircraft, divided between 35 squadrons, to 320; this figure was further reduced to 272 in 1960 and 140 fighters operated by eleven squadrons in 1962. Moreover, ‘in 1957 all of the fighter squadrons of the Royal Auxiliary Air Force were disbanded, a further serious loss of strength and ability to deal with the unexpected.’<sup>22</sup> During the 1960s, Bowyer has contended, ‘the roles of Fighter Command’s squadrons were of watch and ward in the aerial approaches to the United Kingdom, and a smaller but no less important forward reconnaissance capability, though the latter was mainly allotted to the squadrons in France and western Germany’; in essence, the Command ‘became a kennelled watch-dog protection for the V-bomber bases, ensuring security of the bomber take-off platforms.’<sup>23</sup>

### **DISPERSAL AND READINESS**

Given the inability of the UK’s air defence system to guarantee the survival of the V-Force, it was accepted from the outset that Bomber Command would need to adopt new patterns of organisation and operation. One survival measure adopted during the 1950s was that of dispersal. To accommodate the V-Force, ten RAF stations – Finningley, Scampton, Waddington, Coningsby, Cottesmore, Wittering, Marham, Honington, Wyton, and Gaydon – were developed as Class 1 airfields, with the necessary infrastructure to support day-to-day peacetime V-bomber operations. However, as had already been noted, it was recognised from the outset that the significance of these stations would not be lost upon Soviet planners and that they would be prime targets for attack in the event of a Soviet pre-emptive strike. To reduce the risk that the latter might lead to the destruction of the V-Force *in toto*, both Headquarters RAF Bomber Command and the Air Staff pressed for the introduction of a system whereby V bombers could be dispersed to alternative airfields across the UK should war appear likely.

Proposals to disperse the V-Force ‘over ten Class 1 and 45 other airfields in the UK’ were approved by the Air Council in June 1955, and in its Quarterly Liaison Report for



Dispersing the V-Force: four Avro Vulcan B2s of No 83 Squadron, based at Scampton, on the ORP at Finningley during a dispersal exercise less than a year before the Cuban Missile Crisis.

the quarter ended 30 September 1955, the Department of the Air Member for Supply and Research noted that ‘urgent attention’ was ‘being directed towards drawing up detailed plans for the dispersal of MBF [Medium Bomber Force] in war, or during times of international tension’ in order ‘to give full effect to HM Government’s declared defence strategy based on the deterrent value of the V-force.’<sup>24</sup> Speaking on the Air Estimates for 1955-56 in the House of Commons on 10 March 1955, Ward – then Under-Secretary of State for Air – stressed that all efforts were being made ‘to ensure that a surprise attack by the enemy will not cripple the effectiveness of the V-bomber force and its ability to retaliate at once’:

The Command will have its main bases, on the development of which we have already made considerable progress, and a widely dispersed network of operating sites at home and abroad. It is also being organised to maintain a high state of

readiness and flexibility. These steps are an important contribution to the deterrent, because an aggressor could not safely attempt a surprise assault unless he could be sure of attacking all the American and British strategic airfields simultaneously.<sup>25</sup>

Reductions in the size of the V-Force led eventually to the number of dispersal airfields being scaled back to 27, 'belonging not only to home-based RAF Commands but in some cases to the Royal Navy and the MoA [Ministry of Aviation]'.<sup>26</sup>

The provision of dispersal airfields would not in itself serve to safeguard the deterrent force. It was also recognised that Bomber Command would have to shed some of the ponderousness that had hitherto come to characterise bomber operations. The need to increase the Command's readiness state was emphasised by the emergence of a new threat – the entry into service of Soviet ballistic missiles capable of reaching the UK. 'There is at present no form of defence known against ballistic missiles' Ivelaw-Chapman acknowledged in his June 1956 paper to the ACSC:

It is commonly suggested, and may well be true, that when we get into the ballistic missile era none of the currently planned defences will be of any use. And that the only defence then will be to have sufficient ballistic missiles ourselves to ensure that the aggressor is afraid to start. In view of the disparity between the ranges to be covered, we may well expect the Russians to have developed a ballistic missile which is effective against the UK before we have developed a ballistic missile which is effective against Russia. But for the purposes of the deterrent, this is not greatly significant as long as our bombers remain capable of delivering an effective counter attack. What would be significant would be if, while we were still reliant upon bombers, the Russians were able to knock them out by ballistic missiles at their airfields before they could take off.<sup>27</sup>

'The real defence' of the V-Force, Sandys asserted during a meeting of the Cabinet Defence Committee on 31 December 1957, 'lay in increasing the state of readiness of the bombers, so that they could take off before they could be destroyed on the ground.' At the end of their discussion, the Committee duly 'Invited the Minister of Defence, in consultation with the Secretary of State for Air, to consider arrangements for improving the state of readiness of Bomber Command, including the possibility of accelerating the rate of run-down of Fighter Command for this purpose'.<sup>28</sup>

To ensure that sufficient numbers of V-Force aircraft were able to evade destruction at their airfields, Bomber Command looked to practices long-established within RAF Fighter Command. On his appointment as AOC-in-C Bomber Command in January 1956, Air Chief Marshal Sir Harry Broadhurst, 'with vast wartime experience of fighter and tactical air operations behind him introduced a "fighter-pilot type" mentality into V-force [sic]

aircrew'.<sup>29</sup> At Conference "Prospect" on 6 May 1958, Broadhurst 'said his crews could react from the radar of Fighter Command almost as quickly as they could start up their engines.'<sup>30</sup> To facilitate the scrambling of aircraft from readiness 'it was proposed to build operational readiness platforms (ORPs) at the ends of runways on the Class 1 and dispersal airfields...though actual construction was probably not completed until 1963; previously such features were only found on fighter airfields.'<sup>31</sup> A list of medium bomber dispersal airfields approved for Operational Readiness Platforms, circulated in February 1962 detailed nine Class 1 airfields with ORPs capable of accommodating four aircraft (Finningley, Coningsby, Honington, Scampton, Wittering, Cottesmore, Waddington, Gaydon and Wyton); five dispersal airfields with ORPs that also could accommodate four aircraft (Burtonwood, Bedford, St Mawgan, Ballykelly and Kinloss); and twenty-two dispersal airfields with ORPs that were only capable of taking two V-bombers.<sup>32</sup>



ACM Sir Harry Broadhurst, AOC-in-C RAF Bomber Command from January 1956, boarding an Avro Vulcan at Waddington, 22 October 1957.

Bomber Command's alert and readiness system revolved around a series of 'Alert Conditions' and 'Readiness States' ordered by the Bomber Command Operations Centre (BCOC) at HQ Bomber Command. These were laid down in a manual entitled *Bomber Command Alert and Readiness Procedures (Aircraft)*, the second edition of which became effective from 1 August 1962.<sup>33</sup> According to an extract from the latter, 'The degree of preparedness of the Bomber Force is defined as an ALERT CONDITION'. The normal state of the Command in peacetime was designated Alert Condition 4. During 'periods of political tension – which may not be serious enough to warrant Alert Condition 2' the Command could be placed on Alert Condition 3, 'PRECAUTIONARY ALERT'. This condition could be 'issued to all or part of the force at any time' and the 'Specific actions to be taken will be detailed at the time the Alert is announced.'

The next Alert Condition – Alert Condition 2, 'GENERATE AIRCRAFT' – required the Command:

to prepare the maximum number of aircraft to combat serviceability. Aircraft planned to operation [sic] from main bases are to be prepared for operational

take-off and crews are to standby at 15 minutes readiness. All other aircraft are to be armed and prepared for take-off to their dispersal airfields. Reconnaissance Squadrons are to be prepared for operational take-off. All Operations Rooms and other vital services are to be fully manned on a 24 hour basis. Aircraft prepared for dispersal are to remain in this configuration until either ordered to disperse or specifically order [sic] to prepare for operational take-off from main bases.

During this phase, AOC-in-C Bomber Command was 'charged with producing 75% of available aircraft in 24 hours.'<sup>34</sup>

The highest Alert Condition was Alert Condition 1, 'DISPERSE AIRCRAFT'. At this stage,

Aircraft due to disperse are to proceed to their dispersal airfields and there to be prepared for operational take-off; ['regenerated'] crews will then standby at 15 minutes readiness. Aircraft and crews remaining at main bases continue at 15 minutes readiness. Once this Alert Condition has been announced aircraft will continue to disperse, regardless of Readiness State ordered, unless, or until, it is specifically stopped by BCOG.

The Alert Conditions outlined above regulated the process by which Bomber Command would be readied for combat during a transition-to-war period. They were further qualified by a series of Readiness States, which prescribed the 'take-off readiness of the force' and were 'related to the tactical warning that could be expected of an impending



Alerting the V-Force: a practice scramble by a Vickers Valiant crew at RAF Wyton during a visit to the station by the Duke of Edinburgh, 24 June 1958.

enemy attack.' As such, Readiness States were applied to those elements within Bomber Command that had already been generated to *combat ready* status, and could be varied regardless of the Alert Condition then in force. The first was Readiness State 'One Five', or '15 Minutes'; this required 'All combat ready aircraft...to be prepared to take-off within 15 minutes.' The next rung on the readiness ladder was Readiness State 'Zero 5' ('05 Minutes'), during which combat ready aircraft would be expected to get airborne within five minutes; for those aircraft unable to start their engines simultaneously, and at those airfields lacking Operational Readiness Platforms at the end of the runway, 'cockpit readiness will be accepted as meeting this requirement although a 5 minute reaction may not be possible.' Readiness State 'Zero Two' ('02 Minutes') required 'All combat ready aircraft...to start engines and taxi to the take-off position and there await further instructions by VHF R/T.' Ultimately, combat ready aircraft could be ordered to SCRAMBLE, or 'take-off on their operational mission subject to release while airborne.'

Although this system of Alert Conditions would appear to take the form of a 'ladder', one Alert Condition was not necessarily a precursor to the next. For example, at the beginning of Exercise MICKY FINN II on 20 September 1962, the Command was moved from Alert Condition 4 directly to Alert Condition 2, bypassing Alert Condition 3. Bomber Command could be required to maintain Alert Conditions 2 and 1 for a maximum of thirty days. Readiness State Zero Five was to be held for up to four hours; while Zero Two was envisaged as lasting for no longer than a matter of minutes.

Procedures in Bomber Command's Thor Intermediate-Range Ballistic Missile (IRBM) force differed from those of the MBF. In a letter considering Thor readiness and launch procedures dated 11 August 1959, the Vice-Chief of the Air Staff (VCAS), Air Marshal Sir Edward Hudleston, informed Broadhurst's successor as AOC-in-C Bomber Command, Air Marshal Sir Kenneth Cross, that 'Our aim must be to keep all serviceable missiles at T-15' (15 minutes to launch).<sup>35</sup> An Air Staff memo forwarded by VCAS to the CAS on 5 December 1961 stated that 'an average of between 45 and 50 Thor weapons are maintained permanently at fifteen minutes readiness'.<sup>36</sup> During MICKY FINN II, 'The Thors once again proved their reliability and 59 out of the 60 weapons available were available for launch at the 1st count down 5½ hours after the alert was called.'<sup>37</sup>

### **QUICK REACTION ALERT**

It was recognised that while the procedures described above could be used to bring Bomber Command to combat readiness in the period of heightened tension prior to the outbreak of a conflict, they were not suitable to deter an opponent from mounting a 'no-notice' strike. To guard against such an eventuality, a 'Quick Reaction Alert' ('QRA') capability was introduced within Bomber Command. The first element of the Command to adopt QRA was the Valiant 'Tactical Bomber Force' (TBF) assigned to the Supreme Allied Commander Europe (SACEUR). No 207 Squadron was placed at the operational disposal of SACEUR on 1 January 1960, and was incorporated in the latter's QRA system

in October of that year; it was joined in 1961 by Nos 49 and 148 Squadrons. All were co-located at RAF Marham as part of No 3 Group.<sup>38</sup>

QRA was not restricted to the TBF. Following a trial conducted between 18 September and 14 October 1961 (Exercise MACASSAR) that demonstrated Bomber Command's 'ability to maintain a force of some 15 aircraft at 15 minutes readiness during periods of tension', on 31 October 1961 Air Marshal Cross wrote to the VCAS to press the case for keeping a proportion of his force on permanent alert. 'It seems only military commonsense', Cross argued,

to maintain a permanent alert concept of some form, in the face of the growing Russian threat and the need to build up experience to compete with the greatly reduced warning time during the coming years. A permanent alert force also gives us the opportunity of closer integration with the SAC [Strategic Air Command] reflex forces in this country, thus taking full advantage of our combined strengths and the combined effect of our ECM equipments, especially during the critical phase of penetrating the enemy's outer radar defences.<sup>39</sup>

The Air Council 'approved in principle the proposal to maintain one aircraft in each medium bomber squadron at fifteen minutes readiness' on 7 December 1961, and this measure was introduced in the following year.<sup>40</sup> The effect of this was to ensure that even at the normal peacetime Alert Condition – Alert Condition 4 – a proportion of the V-Force was maintained continuously at Readiness State One Five. By the end of that year, 68 weapons systems (54 Thor IRBMs and fourteen aircraft) were 'normally held at immediate readiness (15 minutes)'.<sup>41</sup> In addition to the three QRA Valiants of the TBF, the Medium Bomber Force QRA component in October 1962 comprised six Vulcans of No 1 Group (one at Coningsby, two at Scampton and three at Waddington) and five Victors of No 3 Group (two at Cottesmore, two at Honington and one at Wittering).<sup>42</sup>

Bomber Command did not attempt to emulate the US Air Force (USAF) practice of maintaining aircraft on airborne alert. In the House of Commons on 19 April 1961, the MP for Rochester and Chatham, Julian Critchley, 'asked the Secretary of State for Air what would be the cost of maintaining a standing air alert consisting of 10 per cent. of the V-bomber force.' Julian Amery replied:

Because of its capacity for quick reaction to warning of attack, the V-bomber force provides an effective deterrent without recourse to air alert. To maintain a standing air alert with 10 per cent. of the Force would involve not only an increase in flying maintenance costs but also substantial changes in the present organisation of Bomber Command. I am not in a position to say precisely what the cost would be.<sup>43</sup>

However, in his initial arguments in favour of introducing QRA, Cross did suggest that this would 'also lead us gradually into the permanent airborne alert in the Skybolt era', which he envisaged as beginning in '1966/68'.<sup>44</sup> Such plans centred upon the proposed introduction into Bomber Command service of the Douglas GAM-87 Skybolt air-launched ballistic missile. Although Bomber Command's Operational Research Branch did conduct a number of studies into the practicalities of maintaining an airborne alert, the Kennedy administration's decision to cancel Skybolt at the end of 1962 brought all further work to an end.<sup>45</sup>

### **THE PROOF OF THE PUDDING? BOMBER COMMAND AND THE CUBAN MISSILE CRISIS**

How the Command's war plans might work in the real world would be put to the test in October 1962. The flashpoint for this confrontation would be the Caribbean island of Cuba.

A detailed examination of the Cuban Missile Crisis and its aftermath lies beyond the scope of this paper. However, accounts of the Crisis from a UK perspective indicate that British intelligence officers were first informed by their US counterparts of the location of launch sites on Cuba for Soviet R-12 (NATO designation SS-4 *Sandal*) Medium-Range Ballistic Missiles (MRBMs) and R-14 (SS-5 *Skean*) Intermediate-Range Ballistic Missiles (IRBMs) on 19 October 1962. The British Ambassador to Washington DC, Sir David Ormsby-Gore, cited reports indicating that weapons 'that may not be entirely defensive' had been located on Cuba in a cable to the Foreign Office sent on 20 October. The ambassador was briefed personally by President Kennedy on 21 October and the President sent a personal message to Prime Minister Harold Macmillan later the same day.<sup>46</sup>

The seriousness with which the situation was being taken by the US military was further illustrated by the events of 22 October. During a meeting of the US Joint Chiefs of Staff on the morning of that day, the US Air Force's Chief of Staff, General Curtis E LeMay, requested approval for the introduction, from midday, of a series of measures intended to raise the USAF's readiness in general – and that of SAC in particular. These included: authorising SAC to institute an airborne alert (increasing to one-eighth of the Command's aircraft by the afternoon of the following day), and to begin the dispersal of the Command's Boeing B-47s to civilian airports at the discretion of the Commander-in-Chief SAC; similarly authorising the dispersal of Continental Air Defense Command (CONAD)'s interceptor aircraft 'on a very quiet, low-key basis'; raising the world-wide Defence Condition (DEFCON) to DEFCON 3; and further raising that of SAC to DEFCON 2, the latter to be completed within twenty-four hours. Although the Joint Chiefs authorised the introduction of the airborne alert and the dispersal of SAC and CONAD aircraft, they elected to seek the approval of Secretary of Defense McNamara before instituting the increase in DEFCON states proposed by LeMay.<sup>47</sup>

USAF commands were subsequently placed on DEFCON 3 with effect from 2300Z on 22 October, and the US government would appear to have exerted pressure upon its NATO allies to follow their lead. A key player in the relationship between the Kennedy administration and the NATO governments would appear to have been General Lauris Norstad, USAF, who held the dual appointments of US Commander-in-Chief, Europe (USCINCEUR) and SACEUR. Norstad's relationship with Kennedy and Secretary of Defense Robert McNamara had hitherto been difficult; by mid-1962 their 'disputes... had deepened well beyond any chance of accommodation', and although the general's retirement had been announced in July 1962 on health grounds, 'Norstad, who felt fine, told colleagues he had been fired.'<sup>48</sup> Although due to be replaced imminently by General Lyman L. Lemnitzer, US Army, Norstad nevertheless found himself serving as a linchpin in the relationship between Washington and the European NATO capitals. In a letter sent to Norstad on 22 October, Kennedy stated that as the crisis had begun to unfold he had 'given much thought to its impact upon NATO and your tasks as SACEUR':

I have regretted the inability to widen the circle of discussion during this period and particularly to enlist the support of NATO governments for the course of action which the United States has been obliged to take. While I know that our action creates a difficult situation for you, both in your role of SACEUR and CINCEUR, I have every confidence in your leadership and experience to help us over this critical period in our NATO relationships. Undoubtedly, a Soviet objective in undertaking to create a military base on Cuba has been his long time desire to split the NATO alliance. This we must not allow him to do and I know that your persuasive voice will carry great weight with our allies in presenting the logic and necessity of the American action.<sup>49</sup>

As Kennedy predicted, the task facing Norstad was a difficult one. The readiness state of NATO forces in Europe would prove a particularly divisive issue. Although Prime Minister Harold Macmillan noted in his diary entry for 22 October that 'Washington, in a rather panicky way, have been urging a NATO 'alert', with all this implies (in our case, Royal Proclamation and call-up of Reservists)', it was far from axiomatic that Britain would bow to this request.<sup>50</sup>

The prevailing UK position with regard to NATO's alert system had been agreed seven years earlier. On 15 September 1955, the Cabinet – of which Macmillan, as Foreign Secretary, was then a member – considered a memorandum by Minister of Defence (Selwyn Lloyd) detailing a request from Norstad's predecessor as SACEUR, General Alfred M Gruenther, US Army. Gruenther was keen to ensure that 'national authorities' should 'agree that when a warning period was called he should be automatically authorised to put into force measures which he himself could carry out, and that national authorities should at the same time automatically put into force the measures which they alone

could take.'<sup>51</sup> During the ensuing discussion, it became clear that the Cabinet were unwilling to delegate to Gruenther the authority that he sought. 'For political and other reasons', the minutes record, 'it might not be possible for the Government to give full effect immediately to all of the preparations in question, and on certain of them...the Government would have to reserve their position' – although the Cabinet did undertake to 'do all we could to meet SACEUR's wishes, and...even those measures on which the Government had to reserve their position would be given the most sympathetic consideration when the time arose.'<sup>52</sup>

Now that the time had indeed arisen, Macmillan urged caution. The Prime Minister's personal experiences as a Guards officer during the First World War had left him with 'a scepticism about human and political pretensions, about the claims of military planners, and about the uses of armed conflict', and he now balked at the possibility of stumbling into a new and even more devastating conflict.<sup>53</sup> On the evening of 22 October the Prime Minister 'gave a large dinner for General Norstad, which lasted from 8-11', during the course of which he informed SACEUR 'that we w[oul]d not repeat not agree at this stage' to Washington's call for an increase in the NATO alert state. 'N[orstad] agreed with this', Macmillan continued in his diary, 'and said he thought NATO powers w[oul]d take the same view. I said that 'mobilisation' had sometimes caused war. Here it was absurd, since the additional forces made available by 'Alert' had no military significance.'<sup>54</sup> The SACEUR would appear to have succeeded in transmitting the concerns of Macmillan and other NATO leaders across the Atlantic; for in his diary entry for the following day, Macmillan noted that during a conversation in the afternoon Norstad passed on 'the good news that he had persuaded Washington to be more reasonable....'<sup>55</sup>

The British Government continued to monitor events as they unfolded during the following week, liaising with Washington, but taking no overt action to increase the alert and readiness state of the V-Force. However, as the crisis deepened, at 1100 on Saturday 27 October 1962 the CAS, Air Chief Marshal Sir Thomas Pike, attended a meeting with the Prime Minister at Admiralty House.<sup>56</sup> Sir Thomas outlined the substance of his meeting with the Prime Minister to his fellow Chiefs of Staff – the First Sea Lord (Admiral of the Fleet Sir Caspar John) and the Chief of the Imperial General Staff (General Sir Richard Hull) – at the Ministry of Defence at 1430 that afternoon and a record of this 'conversation' prepared by the Secretary of the Chiefs of Staff Committee is now preserved in The National Archives.<sup>57</sup>

According to this record, Sir Thomas began by relaying a summary of a communication between President Kennedy and the Prime Minister on the evening of 26 October in which the President had described the assurances that the US Government required with regard to the withdrawal of offensive weapons from Cuba. President Kennedy had gone on to state that 'unless he received these assurances within 48 hours he would

take action to destroy the rocket sites by bombing, by invasion, or both.’ CAS further reported that although President Kennedy had ‘stated that he would consult with the Tripartite nations before taking any definite action.... [T]he Prime Minister considered this might take the form of information rather than consultation.’

The Prime Minister had then gone on to discuss with Sir Thomas ‘the current alert posture of our forces.’ Although senior officers of the Air Ministry, Admiralty and War Office had been warned ‘to be available, if required at approximately one hour’s notice’, the Prime Minister was ‘adamant that he did not consider the time was appropriate for any overt preparatory steps to be taken such as mobilisation. Moreover, he did not wish Bomber Command to be alerted, although he wished the force to be ready to take the appropriate steps should this become necessary.’ While plans were in hand to call a meeting of the Cabinet on 28 October should the situation continue to deteriorate, the Prime Minister’s intention was ‘that matters should be played as low key as possible.’

Sir Thomas informed his fellow Chiefs of Staff that ‘as a result of his conversation with the Prime Minister, he had warned the Air Officer Commanding-in-Chief, Bomber Command that he should be on the alert and that his key personnel should be available on station. There were ten bombers overseas at present, but he felt that it was not desirable to recall these aircraft at the moment.’ During their ensuing discussion, the Chiefs of Staff agreed that while measures could be taken ‘in a Precautionary Stage, and before any NATO Alert was declared, these had little military significance without the calling of general mobilisation’, it was nevertheless essential

for Bomber Command to be alerted and dispersed as soon as the situation so warranted in order that its deterrent effect should be seen to remain credible. This measure would be the most effective that could be carried out short of general mobilisation, and would give political reassurance to the United States.

Should the US mount any offensive action against Cuba, the Chiefs of Staff believed that ‘One of the most likely reactions...would be to occupy West Berlin’. However, they concluded that as ‘Berlin was indefensive [sic] militarily’, existing plans to mount probes along the ground access routes to the city would be ‘useless’ and that ‘The Prime Minister should be advised of this in order that he may urge the President to restrain General Norstad from undertaking any such operation.’<sup>58</sup>

Considerable confusion has grown up with regard to the stance adopted by RAF Bomber Command during the course of the crisis. In *Countdown: Britain’s Strategic Nuclear Forces*, Air Vice-Marshal Stewart Menaul – the Senior Air Staff Officer at HQ Bomber Command between 1961 and 1965 – described the impact of the Cuban Missile Crisis on the Command from 27 October 1962. In his account, AVM Menaul notes that at the

time of the crisis Bomber Command was engaged in 'one of their frequent alert and readiness exercises'. On the evening of 26 October, the AOC-in-C Bomber Command, Air Marshal Sir Kenneth Cross, 'called the duty operations officer on the telephone to say that he had decided to allow the exercise to proceed and to retain the existing readiness state for the time being'; subsequently, following a discussion with his senior staff officers Sir Kenneth 'decided to increase the readiness state of the force, purely as part of the training exercise.' As a result, 'Both the Thor missile force and the V-bombers were at fifteen minutes readiness.'<sup>59</sup>



The AOC of No 3 Group, RAF Bomber Command, AVM Kenneth ('Bing') Cross, in front of a Vickers Valiant in December 1958. Cross superseded Broadhurst as the Command's AOC-in-C in May 1959.

Given the author's senior position with HQ Bomber Command at the time of the Cuban Missile Crisis, AVM Menaul's account has been accepted by a number of scholars as an accurate insight into the posture of Bomber Command during the Crisis and the decisions made by its AOC-in-C, acting apparently upon his own initiative. However, in a supplementary paper published in the proceedings of a joint meeting of the RAF Historical Society and the [US] Air Force Historical Foundation in 1993, the then Head of the Air Historical Branch, Group Captain Ian Madelin RAF (Retd), noted that the recollections of Sir Kenneth Cross 'differ from those of Air Marshal [sic] Stewart Menaul'.<sup>60</sup> AVM Menaul's recollections are also at variance with Bomber Command records now deposited in The National Archives. On consulting the RAF Form 540 for RAF Bomber Command in October 1962, it is clear that the Command was *not* in the midst of an alert and readiness exercise on 26-27 October 1962. Rather, Exercise MICKY FINN 2 had taken place during the previous month; this exercise being timed to coincide with NATO Exercise FALLEX 62.<sup>61</sup> Moreover, there is no evidence of an increase in the Command's Alert Condition or Readiness State prior to the meeting between CAS and the Prime Minister on the morning of 27 October 1962.<sup>62</sup>

The Operations Record Books (ORBs) for both HQ No 1 Group and HQ No 3 Group record that the Command was ordered to move to Alert Condition 3, Precautionary Alert, on or immediately after 1300Z on 27 October 1962.<sup>63</sup> The measures to be taken were described by the compiler of the ORB for HQ No 1 Group in the following terms:

All key personnel were required to remain on station and Operation Room staff to be available at short notice. Although no generation of aircraft was ordered, some preparations were made to ensure rapid generation if necessary. All measures were to be unobtrusive.<sup>64</sup>

On the following day, a limited increase in the number of aircraft on QRA would appear to have been ordered by HQ Bomber Command. According to the ORB for HQ No 1 Group, at 1547Z on 28 October the Group was instructed to increase the number of aircraft on QRA from six to twelve, 'to be effective as soon as possible after 0800Z on 29th October, 1962'.<sup>65</sup> Although there is no record of such an order in the ORB for HQ No 3 Group, there are indications that this Group also increased the number of aircraft on QRA during the course of the Crisis.<sup>66</sup> Additionally, on 28 October 1962 an Exercise SUNSPOT detachment of eight Vulcan B1As belonging to No 50 Squadron to RAF Luqa, Malta, was recalled.<sup>67</sup>

All available Thor IRBMs were also brought to 15 minutes readiness on 27 October. In a letter to VCAS dated 31 October 1962, the AOC-in-C Bomber Command noted that 'The recent Cuban crisis emphasizes the value of Thor as a deterrent weapon'. Sir Kenneth went on to note that 'Because its normal state of readiness is 15 minutes the whole system...could be alerted inconspicuously.'<sup>68</sup> However, there is no reference in any of the official sources thus far consulted that the Thor component (either wholly or in part) was raised to a higher readiness state during the course of the crisis.

The only tangible change in Bomber Command's readiness during the course of the crisis, therefore, appears to have been an increase in the number of aircraft on QRA. There is no indication that the readiness state of QRA aircraft in the Command was raised above Readiness State One Five in response to a perceived threat of nuclear attack at any stage during the Cuban Missile Crisis. However, it is of course conceivable that an increase in the readiness state for the QRA aircraft may have been ordered by the BCOC at points during the crisis in order to ensure that QRA crews remained vigilant. RAF Bomber Command remained at Alert Condition 3 until 5 November 1962, when the latter was cancelled and QRA states returned to normal.<sup>69</sup>

## **CONCLUSION**

During the late 1950s, the Royal Air Force put in place a number of measures intended to secure the effectiveness of the MBF in the deterrent role. These concentrated, in large part, in ensuring that elements of the V-Force could survive a pre-emptive Soviet nuclear attack and thus be able to threaten a credible counter-strike. However, although a small proportion of the aircraft and crews available were maintained on QRA, mobilisation of the V-Force in its entirety during an international crisis depended upon the willingness of the UK's political leaders to raise Bomber Command's Alert Condition – at the risk of further raising international tension.

This dilemma was illustrated graphically during the Cuban Missile Crisis. Sir Kenneth Cross would later comment on the marked lack of direction shown by the UK's higher politico-military leadership during the course of the crisis: 'from him downwards, everything worked perfectly; from him upwards, he perceived nothing worked at all.'<sup>70</sup> It is clear, however, that this apparent lack of direction was driven in large part by Harold Macmillan's determination to do everything in his power to minimise the danger of a nuclear exchange; 'business as usual' was very much the order of the day. Macmillan's rejection of any overt measures that might worsen the situation was evident both in his dealings with General Norstad, and in the briefing given by Sir Thomas Pike to his fellow Chiefs of Staff on the afternoon of 27 October 1962. Moreover, the surviving primary papers indicate clearly that the measures taken by HQ Bomber Command were consistent with the wishes of the Prime Minister. This was reflected by Sir Kenneth in his letter to the VCAS on 31 October 1962 cited above, in which the former went on to point out that 'despite having everything ready to bring 75% of the aircraft in the Command to readiness, we could not give the order for fear of the effect it might have (if it became known) on the very tense negotiations being carried on by Mr Krushchev and Mr Kennedy.'<sup>71</sup> Macmillan would appear to have feared that by placing Bomber Command on a war footing, the British Government could tip the international situation further out of control and thereby bring about the nuclear exchange that the Command was intended to deter.

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## NOTES

<sup>1</sup> The National Archives (TNA) CAB 21/4053, annex of loose minute to William Armstrong, Private Secretary to Secretary of the War Cabinet, 6 September 1945.

<sup>2</sup> Nicklaus Thomas-Symonds, *Attlee: A Life in Politics* (London: I B Tauris, 2010), 195.

<sup>3</sup> John Bew, *Citizen Clem: A Biography of Attlee* (London: riverrun [sic], 2016), 369.

<sup>4</sup> 'Bomber Command,' *Flight* LVII, no. 2167 (1950): 25.

<sup>5</sup> 'Bomber Command,' 26.

<sup>6</sup> TNA AIR 2/15917, enclosure 60B, 'Command Directive to Air Marshal Sir Hugh P Lloyd, KBE, CB, MC, DFC', 16 March 1950, para 3. In addition to its primary role, 'Alternative, or additional, commitments which, in emergency' Bomber Command could also be called upon to fulfil included 'Attacks against enemy submarine bases or other maritime objectives in connection with the war at sea'; 'Such sea mining operations as you may be called upon to undertake'; and 'Attacks against objectives in support of the Northern European regional forces.'

<sup>7</sup> TNA AIR 2/15917, enclosure 60B, para 4.

<sup>8</sup> Cmd 9397 'Air Ministry: Memorandum by the Secretary of State for Air to Accompany Air Estimates, 1955-56', (London: HMSO, February 1956), para. 7, 3; para. 9, 4.

<sup>9</sup> Bernard Brodie, *Strategy in the Missile Age* (Santa Monica, CA.: RAND, 1959), 281.

<sup>10</sup> *Ibid.*, 283 (italics as in original).

<sup>11</sup> TNA CAB 21/4035, JPG/55/1 'JIC (55)12', 4 January 1955.

<sup>12</sup> Harold Macmillan, *Riding the Storm: 1956-1959* (London: Macmillan, 1971), 11 (italics and parentheses as in original).

<sup>13</sup> Peter Catterall, ed. *The Macmillan Diaries: Prime Minister and After, 1957-1966*, vol. II (Macmillan, 2011), 73-4 (text in parantheses added).

<sup>14</sup> TNA AIR 6/124, SC(56)16 'Air Council Standing Committee: Future Size and Shape of the Royal Air Force: Note by VCAS', 7 June 1956, para 15, 7-8.

<sup>15</sup> Cmnd 124 'Defence: Outline of Future Policy' (London: HMSO, April 1957), para 3, 1.

<sup>16</sup> Cmnd 124, para 12, 2-3.

<sup>17</sup> Cmnd 124, para 17, 3.

<sup>18</sup> Marshal of the Royal Air Force Sir Dermot Boyle, *My Life: An Autobiography* second ed. (Fairford: Royal Air Force Benevolent Fund, 1990), 108.

<sup>19</sup> Andrew Brookes, 'Death Knell For UK Aerospace? 1957 Defence White Paper Revisited,' *Air International* 73, no. 6 (2007): 57.

<sup>20</sup> Stephen Twigge, and Len Scott, *Planning Armageddon: Britain, the United States and the Command of Western Nuclear Forces, 1945-1964* (Abingdon: Routledge, 2014), 288.

<sup>21</sup> Cmnd 373 'Air Ministry: Memorandum by the Secretary of State for Air to Accompany Air Estimates, 1958-59', (London: HMSO, February 1958), para.32, 6.

<sup>22</sup> Michael Armitage, *The Royal Air Force: An Illustrated History* (London: Arms and Armour Press, 1993), 204.

<sup>23</sup> Chaz Bowyer, *Fighter Command 1936-1968* (London: Sphere, 1981), 221; 22.

<sup>24</sup> Humphrey Wynn, *The RAF Nuclear Deterrent Forces: their origins, roles, and deployment 1946-1969, A documentary history* (London: HMSO, 1994), 79; 122.

<sup>25</sup> Hansard HC Deb 10 March 1955 vol 538 col 630.

<sup>26</sup> Wynn, *The RAF Nuclear Deterrent Forces: their origins, roles, and deployment 1946-1969, A documentary history*, 122 n.2.

<sup>27</sup> TNA AIR 6/124, ACSC (56)16, para 8, 4-5.

<sup>28</sup> TNA CAB 131/18, D(57)14, 31 December 1957, Item 4.

<sup>29</sup> Wynn, *The RAF Nuclear Deterrent Forces: their origins, roles, and deployment 1946-1969, A documentary history*, vii.

<sup>30</sup> 'Service Aviation: Conference "Prospect",' *Flight* 73, no. 2573 (1958): 688. In his autobiography, Sir Dermot Boyle recalled that in response to the 1957 White Paper 'I arranged to mount an exercise in London called Prospect, in which the Air Staff presented the case for manned aircraft to an assembly of some three hundred people, representing every aspect of public life. His Royal Highness the Duke of Edinburgh was not present even though some newspapers said he was. The conference was, however, attended by MPs, Service Chiefs, leaders of industry, trade unionists and many others. We invited Duncan Sandys but he did not attend. Our arguments were quite unanswerable, and indeed few tried to counter them, instead I think virtually everyone present agreed with them. The debate later centred, instead, on what right the Air Marshals had to challenge, publicly, the opinion of the Minister of Defence.' Boyle, *My Life: An Autobiography* 109.

<sup>31</sup> Wayne D. Cocroft, and Roger J.C. Thomas, *Cold War: Building for Nuclear Confrontation 1946-1989* (Swindon: Historic England, 2016), 27.

<sup>32</sup> Wynn, *The RAF Nuclear Deterrent Forces: their origins, roles, and deployment 1946-1969, A documentary history*, 306-7.

<sup>33</sup> TNA AIR 2/16435, enclosure 28.

<sup>34</sup> TNA AIR 8/2369, letter from AM Sir Kenneth Cross to MRAF Sir Thomas Pike, 21 September 1962.

<sup>35</sup> TNA AIR 8/2238.

<sup>36</sup> TNA AIR 8/2369.

<sup>37</sup> TNA AIR 8/2369, letter from AM Sir Kenneth Cross to MRAF Sir Thomas Pike, 21 September 1962. Although the RAF's initial Thor strength stood at sixty missiles, during 1961 one Thor was withdrawn from the front-line in order to be used for training purposes by the Bomber Command Strategic Missile School at Feltwell. Wynn, *The RAF Nuclear Deterrent Forces: their origins, roles, and deployment 1946-1969, A documentary history*, 347; 49 n.1.

<sup>38</sup> *Ibid.*, 363; 68; 71.

<sup>39</sup> TNA AIR 8/2369, letter from AM Sir Kenneth Cross to ACM Sir Edmund Hudleston, 31 October 1961.

<sup>40</sup> TNA AIR 8/2369, Air Council Conclusions of Meeting 23(61), 7 December 1961, item IV.

<sup>41</sup> TNA AIR 8/2369, letter from AM Sir Kenneth Cross to MRAF Sir Thomas Pike, 30 November 1962.

<sup>42</sup> TNA AIR 1/16435, draft prepared by Ops B2, Air Ministry entitled 'Notes on Bomber Command plan to meet increased QRA commitment', 17 January 1963. According to Wynn, 'At the beginning of 1962 the readiness for Saceur [sic]-assigned squadrons was increased when, on 1 January, a revised Nuclear Strike Plan came into effect; it meant that four Valiants instead of three were held at 15 minutes readiness at Marham'; Wynn, *The RAF Nuclear Deterrent Forces: their origins, roles, and deployment 1946-1969, A documentary history*, 335. However, this increase would appear to have been delayed pending the funding of the additional facilities and personnel necessary to accommodate a fourth QRA aircraft at Marham. A number of entries for the regular practice QRA alerts initiated by Bomber Command Operations Centre (Exercise EDOM) in HQ No 3 Group's F540 submission for December 1962 (TNA AIR 25/1548) refer to 'The *three* SACEUR QRA aircraft and the five QRA aircraft from the MBF stations' (my italics). It would therefore appear the Valiant QRA commitment remained at three aircraft until at least the end of 1962 – thus accounting for the total of fourteen aircraft (eleven MBF and three TBF) cited by the AOC-in-C Bomber Command in his letter to CAS of 30 November 1962 (see n41).

<sup>43</sup> Hansard HC Deb 19 April 1961 vol 638 c108W.

<sup>44</sup> TNA AIR 8/2369, letter from AM Sir Kenneth Cross to ACM Sir Edmund Hudleston, 31 October 1961.

<sup>45</sup> See, for example, TNA AIR 14/4211, Memorandum 28, 'Aircraft Utilisation during a Continuous Airborne Alert using Free Fall and Stand Off Weapons', Operational Research Branch, Headquarters Bomber Command, March 1962; TNA AIR 14/4324, Memorandum 255, 'Trial 448: An Airborne Alert. Analysis of the Aircraft Servicing Aspects', Operational Research Branch, Headquarters Bomber Command, September 1962.

<sup>46</sup> Peter Hennessey, *The Prime Minister: The Office and its Holders since 1945* (London: Allen Lane, 2000), 118.

<sup>47</sup> Walter S. Poole, *History of the Joint Chiefs of Staff: The Joint Chiefs of Staff and National Policy, Volume VIII, 1961-1964* (Washington, DC: Office of Joint History, Office of the Chairman of the Joint Chiefs of Staff, 2011), 173.

<sup>48</sup> Ibid., 202.

<sup>49</sup> *Foreign Relations of the United States, 1961–1963, American Republics; Cuba 1961–1962; Cuban Missile Crisis and Aftermath, Volumes X/XI/XII, Microfiche Supplement*, Document 362: 'Telegram 221822Z to Supreme Allied Commander, Europe, October 22'; <https://s3.amazonaws.com/static.history.state.gov/frus/frus1961-63v10-12mSupp/pdf/d362.pdf>, accessed 12 May 2017.

<sup>50</sup> Catterall, *The Macmillan Diaries: Prime Minister and After, 1957–1966*, 510.

<sup>51</sup> TNA CAB 129/77, CP(55)120, 13 September 1955, para 3, 1.

<sup>52</sup> TNA CAB 128/29, CM(55) 21, 15 September 1955, minute 4, 4–5.

<sup>53</sup> Richard E. Neustadt, and Ernest R. May, *Thinking In Time: The Uses of History for Decision Makers* (New York, NY: The Free Press 1986), 193.

<sup>54</sup> Catterall, *The Macmillan Diaries: Prime Minister and After, 1957–1966*, 510.

<sup>55</sup> Ibid., 511.

<sup>56</sup> No 10 Downing Street was then in the process of being refurbished.

<sup>57</sup> TNA DEFE 32/7, COS 1546/29/10/62 'Record of a conversation between the Chief of the Air Staff, the First Sea Lord and Chief of the Imperial General Staff in the Ministry of Defence at 1430 on Saturday, 27th October, 1962'. The account of this conversation that follows is based exclusively from the record contained on this file. The use of the word 'conversation' in this context may reflect the fact that the Chief of the Defence Staff, Admiral of the Fleet Lord Mountbatten of Burma, was away from London on the afternoon of 27 October 1962 and could not therefore be present. In the absence of their chairman the Chiefs of Staff would not appear to have been able to 'meet' formally as a committee.

<sup>58</sup> The notes of this meeting state that 'It was not intended that Commander-in-Chief, British Army of the Rhine, who was on holiday in Scotland, should be recalled at the moment.'

<sup>59</sup> Air Vice-Marshal Stewart Menaul, *Countdown: Britain's Strategic Nuclear Forces* (London: Robert Hale, 1980), 115.

<sup>60</sup> Group Captain Ian Madelin, 'Further Comments on Command and Control of British Nuclear Forces During the Cuban Missile Crisis,' in *Seeing Off the Bear: Anglo-American Air Power Cooperation During the Cold War*, ed. Roger G. Miller (Washington, DC: Air Force History and Museums Program, United States Air Force, 1995), 224.

<sup>61</sup> TNA AIR 24/2688, *Headquarters Bomber Command Post Exercise Report; Exercise MICKY FINN II*, confirms that MICKY FINN II took place on 20–21 September 1962. Additionally, a *Report on Exercise FALLEX '62* is also appended to HQ Bomber Command's Operations Record Book submission for October 1962. According to the latter, the synthetic phase of this exercise took place between 6–20 September 1962; this was followed by a 'live' phase that 'coincided with Bomber Command Exercise MICKY FINN. All stations in the Command were involved from the 20th–21st September, 1962.' The third phase of the exercise (a mixture of live and synthetic play) took place during 21–22 September 1962. A separate alert and readiness exercise for the Thor force – REDOUBLE – was conducted alongside MICKY FINN II.

<sup>62</sup> A further indication of the fact that no increase in the Alert Condition had been instituted by Sir Kenneth Cross prior to 27 October 1962 is provided by the 'Supplement to Form 540 – AOC-in-C's engagements for the month of October, 1962' appended to the ORB submitted HQ Bomber Command (TNA AIR 24/2688), which records that on the evening of 26 October 'The Commander-in-Chief attended the Autumn Ball at Headquarters Bomber Command'.

<sup>63</sup> According to the ORB submitted by HQ No 1 Group for October 1962 (TNA AIR 25/1703), this change in the Alert Condition was initiated 'at 1300Z on 27th October, 1962'. By contrast, the ORB for HQ No 3 Group (TNA AIR 25/1548) states that 'The Air Officer Commanding-in-Chief declared Alert Condition 3 for Bomber Command at 1307 hours.'

<sup>64</sup> TNA AIR 25/1703.

<sup>65</sup> TNA AIR 25/1703.

<sup>66</sup> For example, the ORB for RAF Wittering (TNA AIR 28/1667), then in No 3 Group, states that 'After the Station had been brought to Alert Condition 3 on 27th October 1962 in view of the world situation, an additional aircraft and crew were placed on QRA readiness.'

<sup>67</sup> TNA AIR 25/1703, ORB, No 1 Group, October 1962. Seven of the aircraft arrived back at RAF Waddington on the following day; however, the eighth aircraft was declared Cat 3 and as a result its return was delayed until 1 November 1962.

<sup>68</sup> TNA AIR 20/11371, letter from Air Marshal Sir Kenneth Cross to Air Marshal Sir Wallace Kyle, 31 October 1962.

<sup>69</sup> TNA AIR 25/1703.

<sup>70</sup> Madelin, 'Further Comments on Command and Control of British Nuclear Forces During the Cuban Missile Crisis,' 225.

<sup>71</sup> TNA AIR 20/11371, letter from Cross to Kyle, 31 October 1962.



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