ROYAL AIR FORCE

HISTORICAL SOCIETY

JOURNAL

61

First published in the UK in 2015 by the Royal Air Force Historical Society

NB Some post-publication amendments to detail have been incorporated in this archive edition.

ISSN 1361 4231

Printed by Windrush Group
Windrush House
Avenue Two
Station Lane
Witney
OX28 4XW

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SELECTED GLOSSARY

AAA	Anti-Aircraft Artillery
AAR	Air-to-Air Refuelling
ADGE	Air Defence Ground Environmemt
ADIZ	Air Defence Identification Zone
AFB	(US) Air Force Base
AFME	Air Forces Middle East
AHQ FIC	Air Headquarters French Indo China
ALFSEA	Allied Land Forces South East Asia
AOA	Air Officer Administration
APC	Armament Practice Camp
ASW	Anti-Submarine Warfare
BMH	British Military Hospital
C2	Command and Control
CIGS	Chief of the Imperial General Staff
CSR	Commonwealth Strategic Reserve
DF/GA	Day Fighter/Ground Attack
FAC	Forward Air Control(ler)
GCI	Ground-Controlled Interception
HCU	Heavy Conversion Unit
JP	Junior Pilot
JTP(FE)	Joint Theatre Plan (Far East)
LSL	Landing Ship Logistic
MBF	Medium Bomber Force
MRLA	Malayan Races Liberation Army
NAS	(US) Naval Air Station
(O)AFU	(Observers) Advanced Flying Unit
ODM	Operating Data Manual
OP	Observation Post
OSS	(US) Office of Strategic Services
OTU	Operation Training Unit
PRB	*Parti Rakyat Brunei* (Brunei People's Party)
PRC	Personnel Reception Centre
QOH	Queen’s Own Highlanders
RT UK	Return to UK
RTP(FE)	Reinforced Theatre Plan (Far East)
SEAC	South East Asia Command
TNA	The National Archives
TNKU	*Tentara Nasional Kalimantan Utara* (North Kalimantan National Army)
UE	Unit Establishment

ASPECTS OF THE RAF IN THE FAR EAST – POST-WWII

RAF MUSEUM, HENDON, 22 OCTOBER 2014

WELCOME ADDRESS BY THE SOCIETY'S CHAIRMAN

Air Vice-Marshal Nigel Baldwin CB CBE

Ladies and gentlemen – good morning – good to see you all.

As always, a sincere thank you to Ms Karen Whitting and her splendid staff here at the Museum. As I always say, we could not do without them and they help us so much.

Our Chairman today, Air Mshl Sir Ian Macfadyen, is an Old Cranwellian who began his operational flying career on the Lightning in the UK and in Germany; he then had several tours on the Phantom, including being the first pilot (along with his navigator our editor will be pleased to hear) to land that aircraft in the Falkland Islands just after the 1982 conflict. Station Commander of RAF Leuchars in the mid-1980s, he was Chief of Staff of British Forces in the HQ in Riyadh during the first Gulf War, and went back to Saudi Arabia as an air marshal to be Director General of the Saudi Armed Forces Project (Al Yamamah).

He retired from the RAF in 1999 and was appointed Her Majesty's Lieutenant Governor of the Isle of Man from 2000 to 2005, before becoming the National President of the Royal British Legion. He was appointed Constable & Governor of Windsor Castle in August 2009. He is a former Chairman of Trustees of the RAF Museum, and Chairman of the Geoffrey de Havilland Flying Foundation. He is the Honorary Air Commodore of No 606 (Chiltern) Squadron, Royal Auxiliary Air Force at RAF Benson.

So with all that in his background, he must be well qualified to lead today's seminar.

Sir Ian, you have control.

THE RAF IN INDO CHINA, 1945-46

Stuart Hadaway

Stuart Hadaway read history at Christchurch College, Canterbury 1997-2000, subsequently adding a Diploma in Museum Studies at the University of Leicester. He spent two years with the Museum of the Worcestershire Soldier, followed by five as Assistant Curator of the RAF Museum's Department of Research & Information Services before taking up his present appointment with the Air Historical Branch in 2009.

After the fall of France, Indo China[1] became a Vichy colony, although large Japanese forces soon arrived in the country. While it retained a French government and armed forces, it effectively came under Japanese control. From the Allied point of view, it fell across the border of the Chinese Theatre of Operations and South East Asia Command. Despite attempts to make the country entirely part of one or the other, the question of strategic ownership was tied in with political questions about the country's post-war future, and it was finally agreed at the Potsdam conference to split the country along the 16th parallel. It would fall to SEAC to liberate the southern half using British troops, although there would be local French troops available within the country.

Meanwhile the Indo Chinese themselves were splitting into a dizzying array of political factions, vying for various flavours of independence. While for a long time the French armed forces in the country kept a lid on the situation, after the fall of Vichy, French rule lost stability. Meanwhile Japan had its eye on the country's natural resources, and particularly transport assets, and in March 1945, they mounted a coup. French personnel were rounded up, assets seized and an independent Vietnam declared.

When the Japanese unexpectedly surrendered in August, a power vacuum resulted, not least because the interned French officials and troops were only slowly released. Ho Chi Minh's Communist Viet Minh forces took advantage of this to march on Hanoi in late August, seizing power on 2 September and declaring the Democratic Republic

of Vietnam. Over the coming weeks they seized Government centres across the country, and took control of the media and the police.

At HQ SEAC, it was decided that 20th Indian Division, under Major General Douglas Gracey, should be sent in to supervise the Japanese surrender. Gracey was given a range of objectives, which were not always terribly specific. They were:

a. To secure the Saigon area and the Japanese and civil administrations there.
b. To oversee the disarmament of all Japanese forces south of the 16th parallel.
c. To maintain law and order and ensure national security.
d. To find and evacuate Allied POWs.
e. To liberate Allied territory in so far as resources permit.
f. To give such directions to the French Indo Chinese Government as are required to effect these tasks.

His HQ Allied Land Forces French Indo China was to report, via HQ 12th Army, to General Slim as CinC ALFSEA. On the other hand, Gracey was also given charge of the Saigon Control Commission, which acted as liaison between the Japanese garrisons and Lord Mountbatten at SEAC. The duties of the two organisations were overlapping to a great extent, and their higher directions did not always agree. For example, despite the broad objectives, Mountbatten was very clear that Gracey's involvement was to be as narrow as possible. He had himself received instructions from London, based largely on the experiences in Greece the previous winter, that British forces were not to become embroiled in a civil war. The French would have to win back their own country.

To support Gracey in both of his tasks, two corresponding RAF units were formed. An RAF Element under Air Cdre Walter Cheshire was added to the Control Commission, again reporting to Mountbatten, while No 908 Wg under Gp Capt F C Sturgiss was formed to support the Army, and was controlled, via AHQ Burma, by Sir Keith Park as Allied Air Commander at SEAC. Even more than with Gracey's forces, the lines between these two bodies were extremely blurred. Cheshire records in his memoirs[2] how his brief was somewhat lacking:

'When Air Command Headquarters at Kandy detailed me for

Japanese POWs maintaining the pavement at Tan Son Nhut.

this appointment, they were extremely vague about the duties and responsibilities involved, and this lack of positive instructions was further emphasised when the Staff invited me to write my own brief.'

In effect Cheshire took control of both organisations, and penned the following directives, which were just as vague as Gracey's. The RAF would provide:

a. Air Defence and support of armed forces in the Saigon area with shows of force.
b. Air lift to Saigon.
c. Air supply to British forces of occupation.

On 1 October, the lines were further blurred when 908 Wing was disbanded and Air Headquarters French Indo China (AHQ FIC), under Cheshire, was formed at RAF Saigon, ie Tan Son Nhut airfield, which was located just outside the city. Unfortunately the new arrangement was unclear, and the Operations Record Book for RAF Saigon shows that no one was quite sure who or what AHQ FIC actually was, or whose staff was responsible for it. Even two months later, all paperwork was being copied to both the staff at RAF Saigon and to Cheshire's office at the Control Commission. However, for all of the administrative confusion, a practical approach was adopted by those involved, and somehow the system worked.

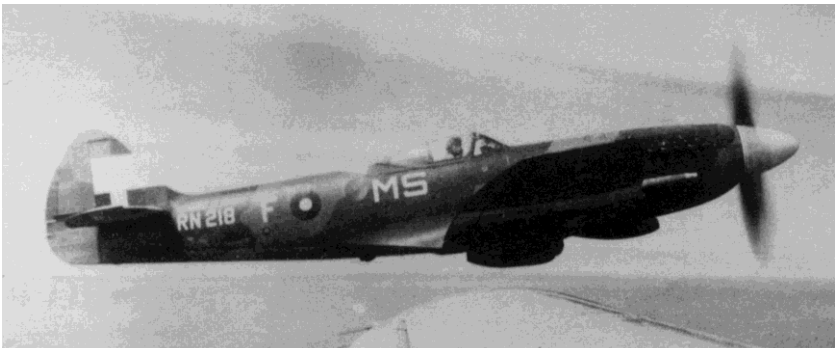
A number of units were involved. On the air transport side, there

A Mosquito PR34 of No 684 Sqn.

were several squadrons in the region, mostly using Lend-Lease Dakotas. These were transients, mostly based in Burma and using RAF Saigon as a staging post. Actually based *in* Indo China was No 684 Sqn, using Mosquitos to conduct a photographic survey of the country in order to create accurate maps, and No 273 Sqn, equipped with Spitfire VIIIs, and later Mk XIVs. To support the flying units, the necessary ground element eventually comprised:

No 1307 Wing, RAF Regt.
No 2963 AA Squadron, RAF Regt.
No 2967 Field Squadron, RAF Regt.
No 98 Mobile Flying Control Unit
Det No 3209 Servicing Commando
Det No 99 Embarkation Unit
Nos 5803, 5804, 5820, 5847, 5876, 55647 & 55656 Mobile Signals Units
No 347 Wing Mobile Photographic Section
No 7273 Serving Echelon
No 2 Field Hygiene Section
No 2 Staging Post
No 717 Meteorological Forecast Section
No 23 Anti-Malarial Control Unit

Indian troops began to arrive in Saigon on 11 September, the first permanent RAF personnel, No 273 Sqn's advance echelon, following



The only aircraft available to the RAF in Indo China with any combat potential were the Spitfire XIVs of No 273 Sqn.

on the 19th. At this stage, it is clear that few of those involved had any real idea what was ahead of them. Later, the Intelligence Officer at AHQ FIC would freely admit that: 'The Annamite disturbances were not reckoned for prior to our arrival.'

On the ground, resistance was encountered from the locals, particularly the Viet Minh, who were being actively trained and armed by the OSS as well as escaped Japanese personnel. With limited numbers on the ground and an unclear intelligence picture, Gracey was forced to employ Japanese troops to maintain order, which only confused matters more. When No 273 Sqn arrived, they discovered that:[3]

> 'The situation in Saigon is bewildering, though, when we have our former enemies now our allies against a foe of which nearly all the squadron never knew the existence.'

It took some six weeks to move all of the RAF units into the country. During this interlude the airfield was attacked or experienced sabotage on several occasions, and a number of casualties were suffered. It was late October before the airfield was provided with an adequate degree of security, using a mixed force of RAF Regt, Japanese and Gurkha troops.

While intelligence was still being gathered by British, French and American sources in Indo China, it was not getting through to all levels; nor was clear information on their overall mission getting through to those on the ground. Even basic information could be

lacking; the use of the word ‘Annamite’ to describe the Indo Chinese itself suggests a lack of understanding of the politics and geography of the country. Very few reports differentiated between the local guerrilla groups, and confusion was rife. One report, admittedly slightly hysterical in tone, seemingly refers to ‘Buddhist guerrillas’. Even the value of the information gathered by the Spitfires could be suspect; apart from the fact that they flew exactly the same patrol pattern at the same time every day, they also discovered that it could be flown in just 25 minutes, which casts some doubt on their thoroughness and on their ability to catch the enemy unawares.

Through late September, Spitfire operations were limited by lack of fuel, although some ‘show of force’ flights were made by large formations. This was in line with Cheshire’s brief, which effectively limited shows of force to the Saigon area. Cheshire noted that:[4]

> ‘This limitation was imposed for political reasons, based on the curious idea that bullets fired from aircraft were politically more reprehensible than bullets, equally lethal, fired from the ground.’

The reasons behind these orders were the same as those behind Gracey’s, ie to conduct only defensive operations to secure the position in Saigon. The British were to free any POWs and disarm the Japanese, for which securing the city was a necessary prerequisite, and then withdraw, leaving any protracted counter-insurgency campaigns to be fought by the French. The strict rules of engagement were a part of a policy which aimed to avoid becoming involved in someone else’s fight.

In practice, this was not entirely possible. To control Saigon, the Viet Minh would need to be ousted from Government buildings, and control of the police and media regained. For their part, the Indo Chinese saw little distinction between the European forces, particularly as Gracey’s, and Cheshire’s, remits were technically Allied rather than strictly British. While the local armed forces, including paramilitary irregulars were independent, the French air forces, of which more later, came under Cheshire’s control.

French reinforcements were coming from the Middle East, but would not arrive for weeks, if not months, so Gracey had to use his own troops to re-establish French control over the city. On

An example of a Japanese Army Air Force aeroplane co-opted into quasi-RAF service, in this case a Kawasaki Ki 48 light bomber.

23 September, he mounted a counter-coup, wresting control back from the Viet Minh while No 273 Sqn wheeled overhead, showing force. In the aftermath of this, violence flared in the city and guerrilla forces began to gather in the areas around Saigon. On 30 September, Gracey signalled Mountbatten to clarify the position on the use of his air assets. Could aircraft on tactical reconnaissance sorties attack hostile targets? The following day, fresh rules were issued from SEAC: aircraft could attack hostile targets only in order to clear roads that were being used by Gracey in the immediate Saigon area, but only after warning leaflets had been dropped.

For the moment it was a moot point, as the Viet Minh agreed to a ceasefire on 2 October, besides which fuel shortages still greatly restricted flying. Ample stocks of Japanese aviation fuel were available but it was unsuitable for British engines so Cheshire was obliged to use Japanese pilots to fly reconnaissance sorties using their own aircraft, usually with RAF pilots on board as observers.

These Japanese forces also provided the means for one of the stranger post-war RAF formations. Although British commitments in the Far East were expanding, the available transport fleet was contracting as Lend Lease Dakotas were either returned or lost from lack of spares. So the Japanese Air Force in French Indo China was conscripted.

Air Cdre Cheshire took it upon himself to form the Gremlin Task

Force, using Japanese aircraft, with their markings modified into RAF roundels, which were flown and maintained by Japanese personnel. Apart from a couple of officers to supervise the paperwork and a handful of wireless operators for ground control, this force cost the RAF little while boosting the air transport available in the region. They made several thousand sorties across South East Asia before the British withdrawal, and even though Cheshire was reproved for not having sought appropriate authorisation, the Force was a great success and undoubtedly eased the air transport situation.

Only from 14 October did daily recces begin to take place around the city, with longer sorties further out once a week. These were to be purely reconnaissance, with no latitude to attack targets of opportunity, even though the Viet Minh had broken their truce and were again attacking Allied forces. Even when Allied troops began a push on the 12th to expand their hold on Saigon, it was made clear that requests for air support had first to be cleared by Gracey's HQ, and that:[5]

> 'Spitfire support will be available only, repeat only, in the case of grave necessity, and then after due warning has been given by leaflets being dropped.'

However, Britain's restricted stance nearly took a blow on the 17th, when Viet Minh forces attacked the Japanese garrison at Dalat, over 100 miles north east of Saigon, where large numbers of French civilians had taken refuge. Having seen several large-scale massacres of French civilians already, Gracey ordered Cheshire to lend the garrison air support until reinforcements could arrive. The initiative would lie with the Squadron Commander as to how and where to attack, with the provisos that leaflets were to be dropped first and that only the minimum force necessary was to be employed.

After a last minute rethink about the use of force, unarmed sorties were eventually flown with some successful dummy attacks breaking up Viet Minh concentrations. From then until mid-December, the rules were strictly adhered to; no offensive action was taken by the RAF, although the daily and weekly patrols continued and regular shows of force were mounted, which invariably scattered the enemy targeted. On several occasions, these sorties were carried out in conjunction with ground operations, with Spitfires making low passes over

Five French Morane 500s plus a Spitfire at Tan Son Nhut with sundry damaged Japanese aircraft in the background.

villages as troops entered.

The biggest problem over this period was the French Air Force, which was still under Allied command and control. Although they only had limited assets in theatre – a few Morane 500s (licence-built adaptations of the Fiesler Storch), some Catalina amphibians, and a handful of salvaged Japanese fighters – they were still taking an active part in the tactical reconnaissance work. Perhaps understandably, with local French troops struggling to contain the insurgency and atrocities being committed against civilians, the French increasingly broke their standing orders. By mid-November the issue had come to a head, with reports of Catalinas conducting ground attack operations without first dropping leaflets. The French commander, Le Clerc, protested that the present system, where air support was only for troops working in direct conjunction with the British, was too restrictive. On the British part, the fear was that the French actions could be blamed on the RAF and the British Government, leading to a spiral of reprisal attacks and counter-attacks.

Le Clerc requested that a squadron of Spitfires be loaned to him until the arrival of French Spitfire IXs from Europe. As French personnel were not available, ground crews, and perhaps even pilots, would also have to be supplied by the British. The issue was referred

French Catalinas, like this one, were reportedly being used to fly ground attack sorties in November 1945.

to Mountbatten, who felt that the 'obvious' solution was that aircraft and ground crew should be loaned, as long as the markings were changed accordingly. He passed the issue on to Park, whose response was nothing if not emphatic. He stated that he had no authority to lend RAF equipment to foreign powers, and that changing the markings would hardly stop the enemy assuming that the Spitfires were British. Besides, the Spitfires were needed elsewhere in SEAC as American aircraft were being withdrawn under Lend-Lease. He did, however, agree that the French should be given freedom of action under their own command.

London, however, took a different view. They were seeking leverage to negotiate the use of Tan Son Nhut as a transport staging post after the planned withdrawal of the RAF in early 1946, and the Spitfires were a suitable bargaining chip. The matter shuttled back and forth between London and SEAC for a month until, in mid-November, it was agreed that twelve Spitfire VIIIs would be loaned to the French, on condition that they could provide air and ground crews and enough spares. In fact, the French did not have the necessary back-up, and more than half of the Spitfires were soon unserviceable. Even when their own Mk IXs began to arrive in January they still lacked the resources needed to support them. Although the aircraft were uncrated, this was more to do with the desire to use the crates for accommodation than anything else, and the French Spitfire VIIIs and IXs both

suffered a high accident rate.

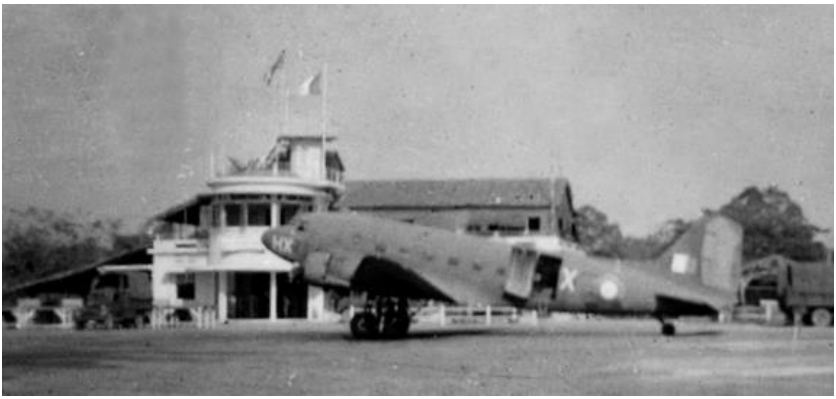
Meanwhile, No 273 Sqn continued to patrol and carry out dummy attacks where necessary. On only one occasion was live-firing authorised, after a desperate plea from Le Clerc. The French garrison at Ban Me Thuot was attacked by vastly superior forces on 8 December, and suffered heavy casualties. Further attacks followed over the next two days, but no French aircraft were serviceable. On 11 December, with the attacks continuing, Gracey authorised three Spitfires to make ground attack runs in support of the French garrison, although they were told not to attack large concentrations of guerrillas. After dropping leaflets several attack runs were made at very low level and various buildings and vehicles were strafed. The French garrison directed some of these attacks with signals from the ground, but not all of these signals could be understood by the pilots. No further attacks were made against the garrison.

Apart from this brief excitement and the occasional dummy attack, the routine of tactical reconnaissance work continued. Its surveys finished, No 684 Sqn withdrew in January 1946 while No 273 Sqn was notified that it would be disbanded at the end of the month. By mid-January, personnel began to be moved to Burma and, as planned, the squadron was disbanded on the 31st. Two weeks later RAF Saigon was also closed, although a small staging post remained at Tan Son Nhut.

The deployment had lasted less than five months, but it had achieved the aims set out for it. Through strict adherence to the rules of engagement, any form of escalation of British involvement had been avoided. In the air, even more than on the ground, British forces had stuck to their remit and, unlike elsewhere in SEAC, had avoided being drawn further into the civil war that was breaking out across the country.

Postscript:

After occupying Tan Son Nhut, the RAF ran a Union Jack up the flagpole on the terminal building. When the French arrived to take over the country's administration, they insisted that the flag be replaced with a Tricolour, and it duly was. On the first night, the Tricolour was removed by an RAF person or persons unknown and the Union Jack replaced. At dawn the French protested, and the Union



While it is not of the highest quality, this photograph suffices to show the two flagpoles on the roof of the terminal building at Tan Son Nhut – with the Union Jack flying from the taller one.

Flag was again hauled down and the Tricolour run up. The same thing happened again the following night, and the subsequent dawn.

The night after that, the flagpole outside the Governor's Residence in Saigon mysteriously disappeared. It had been calculated – or so an LAC, who recounted the tale to the author in minute detail (while at the same time denying any personal involvement) states – that this flagpole was the tallest in the city, if not the country. The following dawn, a Union Flag was flying over the terminal from a newly erected second pole and, due to its added length, high above the Tricolour. There it remained until the British withdrew.

Notes:

[1] Today, Indochina is conventionally rendered as one word (and in French, always, as *Indochine*) in 1945-46, however, it was usually divided as Indo China, sometimes hyphenated, sometimes not. Since the local RAF Commander, Air Cdre Cheshire, used the *sans* hyphen option, that style has been reflected in this paper. **Ed**

[2] RAF Museum X004-8416, also reproduced as 'The Gremlin Task Force' by Air Chf Mshl Sir Walter Cheshire, in RAF Historical Society Journal 47 (2010).

[3] TNA AIR27/1583; No 273 Sqn ORB, 1945.

[4] Cheshire, *op cit*.

[5] TNA WO203/2579, Enc. 10 – ALF FIC Operation Instruction No 4 dated 11 October 1945.

THE ROYAL AIR FORCE IN KOREA

Ewan Burnet

Ewan Burnet began his career in 2006 as a museum assistant with the Imperial War Museum at Duxford. He moved to the RAF Museum at Hendon in 2008 where he is currently curator of the film and sound archive.

This paper aims to provide a brief survey of the RAF's role during the Korean War, with some reference to the decision-making processes at senior military and political levels. In writing this paper I have drawn on various sources, including, of course, the RAF Historical Society's last look at the Korean War, in 2000. I hope that, in the course of this paper, I will be able to add something to this earlier work.

With the end of Japanese occupation in 1945, Korea was divided into north and south along the 38th parallel, with Soviet forces occupying the northern part and the southern being the responsibility of the United States. By 1950, US forces in South Korea were very much depleted and it was at this point, with Soviet agreement, that North Korea saw an opportunity to reunite the country under its own ideology.

On 25 June 1950, North Korean forces invaded South Korea. On the same day, United Nations Security Council Resolution 82 called for an immediate cessation of hostilities and on 'the authorities in North Korea to withdraw forthwith their armed forces to the 38th parallel.' It further called on 'all member states to render every assistance to the United Nations in the execution of this resolution and to refrain from giving assistance to the North Korean authorities.' Needless to say, this was ignored by North Korea, and on 27 June, the UN passed Security Council Resolution 83, recommending that 'the members of the United Nations furnish such assistance to the Republic of Korea as may be necessary to repel the armed attack and to restore international peace and security in the area.' The passing of both resolutions was facilitated by the absence of the Soviet Union, which was at this time boycotting the UN over the issue of recognition, and a permanent seat on the security council, for the People's Republic of

China.

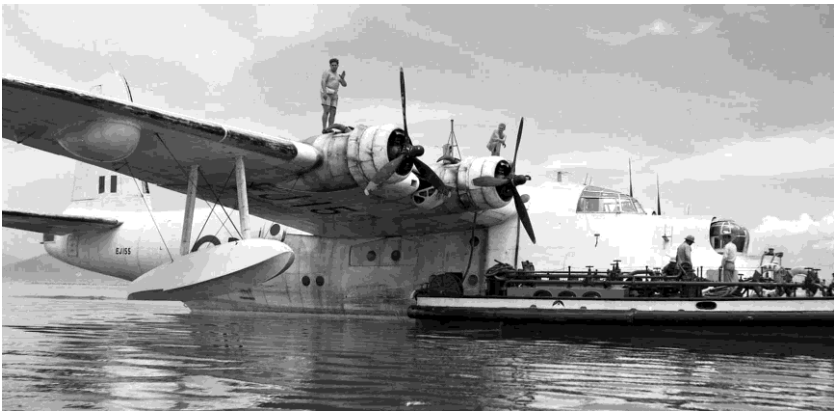
On the same day, 27 June, the Cabinet met; Korea was fourth on the agenda, after the integration of the French and German coal and steel industries, the white fish industry and marginal land, but the Cabinet agreed, among other things, that the Minister of Defence, Emanuel Shinwell, should arrange for the Chiefs of Staff to report on how the UK might be able to assist South Korea.

The Chiefs of Staff discussed Korea on 3 July and, in the context of deteriorating east-west relations, agreed that it was highly probable that the North Korean invasion had been instigated by the Russians in the hope of either conquering South Korea, and thereby humiliating the west, or of forcing the western nations to divert forces from other theatres – with the implication that Russia would then have the opportunity to further its territorial ambitions in other parts of the world. On this basis, 'There was general agreement that it would be fundamentally unsound on military grounds to send land or air forces to Korea.'

The Chiefs did, however, concede that it might be possible to spare five Sunderlands from Hong Kong, but expressed concern for the morale of Hong Kong's population if aircraft were redeployed and doubted in any case that they would be of much use to the Americans given the current situation.

The Cabinet endorsed the Chiefs' views on 6 July, noting that, 'It was especially important at the present time that preoccupation with Korea should not divert attention from other danger-spots in these areas; and also that we should not allow the situation in the East generally to blind us to the risks to which we were exposed in Europe.' The British government and service chiefs were therefore largely in agreement that no forces could be spared for Korea, with the exception of a Sunderland squadron, deployment of which appears to have been authorised by the Prime Minister at this time.

The possibility was also raised in July 1950, by the Chief of the Air Staff, Sir John Slessor, that two squadrons of Mustangs might be manned by British volunteers, if the Americans could supply aircraft and maintenance facilities. The idea was put to the Americans, who declined on the grounds that they did not require additional air support in Korea itself, and that they would prefer the British to maintain their strength in other parts of the world. Perhaps because South Africa did



A Sunderland GR 5, EJ155, of No 88 Sqn at Iwakuni. (Ken Mattocks via No 656 Sqn Assoc)

not have the same level of international commitment as the UK, No 2 Sqn of the South African Air Force did deploy to Korea on terms similar to those proposed by Slessor for RAF volunteers, making use of American-supplied Mustangs and logistics on arrival in theatre.

On 7 July 1950, the Air Officer Commanding, Hong Kong, Air Cdre A D Davies, and OC 88 Sqn, Sqn Ldr J W Helme, flew to Iwakuni in a Sunderland for discussions on the facilities available there to support flying boat operations. They returned to Hong Kong on the 9th; two days later extra mooring buoys were being laid and office accommodation obtained at Iwakuni. A second meeting took place on 16 July for discussions with naval operations staff, and the first Sunderland patrol of the Korean War was flown on the 18th – beginning a commitment that would continue on a rotating basis between the three Far East Sunderland units – Nos 88, 205 and 209 Sqns – until August 1954.

At the request of the United States, an extra squadron was deployed to Iwakuni in early September to fly in support of the Inchon landings, beginning on 15 September. Two squadrons remained on station until the following spring, by which point the Air Ministry and Chiefs of Staff were questioning the need for so many Sunderlands to be operating in the Korean theatre. It was decided that there was not enough work for so many aircraft, and as the Americans had no objection, the commitment was reduced to a single squadron in April

1951, the three squadrons continuing to rotate in turn and with the aircraft released being put to work in Malaya.

Korean War Sunderland patrols took place in the context of a variable operational tempo, as the aircraft were also supporting Operation FIREDOG in Malaya in addition to their routine Search and Rescue and transport commitments. That the tempo could be quite high at times is evident from the Operations Record Books, and from first-hand accounts; for instance, in his *Sunderland over Far Eastern Seas*, Derek Empson states:

> 'On 23 March [1953], with Dave Cooke as captain, we flew a 7 hrs 20 min Operation Firedog over the Malayan jungle. We dropped 240 bombs and fired many thousands of rounds of 0·5 in cannon and 0·303 in. machine-gun ammunition over a five-hour period into an area of primary jungle about an hour's flying time north of Singapore. Two days later we were summoned to fly to Iwakuni for a five-week detachment on Korean operations, departing on the evening of 25 March.' [1]

And then:

> 'Having completed just over five weeks at Iwakuni, on 1 May F/L Dave Cooke and our crew of C-Charlie flew to Kai Tak for a one-month search and rescue (SAR) detachment.'[2]

So what sort of operations were being flown by the Sunderlands? The ORBs are, of course, a little sparse on detail, beyond mentioning general locations – the Yellow Sea for example. Fortunately there is a bit more detail in other sources. Empson provides a detailed account of the types of patrol flown, and this is supported to some extent by other first-hand accounts.

One of the main roles of the Sunderland, and its US Navy counterparts, during the Korean War was surveillance of shipping and anti-submarine patrols in the Tsushima Straits and Yellow Sea. Air Surveillance Patrol (ASP; sometimes known as Anti-Submarine Patrol) Tsushima covered the busy shipping routes between Korea and Japan, while Yellow Sea patrols were coded Fox – Fox Red, Fox Blue, Fox Green for example. The Sunderlands would fly pre-planned routes in their allocated areas, diverting as necessary to identify and assess surface radar contacts and co-ordinating with warships if

further action was required. Very little in the way of anti-submarine work proved necessary, and in June 1951 this was pointed out in a loose minute written by a group captain serving as an Operations Officer with the Far East Air Force, together with a query on whether there was known to be any submarine activity or if ASW patrols were entirely precautionary.

West Coast Weather patrols were used to provide meteorological data essential for the planning of air strikes against targets in Korea; authentication procedures were in place to ensure that information was passed to the correct recipient, and there was some suspicion that North Korean or Chinese forces did try to fool aircrews into passing weather data prematurely – in the hope that they would not then pass it to the correct destination. Mine clearance and anti-submarine patrols were also flown, both as routine sorties and in support of specific operations – such as the Inchon landings. All of these operations involved very long over-water flights, often in freezing temperatures and bad weather. The commitment continued for a full year after the armistice in Korea, although at a much reduced tempo, with Sunderland patrols finally ending in August 1954.

Plans to run down the Far East Sunderland force early in 1951 had been suspended due to the Korean War, but were soon revived following the Armistice, with No 88 Sqn disbanding on 1 October 1954, Nos 205 and 209 Sqns merging in January 1955 and Sunderland operations finally ceasing altogether in May 1959. Thereafter, maritime operations became the exclusive responsibility of land-based aircraft – particularly the Shackleton.

I will finish on Sunderlands with an interesting story regarding another aspect of the Sunderland's role, taken from a first-hand account in the RAF Museum's archives. Archie Kinch remembers how he was introduced to 'two rather scruffy Koreans, both of whom spoke English with polished Harvard accents.' With the two Koreans as passengers, he was issued with sealed orders and despatched north along the east coast of Korea. On opening the orders at a designated point, he discovered that the agents were to be dropped in a small bay near Hungnam, which he did, despite the boat sent to meet them creating a hole in the Sunderland's fuselage. Mock attacks by two American Corsairs notwithstanding, he was able to return without incident.

A US Special Service operator jumping from an Auster AOP 6 of No 1913 Flt in 1954. (Ken Mattocks via No 656 Sqn Assoc)

Austers

Although under RAF command, and having some RAF personnel, the Austers of No 1903 AOP (Air Observation Post) Flight and No 1913 Light Liaison Flight, the only British aircraft operating from bases in Korea itself, were flown and serviced predominantly by soldiers. No 1903 Flt was transferred from Hong Kong to Korea in the summer of 1951 as part of the build-up of the Commonwealth Division, to be followed in November by No 1913 Flt, specifically formed for service in Korea. Operating from rough forward airstrips, they provided light transport, reconnaissance and artillery-spotting support to ground forces, dealing in the process with alternate extremes of low and high temperature – interspersed with a considerable amount of mud as the seasons changed. Propeller-swinging could be a dangerous occupation on icy ground; ground fire could be a hazard when loitering over enemy lines and administration was complicated by the need to take into account both Army and RAF requirements, but Nos 1903 and 1913 Flts did by all accounts put in a very creditable performance throughout the conflict, and sustained relatively few casualties in the process.

Casualty evacuation

As early as August 1950, Cecil Bouchier (see below) was

Lyneham-based Hastings, like this one, seen taking off from Kai Tak in 1953, were involved in the evacuation of casualties from Korea. (Ken Mattocks via No 656 Sqn Assoc)

informing the UK Chiefs of Staff of the facilities available in Japan to handle Hastings aircraft tasked for transport and casualty evacuation. Under a United Nations agreement dated 1 March 1952, responsibility for the evacuation of casualties from Korea to hospitals in Japan rested with the United States 8th Army, after which they would become a national responsibility. No 30 Transport Unit, RAAF (which became No 36 Sqn in March 1953) was active in providing logistic support to No 77 Sqn, and in transporting soldiers in and out of Korea; casualty evacuation also fell within the unit's remit. RAF Dakotas, Hastings and Valettas were put to use evacuating British casualties from the hospital at Iwakuni to Singapore and from Singapore back to the United Kingdom on the route already used regularly by RAF transport aircraft – with stops at Negombo, Karachi, Habbaniya and Malta. RAF medical staff were also based in Korea but, regrettably, there seems to be little information available on their activities.

Individual officers

Although very few RAF squadrons operated in or around Korea during the war, a number of individual officers served during the

AVM (seen here as Air Cdre) Cecil 'Boy' Bouchier played a key role in the British involvement in the Korean War.

conflict in various roles. Perhaps the most influential was AVM Cecil Bouchier, who arrived in Korea on 5 August 1950 as the representative of the British Chiefs of Staff at Douglas MacArthur's headquarters in Tokyo. According to Bouchier's own account,[3] he was briefed by the CIGS, FM William Slim, to 'Ride MacArthur off if he tries to ask for a single British soldier,' but Bouchier soon decided for himself that there was a need for British ground forces to be committed. He accordingly submitted his recommendation to the Chiefs and pressed the point on several occasions. Bouchier remained at his post until relieved at the end of 1952, sending regular reports on the situation in Korea and at the end of his tour he received glowing testimonials from Slessor and General Mark Clark (who was by then commanding United Nations forces in Korea). In October 1952 he wrote to Slessor, pointing out that he had been in Japan for two years without leave, that his wife had been caring for their disabled son for six years while he had served overseas and that he had turned down a well-paid job in business in order to continue serving in the RAF; but he emphasises that 'my duty will always come first' and that if he was still needed in the Far East 'the personal considerations about which I write are of no importance whatever.'

Two other well-known officers who participated in the war were Johnny Johnson, already famous as a Second World War Spitfire pilot, and Peter Wykeham-Barnes. Johnson was serving on an exchange tour in the United States at the start of the Korean War and was detached, initially to join Bouchier's staff 'with the object of gathering together information about the Korean War which will assist us to improve our operational and technical efficiency.'[4] He went on to fly various American aircraft types during his tour in Korea, including the F-80, F-86 and B-26. According to his own account, the

(The then) Wg Cdr Peter Wykeham-Barnes was seconded to the USAF in 1950 to advise on the conduct of night attack operations being conducted by B-26s of the 3rd Bomb Wing.

gist of his subsequent report to Slessor was that tactical aviation had saved the day during the battle for the Pusan perimeter but that a number of mistakes had been made and that there were important lessons to be drawn from the conflict.

Peter Wykeham-Barnes served in an advisory role, passing on the benefit of his experience in interdiction operations during WW II. Wykeham-Barnes gave a lecture on his Korean experiences to the Royal United Services Institute in December 1951,[5] when he explained that the Americans had discovered early in the Korean conflict that their expertise in interdiction operations was lacking, and that they had asked for the loan of an RAF advisor with experience in this role. Barnes was given the task. Attached to US 5th Air Force headquarters, he flew on several operations, as well as assisting in planning. Like Johnson, Wykeham-Barnes stressed the importance of air power in supporting ground forces against North Korean attacks during the early part of the war, and developed his lecture with details of the difficulties experienced in making effective use of aircraft at this time.

Johnson and Barnes were broadly in agreement on several points: the lack of preparedness for key aspects of the air war, such as interdiction; the importance of air superiority; the value of proper communication and co-ordination between air and ground forces, and the value of jet aircraft. Much seemed to have been forgotten and neglected in the five years since the end of the war, but much expertise was still on hand from that conflict and the fundamentals identified by Johnson and Barnes – control of the air, close air support for ground forces, interdiction of enemy movements behind the lines and effective co-ordination of air and ground forces – were not long in reasserting themselves.

Flt Lts J R Maitland (left) and R T F Dickinson were among the RAF pilots who flew USAF F-86 Sabres in Korea, Dickinson being credited with having destroyed a MiG-15.

United Nations forces were also fortunate to have, in the F-86, a fighter aircraft capable of matching the MiG-15. Johnson and Barnes also joined other western officers in criticising the restriction imposed on operations north of the Yalu River, on the border between North Korea and China. The ban was put in place in an attempt to prevent escalation of the conflict to war with China, but was seen by many military officers as unwarranted political interference, preventing United Nations forces from doing what they believed to be necessary to win the war.

A formal exchange programme under which RAF pilots could gain experience in the F-86 in Korea was established quite late on in the conflict, at Slessor's instigation. After an interview with AOCinC Fighter Command, Sir Basil Embry, some two-dozen pilots were converted to the F-86 at Nellis AFB in Nevada before being posted to Korea where they flew with operational USAF units. The opportunity for RAF pilots to gain experience in flying what was then the west's most capable fighter in combat against Soviet aircraft, was not to be missed, and pilots such as Joe Blyth, Peter Scott, John Nicholls and Jock Maitland among others, were able to bring back valuable lessons to the mainstream RAF.

The F-86 was not the only American aircraft flown by RAF pilots in Korea; Alan Boxer (later to rise to the rank of air vice-marshal) for example flew the B-29, which was in RAF service as the Washington

at the time, and played an important part in attacking strategically important targets in North Korea – although not, of course, north of the Yalu. Boxer was already serving as an exchange officer with the USAF at the start of the war, and he served a six month tour in Korea as part of that posting. He was decorated by the Americans, receiving the Air Medal in May 1951 for his service in Korea.

John Price remembered how, finding themselves with a shortage of suitable pilots, the Royal Australian Air Force requested RAF pilots to serve with No 77 Sqn RAAF in Korea, operating first Mustangs and then Meteor F.8s, primarily in a ground attack role. No 77 Sqn had been stationed in Japan prior to the outbreak of the Korean War, and had been about to disband at the time of the North Korean invasion. Disbandment was rapidly cancelled and from 2 July the squadron found itself providing escorts for C-47s, B-26s and B-29s, as well as conducting ground attack operations against North Korean ground forces. Attempts to acquire Sabres were unsuccessful due to priority being given to the USAF, and No77 Sqn was re-equipped instead with Meteors in the spring of 1951. As the Meteor was no match for the MiG-15 in aerial combat, the Australians continued to operate primarily in a ground attack role, although aerial combat against MiGs did occur and did not always result in victory for communist forces.

This has been only a brief summary of the RAF's activities during the Korean War, drawing on a number of sources and leaving much out due to limited time for research and the need to remain within the boundaries of my time slot. Several areas, such as the role of exchange pilots or the work of RAF medical staff in Korea itself, could stand further investigation but I hope that this has been of some interest.

Notes:

[1] Empson, Derek K; *Sunderland over Far Eastern Seas* (Pen & Sword; Barnsley; 2010) p60.

[2] Empson, *op cit*, p91.

[3] Bouchier, Cecil (Ed Britton, Dorothy, Lady Bouchier); *Spitfires in Japan* (Global Oriental; Folkestone; 2005).

[4] TNA AIR 20/7412. Signal dated 30 September 1950.

[5] Reported in *Flight*, 14 December 1951, p760.

BRUNEI 1962-63

Sebastian Cox

Sebastian Cox has been the Head of the Air Historical Branch (RAF) in the Ministry of Defence since 1996 – the first person to hold that post without having previous commissioned military service. He has written widely on the history of the RAF and air power, and has edited two book series related to the subject. He is an ex-officio member of the Society's Committee, an elected trustee of the Society of Military History, and a member of the British Commission of Military History. He has lectured on air power to military and civilian audiences on four continents.

Mr Chairman thank you. Good morning ladies and gentlemen. My task this morning is to discuss the part played by the Royal Air Force in the event now known to history as the Brunei Revolt. I think it would be helpful to start with a brief description of the geography of the island of Borneo and the political background and situation in December 1962 before moving on to describe the revolt itself and the military operations which followed.

The island of Borneo is the third largest in the world and has an area of some 736,000 square kilometres. In the era of colonial occupation it was divided politically between the British and the Dutch and this historic division had carried forward into the period of decolonisation. Approximately 76% of the island covering 540,000 square kilometres had been part of the Dutch colonial empire in the east indies and this became the Indonesian province of Kalimantan comprising most of the south and east of the island. A further 26% of the island, along the northern coastal strip, formed the British administered territories of Sarawak and North Borneo, the latter also known as Sabah. Sarawak covers some 48,250 square miles and Sabah 29,400 square miles and together they have a coastline of 1,400 miles and their land border with Indonesian Kalimantan is 900 miles long. The remaining 1% of Borneo was, and is, made up of the Sultanate of Brunei. To the north of Borneo lies the small island of Labuan with a good harbour at Victoria. Labuan also had an airport with a good

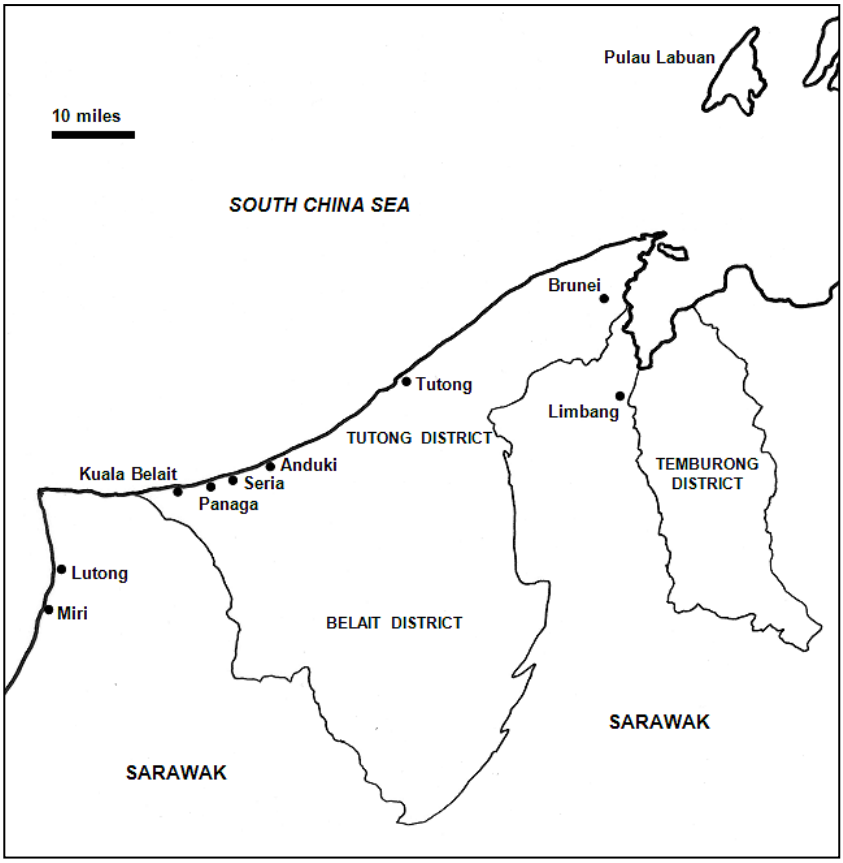
runway and some hardstandings used by the Malayan airliners which served the territory and included a resident RAF detachment.

Brunei was ruled by the Sultan, Sir Omar Ali Saifuddien. Under a 1906 agreement he ruled with the benefit of advice from a British Resident. Under a treaty signed in 1888 all three northern Borneo territories were under British protection and post-war Sarawak and North Borneo were made crown colonies whilst Brunei remained a protectorate. Ethnically the island was also divided, with ethnic Malays, Chinese, and the indigenous Dayak peoples intermingled and there were also large numbers of Indonesian workers in the north with 30,000 present in Sabah alone.[1]

The interior of the island was covered by rainforest and mountain ranges and there were few roads outside the coastal areas. Transportation was largely on foot or by boat along the coast or the many rivers running down from the mountains, and the population was likewise concentrated in the coastal kampongs and along the rivers where the famed indigenous Dayak longhouses were often situated.

The discovery of rich oil and gas deposits on the Brunei coast in 1929 was to transform the economic prospects of the Sultanate and Shell subsequently built oil facilities at Seria in Brunei. This gave the Sultan access to great wealth but political development in the territory was slow. The Sultan continued to rule in an autocratic, if largely benevolent, manner but his administration was also corrupt and inefficient. Some constitutional progress was made, when under pressure from the British and Malayan governments, elections to a new legislative council were announced. The Sultan, however, retained the right to appoint seventeen of the thirty-three council members, with the remaining sixteen places filled by elected representatives. In the event the *Parti Rakyat Brunei* (PRB) or people's party under its leader, A M Azahari, won all sixteen seats.

But the political developments in Brunei cannot, and could not be, separated from the wider political developments within the region as a whole, and in particular the decolonisation process for Malaya and Singapore and the arrangements for their self-government. Both the British government and the leading Malayan politician at the time, Tunku (or Prince) Abdul Rahman, favoured the creation of a Malayan federal state structure encompassing the Malayan peninsula,



The Sultanate of Brunei.

Singapore, and the three northern territories on Borneo, including the Sultanate of Brunei.

There were tensions between Singaporean political leaders, notably Lee Kuan Yew, and the peninsular Malayans, but these did not at first derail the move towards some form of wider Malaysian federation. The proposal for this enlarged Malaysian entity was, however, viewed with hostility by President Sukarno of Indonesia and by the Philippines government, both of which regarded it as an ill-disguised attempt by the British to retain effective control over Malayan affairs and thus perpetuate colonial rule in a different form. In addition both

these governments maintained historic claims to the northern Borneo territories.

The Sultan was himself somewhat ambivalent towards the incorporation of Brunei within a greater Malaysian solution. Under pressure to agree from the British and Malaysians he prevaricated, probably because he feared the potential diminution in his own powers within a more dominant Malayan structure and also harboured not unfounded suspicious that some Malaysian politicians viewed the oil wealth of Brunei as potentially a Malayan and not purely Bruneian asset. He recognised, however, that the tiny size and great wealth of Brunei made it vulnerable and that some form of political union with Malaysia would provide greater protection.

A M Azahari's exact political aims in 1962 were and are somewhat opaque. In September 1962 the *Borneo Bulletin* had published two statements from Azahari: one supporting the Sultan's policy of joining Malaysia and one calling for an independent Borneo federation.[2] Given subsequent events it appears that he did apparently favour the creation of an independent confederation of the three states of north Borneo under the Sultan. The exact relationship he envisaged between such a state and Kalimantan and Indonesia is less clear. What is certain is that he did not favour the Malaysian solution and that he and his party actively campaigned against it, particularly amongst the Malay population in Borneo. Azahari's strategy, however, was not limited to democratic engagement through the legislative council. The PRB also had an armed and militant wing known as the *Tentara Nasional Kalimantan Utara*, or North Kalimantan National Army or TNKU. According to a British intelligence assessment, based on interrogations of captured rebels, Azahari had reached an agreement with the Indonesians for the latter to give military training to the TNKU in camps in Kalimantan. These cadres were trained over some months and then returned to train other volunteers in northern Borneo.[3] Although the Indonesians tried to disguise their military involvement behind a façade of these instructors being volunteers, the assessment also stated that the Indonesian military intelligence service had been engaged in subversive activity in northern Borneo for two years under the guidance of the delightfully named, and I kid you not, Colonel Suparman – whether he operated whilst disguised as Clark Kent I cannot say but fortunately his performance proved to be less

than superhuman. Exactly what the Indonesians envisaged as the final outcome is also obscure but it seems unlikely, given their subsequent behaviour during Confrontation, that they would have allowed any north Borneo confederation to remain truly independent.

The commander of the TNKU was Jasim Affendi. Estimates of the overall strength of the TNKU vary, but it appears likely that Azahari and Affendi disposed of some 2,000-2,500 semi-trained men with a further 6,000 untrained volunteers in support. The Indonesians do not appear to have provided arms on any significant scale and the TNKU in December 1962 had few military firearms and initial equipment consisted mostly of shotguns and the local razor sharp machete-like parang.

The British-led police authorities in northern Borneo and various British civilian officials from the Colonial Office do seem to have got wind of the revolt. The British High Commissioner in Kuala Lumpur reported in early September that Abdul Rahman had warned him of plans by the *Parti Rakyat* for a revolt. Similarly the Deputy British High Commissioner in Brunei had reported in early December on the presence of 'parade grounds', of which four had been discovered. In a later report he stated that from about 5 December, three days before the revolt broke out, Bruneian officials had begun feeding reports to the police of arms and uniforms being stored in villages, although searches had found nothing. He also stated that there had been reports of youths from Brunei passing through Sarawak on their way to be trained in Indonesian territory and of arrests being made in early December of men with TNKU uniforms in both Sarawak and the Temburong enclave of Brunei. Other reports spoke of men buying up jungle green cloth, knapsacks, knives and parangs. In late November the British Resident in the fifth division of Sarawak had been told that an uprising would take place in Brunei on 19 December and he followed that up on 6 December, saying the date was now advanced to the 8th. And the Resident in the fourth division also sent a warning to Brunei of impending trouble on 7 December. This information was passed to the Earl of Selkirk, British Commissioner General for south east Asia, who was visiting Brunei and who telegraphed London that an armed attack was planned on the Miri oil installations at 0200 hrs on Saturday, 8 December.[4]

It would appear, therefore, that the colonial officials and the Brunei

police were aware by 7 December that something untoward was imminent. The Brunei police commissioner, A N Outram, was able to alert the seven Police Stations in the territory that they were to be fully manned by 1800 hrs and he established some road blocks at strategic points. He also sent police guards to the Sultan's palace and the house of the Chief Minister. There were some 200 men in the Brunei police force, with the senior ranks largely occupied by Britons or Rhodesians, some of whom were ex-Malayan or Palestine Police Service officers and therefore experienced in counter-insurgency. Many of the rank and file were locally recruited, however, and senior officers were doubtful of their loyalty if 'confronted with their kith and kin'.[5]

As with so much to do with the PRB and the TNKU the exact train of events leading up to the revolt is obscure. There may have been an element of frustration at the actions of the Sultan, who had postponed the first meeting of the legislative council several times, according to one source, at the behest of the British. Why is not stated, though it may have been because they were hoping to persuade the Sultan to make a positive move in favour of the Malaysian option before the council met.[6] The final postponement saw the meeting rescheduled for 19 December which was the date some intelligence reports indicated for the uprising. There are indications that the revolt was brought forward and mounted in haste, and the primary reason the rebels decided to act was probably fear that the authorities had got wind of what was happening, particularly after the arrests in Sarawak of men with TNKU uniforms. On 7 December Azahari had flown from Singapore to the Philippines' capital, Manila, and he told a senior PRB official there that the uprising was scheduled for the early hours of the following morning.

It seems that the PRB and TNKU leadership calculated that if they moved swiftly the government would not have time to react. They made several assumptions which in the event were to prove erroneous. Prominent amongst these were:

1. That if they seized the Sultan he would declare in their favour and become the head of state for the north Borneo confederation.
2. That this would encourage and ensure the popular support, which, in any case, they were convinced would occur.

3. That if they took out the Police Stations this would both remove any organised force capable of resisting the rebels and would also provide them with firearms.
4. That they would receive rapid support both physical and moral from Indonesia and possibly the Philippines.

The rebels were, of course, aware that there were no British troops present in Brunei on 8 December. They also appear to have assumed that by seizing both the Sultan and power they could present the world with a *fait accompli* which would gain widespread international support and that any counteraction by Britain could be presented as neo-colonialism and would incur such international opprobrium that it would not be attempted.

Things did not go according to plan for the rebels almost from the start. At 0200 hrs on 8 December they seized the power plant in Brunei town and extinguished all the lights and at 0205 hrs about 350 rebels assaulted the Brunei town Police Station. They were spotted and fired on, and the attack was repulsed. The power house was retaken and police parties sent to the Chief Minister's house, where rebels were captured and disarmed, and to the Sultan's palace where another assault was also repulsed. Desultory firing went on until the morning. At 0800 hrs the Commissioner of Police and Confidential Secretary to the High Commissioner met with senior Brunei government officials who requested assistance from British troops. When asked, the Brunei officials confirmed that the request was being made at the behest of the Sultan. A message was then sent to Singapore by police radio asking for five companies of infantry.[7] Thus, there were two very important early setbacks for the rebel plan. The first was their failure to secure the person of the Sultan, which undermined their credibility with large sections of the population and also fatally weakened their cause in the eyes of the international community, as they could not now claim that any British reaction was against the wishes of the legitimate government of Brunei.

Here we should note that, despite the prior intelligence known to the civilian and police authorities in Borneo, the military authorities in Singapore were not as well prepared as they might have been. A meeting had been held at HQ Far East Air Force (FEAF) on 2 December to discuss the possible need to implement an existing plan to reinforce Brunei with two companies of infantry, Plan ALE, but

this was predicated on an internal security problem not a full scale revolt. Plan ALE allowed for a lift of two infantry companies and a small HQ, together with Royal Engineer and signals elements, totalling 281 men and six vehicles with trailers. The CinC Far East, Admiral Sir David Luce, alerted FEAF to Plan ALE State Yellow (readiness to move in 48 hours) at 1800 hrs Zulu on the 7th, which was 0200 hrs local time on the 8th. At 2010Z on the 7th (0410 hrs on the 8th local) FEAF signalled Transport Command requesting the retention and use of the 99 Squadron Britannia currently at Changi for up to two sorties to Labuan which they estimated would reduce the in-position time by 24 hours. At 0246Z on 8th (1046 hrs local), presumably after receipt and assessment of the Police Commissioner's message from Borneo, Admiral Luce called Plan ALE State Red (execute the plan forthwith).[8]

The reaction in Singapore was probably not helped by the fact that 8 December was a Saturday. In fact, the first reinforcement flight into Brunei did not come from Singapore at all, although it was undertaken by the Royal Air Force. At some point on the 8th the Police Commissioner in Brunei, A N Outram, had asked his counterpart in Jesselton what reinforcement could be provided under the mutual aid provision. A 209 Squadron Twin Pioneer was immediately tasked to reposition to Jesselton to pick up a platoon of the Sarawak Police Field Force and move them forward to Brunei. The aircraft arrived in Brunei at 1340 hrs on 8 December, but after disembarking the passengers it was assessed to be too dangerous for the aircraft to remain and it flew to Labuan. Two sections of the police were, however, retained at Brunei airport to secure the airfield for incoming aircraft.[9] This rapid, if small scale, initiative was to prove crucial. Once the police had secured the airfield the Controller of Civil Aviation, a Mr Glass, and his staff, aided by the civilian fire brigade, removed the obstructions which had been placed on the runway.[10] The failure to secure the airfield was the second critical error on the part of the rebels.

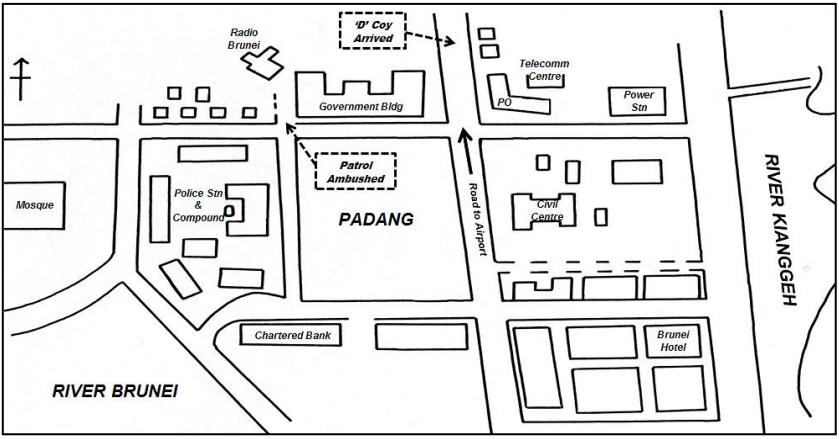
Meanwhile in Singapore at 0500 hrs the 1/2nd Battalion of the King Edward's Own Gurkha Rifles received a warning order to activate Plan ALE and to be ready to send two companies and a battalion HQ to Brunei by 1600 hrs. At 0930, this was upped to 'as soon as possible' and at midday the battalion started to move and one

company was at RAF Seletar by 1230. [11] Inevitably, perhaps, there was an element of 'hurry up and wait' and not everything appears to have gone smoothly. No 34 Sqn at Seletar received the first alert from 224 Group at 0800 hrs local and was told to be on immediate standby from 1200 hrs. Further orders from 224 Group instructed the squadron to be ready to despatch the first three aircraft at 1430, 1500 and 1530 hrs. The crews were on the airfield by 1300 and were issued with personal firearms and equipment. The first Beverley flown by OC 34 Sqn, Sqn Ldr Bennett DFC, took off at 1445 carrying 93 Gurkhas and four ground servicing personnel. He was ordered to fly to Brunei, inspect the airfield from the air, and if satisfied that it was free of enemy and unobstructed, to land. If the airfield was not usable he was to divert to Labuan.[12] In the event of course the small Sarawak police contingent had secured the airfield and Bennett made an assault landing and safely disgorged his Gurkhas before flying on to Labuan.

At Seletar meanwhile continual heavy rain, squalls and a cloud base occasionally reduced to 100 feet with visibility of 300 yards prevented refuelling and delayed the second Beverley, which did not depart until 1635. It arrived at Brunei at 2105 landing 35 Gurkhas and three Landrovers with trailers. It then flew to Jesselton and picked up twelve Gurkha signallers and their Landrover and returned to Brunei at 0115 hrs on 9 December. The third Beverley had also been delayed leaving Seletar by the late arrival of its cargo from Changi, and it only took off at 1945 hrs, arriving at Brunei at one minute to midnight, where it deplaned 35 troops, but was unable to offload its two Landrovers and 5,000 lb of stores due to the absence of ramps. It had to wait until the Jesselton aircraft returned and then utilised its ramps to offload. All three Beverleys repositioned at Labuan for the night.[13]

RAF Changi appears to have reacted more quickly to the developing crisis than Seletar and, perhaps because a Transport Command crew from No 99 Sqn was present on the airfield, it despatched the requisitioned Britannia carrying a party of troops to Labaun at 0710 hrs local. It was back at Changi at 1300 hrs even before the first 34 Squadron Beverley had taken off from Seletar. Changi performed a rapid turnaround in 1 hour 10 minutes which saw the Britannia on its way back to Labuan with a 511 Squadron crew flying the aircraft.[14]

Meanwhile, elsewhere in Brunei and Sarawak the rebels had



Sketch plan of Brunei Town Centre.

achieved some local successes. They had seized the oil facilities at Seria, and a number of Police Stations had fallen including that at Limbang, despite fierce resistance by many of the police, at least four of whom were killed. A number of hostages, including the Australian Resident in the fifth division of Sarawak, had been captured.[15] Two Police Stations outside Brunei town were, however, still holding out. In the early hours on 9 December an attempt by the Gurkhas to reach Seria and relieve the Police Station had failed when the Gurkhas were ambushed on the road and they were split into two parties in the town of Tutong. The Gurkhas also fought a sharp close range action around the Police Station and government building in Brunei town during which they suffered several casualties, two of whom subsequently died. However, by morning they had secured the following buildings in the town:

The Chartered Bank,
The Radio Brunei building
The Post Office
The telecoms centre
The power station
The river front
The Brunei Hotel.

The town was now firmly in government hands and a number of prisoners had been taken and some twenty-four rebels killed. On

Troops about to board a Hastings of No 48 Sqn.

9 December the Gurkhas concentrated on securing the town, bringing the Sultan from his palace to the Police Station for extra security. Only desultory rebel attempts were made to challenge their grip on the town the following night.[16]

The situation was still precarious, however, with the rebels in control of large parts of the territory outside Brunei town and only isolated pockets holding out against them. There were, however, two major air-related factors which were to prove fatal to the rebels. The first was that the offshore airhead at Labuan was secure and included a good runway of sufficient length to accommodate aircraft as large as the Britannia and Hastings. The second was that the initial actions of No 209 Sqn and the Brunei Field Force, rapidly backed up by No 34 Sqn's delivery of the Gurkhas, had secured the advanced tactical airhead at Brunei airfield. The way was therefore open for the rapid reinforcement of the initial lodgement. Over the days that followed the Britannia and Hastings lift into Labuan was augmented by an RNZAF Bristol Freighter, an RAAF C-130 Hercules, a 205 Squadron Shackleton and a 52 Squadron Valetta.[17] The Beverleys meantime concentrated on ferrying troops and material from Labuan into Brunei.

Men of the 1st Battalion Queen's Own Highlanders unloading stores and equipment from a Beverley of No 34 Sqn at Brunei.

On 9 December the latter carried 321 troops and 31,000 lb of freight into Brunei and brought out 27 casualties and 79 civilians.[18] The Gurkha battalion in Brunei was thus brought up to full strength. The Command reserve Beverley was also tasked to carry troops direct from Seletar to Brunei and took off at 1415 hrs on 9 December carrying 33 troops, including a platoon of 'A' Company 1st Battalion Queen's Own Highlanders. The remainder of 'A' Company and the Battalion HQ were flown into Labuan by Britannia and Hastings and moved forward by Beverley reaching Brunei at 0415 hrs on 10 December.[19]

Brig J B A Glennie had been appointed as Force Commander with the Station Commander of RAF Seletar, Gp Capt R D Williams, as his Air Task Force Commander. Arriving in Labuan, Glennie tasked the Queens Own Highlanders (QOH) with re-establishing control in Seria, relieving the beleaguered Police Stations at nearby Panaga and at Kuala Belait, and freeing the 60 or so hostages believed to be held in Seria Police Station. Glennie emphasised that speed of execution was

essential and might compensate for lack of numbers.

At 0740 hrs the CO of the Highland battalion, Lt Col W G McHardy, accompanied by the Brunei Police Commissioner, the OC 'A' Company QOH, and two pilots of Brunei Shell Petroleum, took off from Brunei in a 209 Squadron Twin Pioneer to reconnoitre Seria and Kuala Belait and the airstrip at Anduki at the eastern end of Seria. The pilot, Flt Lt Lamb, quickly established that the runway at Anduki was blocked and also flew over and checked a possible landing zone at the western end of the town which had been selected the previous day by OC 209 Sqn, Wg Cdr Graves. The aircraft was not fired on and some of the rebels waved at the aircraft. It was later ascertained from a freed hostage that the rebels mistook the red dayglo markings on the Twin Pioneer for the red markings carried by Indonesian aircraft. During this reconnaissance Lt Col McHardy learned from the pilot that there were four more Twin Pioneers at Labuan and on landing back at Brunei he requested that these aircraft be made available to him.[20]

An audacious assault landing plan was rapidly hatched. Sixty men of 'A' Company were to be flown to the LZ at the western end of the town in five Twin Pioneers of 209 Squadron led by Wg Cdr Graves. They were then to move as rapidly as possible to relieve Panaga Police Station. Ten miles to the east, a 34 Squadron Beverley was to make an assault landing at Anduki carrying the remainder of 'A' Company who were to seize control of the airfield. The cabin doors of the Twin Pioneers were removed to facilitate a fast exit and the Highlanders practised rapid deplaning before the operation was mounted.[21] Whilst this operation was being prepared the rebels telephoned a Shell Petroleum representative to say that they would attack Panaga Police Station again using hostages as a human shield, a tactic which they had employed elsewhere. As the conversation was in progress a 45 Squadron Canberra made a series of low passes over Seria and a second rebel came on the line to say that the hostages would not be harmed.[22]

At around 1230 hrs the Beverley, captained by Flt Lt Fell and with a Shell pilot familiar with Anduki airfield on board, lifted off from Brunei in company with the five Twin Pioneers and a Beaver carrying Lt Col McHardy who was to co-ordinate the assault from the air. The simultaneous landings were timed for 1345 hrs. Unknown to the crew,

Soldiers of the QOH rehearsing rapid deplaning from a Twin Pioneer of No 209 Sqn

the rebels had assumed that the morning fly-by of the 209 Squadron aircraft was an Indonesian reconnaissance flight and they had obligingly cleared the runway of obstacles in the interim. Fell flew the slab-sided Beverley at 100 feet in a very low level approach to Anduki from over the sea, climbed over the trees behind the beach and landed at the seaward end of the runway, braked hard and brought the large aircraft to a halt less than a quarter of the way along the runway. The 110 troops were standing on the lower deck and exited the aircraft from the rear doors and the aircraft immediately executed a short field take-off in the same direction having had its wheels on the ground for just 1 minute 48 seconds. As it took off it was hit by two rounds fired from a light automatic weapon in the Control Tower but was not seriously damaged and there were no casualties. The assault force rapidly seized control of the airport buildings, killing two rebels and capturing five. They then secured the road bridge leading into Seria.[23]

At the other end of Seria, the landings of the five Twin Pioneers

Twin Pioneers and a Beverley, shortly before taking off from Brunei prior to delivering the troops of the QOH that retook Seria on 10 December. Note that the doors have been removed from the Twin Pioneers and (extreme left) the nose of one of the Percival Princes operated by Shell Petroleum.

proved less straightforward. Like Fell in the Beverley, Wg Cdr Graves came in very low over some high trees to the north and touched down on the small area of rough grassy ground which constituted the LZ. He halted just ten yards from a ditch with his aircraft facing a 'Halt Major Road Ahead' sign. The other aircraft were instructed to land from the south, which involved an approach which brushed through a tree with the port wing tip. One aircraft became bogged in the soft ground and a brief tropical storm caused further difficulties, so that the landings took some twenty-five minutes in all. Nevertheless, all the aircraft landed and took-off successfully and the troops moved rapidly to relieve Panaga Police Station, some two miles from the landing zone, without meeting any opposition.[24]

The 209 Squadron aircraft returned to Labuan and three immediately mounted another airlift of troops, this time to Lutong where they were to help troops flown in on the 9th by Shell and requisitioned Borneo Airways aircraft to secure the oil facilities there and those at Miri a little further along the coast. At 1720 hrs that evening the squadron began shuttle flights of troops and stores to Lutong and Anduki, continuing into the small hours of the 11th. The 34 Squadron Beverleys spent the day in a similar fashion, shuttling men and stores from Labuan to Brunei, whilst two round trips were made to Singapore, and a further sortie was flown into Anduki carrying vehicles and the Highlander's assault pioneer platoon.[25] By nightfall on the 10th Brunei town and its airport were secure, as was Anduki airfield, and Panaga Police Station had been relieved. The Highlanders were in position at either end of the Seria complex and also controlled two of the three main routes into Seria which enabled them to intercept a number of vehicles carrying rebels, several of whom were killed, wounded or captured.[26]

At 0700 hrs on 11 December two 34 Squadron Beverleys flew into Anduki carrying reinforcements in the form of 'B' Company of the Queens Highlanders, who had had an uncomfortable but rapid sea crossing from Singapore to Labuan aboard HMS *Cavalier*. At 0730 Lt Col McHardy instructed 'B' Company to start moving into Seria from the east while a platoon from the original assault force did the same from the west. The 'B' Company force reached the middle of the complex with only sporadic resistance from rebels, many of whom were armed only with knives or parangs, but the platoon of 'A' Company moving in the opposite direction fought a sharp action around the Sultan's country palace against a rebel force whose armoury included at least one light machine gun and some rifles. In the firefight one rebel was killed and one wounded, and seven were captured, while five more escaped, two of them being wounded. The haul of weaponry included an LMG, a Sten gun and rifles, as well as plentiful ammunition and police uniforms. The platoon continued its advance, wounding two rebels and killing a third. At noon, 34 Squadron flew 'B' Company of the 1/2 Gurkhas into Anduki where they were placed under the command of Lt Col McHardy, who despatched them with a platoon of Highlanders in eleven Landrovers to the nearby estuary port of Kuala Belait with order to clear it of

rebels. This force had established a firm presence in Kuala Belait by nightfall.[27]

The rebels were now effectively sealed off and maintained firm control only of the main Seria bazaar. They contented themselves with sniping at the Highlanders and Shell employees who were attempting to restore essential services. By nightfall on 11 December the security forces' grip on Seria and its environs was tightening inexorably and on the morning of the 12th Lt Col McHardy moved to eliminate the last rebel stronghold in the bazaar. Intelligence, much of which came from Shell employees, both European and locals, suggested that about 200 armed rebels were in the bazaar of whom 50 were considered to be the hard core. They were believed to be holding European hostages in the Seria Police Station, and further intelligence suggested that they had established strong points on the roofs of several buildings and were dug in under some bungalows.[28]

The plan was for the Highlanders to move in and establish strongpoints on a block of flats and a school about 200 yards from the police compound and then a Brunei police inspector would use a loud hailer to call on the rebels to surrender. Fearing that they might massacre the hostages if cornered, McHardy deliberately avoided surrounding the compound, instead establishing a platoon in ambush about a mile to the rear. The plan also involved RAF Hunters making low level passes over the compound. A Twin Pioneer voice aircraft was to follow up the Hunter passes with a further call to surrender.

The Highlanders began to move in the late morning and they occupied the flats and the school without opposition and posted men on the top of the buildings. The leading section then approached the Police Station and when fifty yards from the compound came under sub-machine gun, rifle and shotgun fire from a house at just twenty yards range. This fire was vigorously returned and two men were seen running between houses. As the 20 Squadron Hunters roared low over their heads the Highlanders moved forward and got into a monsoon drain close to the compound, and one section then moved around to the rear and climbed the fence before rushing the Police Station.[29]

Accounts of the action differ as to whether the Hunters opened fire. The Queens Own Highlanders' account maintains that they did not fire their weapons but 20 Squadron's Operations' Record Book, and other sources, indicate that one aircraft did fire its cannon as it flew

low over the Police Station, but aimed the burst out into the sea.[30] The Twin Pioneer then broadcast another call to surrender.[31] On entering the Police Station the soldiers found some 46 hostages, sixteen of them crowded into a one-man cell, along with five rebels, a doctor and a nurse. Two of the rebels had been wounded. The Highlanders set about clearing the nearby buildings and Police barracks but at this point a posse of press arrived in two Landrovers and, in the words of the Battalion history, 'chaos ensued with pressmen, hostages and house-clearing Highlanders all mixed up together.'[32]

The Gurkhas and their supporting Highlanders were simultaneously completing the clearance of Kuala Belait. Here too they retook control of the Police Station by 1000 hrs, freeing the four European hostages held there, and then moved on to clear the entire area. During operations in Kuala Belait three rebels were killed and seventeen captured, including two who were wounded. Thirty firearms, including twenty-five rifles, were recovered along with much ammunition. By the end of the day the security forces had control of Brunei town, Brunei airfield, Seria and the oil facilities, Anduki airfield, Miri and its oil facilities, Lutong and Kuala Belait and the associated oil facilities. The rebels still controlled the town of Limbang where they were holding the Australian Resident, his wife and others hostage. They were about 150 strong but were soon to discover that facing determined and high calibre professional soldiers was a rather different proposition to assaulting unfortified Police Stations.

Among the further reinforcements flown in to Brunei was 'L' Company of 42 Royal Marine Commando with elements of the Support Company (the remainder of 42 Commando moved by sea).[33] Unlike Brunei, Seria and Lutong there was no airfield or suitable landing zone near Limbang from which to mount an air assault. Limbang was on the Limbang River, but there were no shallow draft naval vessels available to support an assault from the water. It was nevertheless decided that 'L' Company would mount an assault landing from the river using two unarmoured lighters, or Z craft of the Shell Oil Company, which bore a passing resemblance to landing craft. The RN Minesweepers HMS *Chawton* and HMS *Fiskerton* supplied naval crews to man the craft. At dawn on the 13th the two craft approached the town hoping to catch the defenders by surprise.

The throb of their diesel engines gave them away, however, and they came under fire which the Marines returned from the Support Company medium machine guns mounted on the second craft. The assault went in regardless of the heavy fire from the rebel defenders, with the first craft landing Marines opposite the Police Station, whilst the second, with the MMGs, stood off in the river to give fire support. At one point the coxswain and 'L' Company's second-in-command on the second craft were hit and the craft drifted down river before it was brought under control. A sharp fight ensued around the Police Station and through the town, which resulted in the rout of the rebel force and the freeing of the Resident and other hostages, including a policeman who had hidden in the roof of the station with his rifle for five days. Fifteen rebels were killed and eight captured but the Marines lost five dead and a number wounded. The haul of arms included a Bren gun, a Sterling sub-machine gun, a number of rifles and numerous shotguns. The assault had come none too soon, as it was discovered that the rebels had planned to hang the Resident later in the day. The rapid victory at Limbang, however, finally and effectively broke the back of rebel resistance.[34]

While the Queens' Own Highlanders, 1/2 Gurkhas and latterly 'L' Coy 42 Cdo were busy suppressing the main centres of the revolt the build-up of British forces by both sea and air continued apace. HMS *Tiger* landed a battalion of the Royal Greenjackets and Ferret scout cars of the Royal Irish Hussars, HMS *Albion* brought 40 Commando, and HMS *Alert* with HMS *Woodbridge Haven* landed the remainder of 42 Commando.[35] The airlift from Singapore involved seven different aircraft types including those from the RAAF and RNZAF. RAF Changi was the main operating base for the airlift although the Beverleys used their home base at Seletar and a few aircraft flew from Butterworth.

Over the seven days following the initial lift on 8 December, 128 sorties were flown from Singapore. A total of 2,672 men, 82 vehicles with 61 trailers and 195·4 short tons of stores were flown in along with two Army Austers. In the period 15 to 18 December the frenetic pace slowed somewhat and only the RAF Hastings, RAAF C-130 and RNZAF Bristol Freighter operated from Singapore. In the latter stages the Hastings also began to operate direct to Brunei rather than Labuan which considerably eased the pressure on the 34 Squadron shuttle

No 34 Sqn's Beverleys had been critical to the success of the campaign.

between Labuan and Brunei.[36] In fact for much of the operation the Beverleys effectively operated as 'high capacity' short range tactical transports, with 60 per cent of their sorties being of 30 minutes duration or less.[37] In all by 31 December 1962 the airlift to Borneo had carried nearly a million pounds of Army freight (including vehicles), over 600,000 pounds of RAF freight and more than 2,700 Army and nearly 950 RAF personnel. The airlift also flew in thirty dogs.[38]

Subsequent operations were largely concerned with mopping-up the rebels and preventing their escape into the jungle and across the border into Indonesia. The increased dispersal of the ground forces meant they could no longer be supplied exclusively via the airfields and strips and on 17 December the Beverleys made their first airdrop of supplies to units at Lutong.[39] Helicopters were henceforth to prove essential to this increasingly dispersed part of the operation and the first helicopters into Brunei were RN Wessex and Whirlwinds brought in by HMS *Albion*. Three Bristol Belvederes of No 66 Sqn were cleared to take off at 1 000 lb over normal limits with overload fuel tanks and on 17 December these flew direct from Singapore to Kuching and from there to Labuan. The flight took eight hours and apart from some abnormally heavy vibration early in the flight the crews reported no adverse effects on the aircraft. A 34 Squadron Beverley picked up two Bristol Sycamores of No 110 Sqn from

Although they did not feature in the initial action, the Pioneers of No 209 Sqn arrived in Borneo shortly afterwards and were employed in the pursuit of the fugitive remnant of the uprising.

Butterworth and flew them to Seletar on Christmas Day, before moving them across to Labuan on 27 December. A second Beverley flew to Butterworth on the 27th where it picked up a third Sycamore and flew it directly to Labuan the same day.[40] The Beverleys also brought in six pilots and twelve groundcrew from 110 Squadron and the Sycamores were operating by the following day.[41] Once the Brunei Revolt metamorphosed into the protracted Indonesian Confrontation campaign the helicopters were fundamental to success but, though they proved most valuable in the mopping-up operations, they had arrived in Brunei too late for the crucial interventions which took place in the first five days of the rebellion.

The authorities authorised the raising and use of local Iban irregulars for the mopping-up task as their villages inland lay across the path of any fleeing rebels, with whom they had little sympathy. Many of the irregulars were raised by the expert anthropologist Tom Harrisson who had parachuted into Borneo during the Second World War and raised the Iban against the Japanese occupation force. Harrisson stayed after the War and lived in Sarawak. Both Harrisson and the local Shell security officer, Mr F Griffiths, set about utilising their contacts with these indigenous populations and they were to prove invaluable in hunting down or providing intelligence on fleeing

rebels. On 17 December No 209 Sqn flew four Single Pioneers to Brunei and one of these was used to fly Harrisson around the territory visiting and liaising with the local tribes, conducting personal reconnaissance based on his knowledge of the area and identifying likely routes of egress for the rebels. The knowledge of local strips and geography which he passed on to the squadron's pilots proved invaluable as the aircrew very soon discovered that their maps, particularly of the interior, were often inaccurate.[42]

The mopping-up operations continued into the early months of 1963 and coincided with a period of very heavy rain which caused widespread flooding. Paradoxically this allowed the British forces to conduct a hearts and minds campaign by providing food and other relief supplies, and moving villagers from affected areas, a task in which the helicopters proved particularly useful.[43]

It is clear that the suppression of the Brunei Revolt was a joint operation *par excellence,* with all three services playing major roles in the successful outcome which might so easily have turned out very differently. In this they were materially assisted by the incompetence and poor leadership of the TNKU. In many respects the rebels resembled little more than an armed and dangerous rabble, but they nonetheless posed a real threat for all that. There were two particularly crucial factors which caused the rebellion to misfire and ultimately fail. Both stemmed from decisive action on the part of the Police Commissioner in Brunei. A N Outram's steadfast leadership of the Police in the early phases and his securing of the person of the Sultan and the Brunei Police Station removed the possibility of the rebels gaining quick and undisputed control of the capital and the existing political leadership – the cornerstones of any successful revolt. His further decision to make an early request for the rapid deployment of the platoon of the Sarawak Police Field Force from Jesselton was equally vital. The despatch of this small but crucial reinforcement by Twin Pioneer ensured that the vital airhead at Brunei airfield remained under the authorities' control, allowing the first fly-in of Gurkhas to take place unopposed. As Sqn Ldr Bennett's orders on 8 December were to fly the first Beverley on to Labuan if the airfield was not secure, the situation in Brunei might well have deteriorated beyond redemption if the arrival of the Gurkhas had been delayed until some point on the 9th or later. Nor is it clear precisely how the Gurkhas, and

later the Highlanders, could have been landed in Brunei if not from the air and they would certainly have faced greater opposition whatever mode of transport was used. Possession of the airhead not only ensured that rebel control was effectively contested from very early in the proceedings, giving succour to the badly outnumbered police and pause for thought to uncommitted locals, but also prevented the TNKU from consolidating their initial gains. Had the TNKU been able to link up, what were effectively, a series of isolated rebellions its suppression would have been markedly more difficult. As always in such situations rapid response was the key to success and the rapid response could only come by air.

Notes:

[1] Ritchie, Sebastian; *The RAF, Small Wars and Insurgencies: Later Colonial Operations, 1945-1975* (Air Historical Branch(RAF), Northolt, 2011), p96.

[2] Majid, Harun Abdul; *Rebellion in Brunei – The 1962 Revolt, Imperialism, Confrontation and Oil* (Tauris, London, 2007), p5.

[3] TNA AIR 20/11540 Intelligence assessment contained in Secret Telegram 474 CinC Far East to Cabinet Office and others, 22 December 1962.

[4] Majid pp3-9. AIR 23/8655 Operation ALE – Borneo Territories, Transport Command Operational Research Branch Report 10/63 pp3-4.

[5] Majid pp7-8 & 11.

[6] *Ibid* p8.

[7] www.arcre.com/archivve/brunei/bruneirevolt accessed 6/10/2014. Document: 'The Opening Phases of the TNKU Rebellion Town', being ANNEX E to Part III, COMBRITBOR PERINTREP No 2, hereafter 'Opening phases'.

[8] TNA AIR 23/8655 Operation ALE – Borneo Territories, Transport Command Operational Research Branch Report 10/63. Appendix B, Summary of Signals.

[9] TNA AIR 27/2992, 209 Squadron, F540 December 1962 and 'Opening Phases'.

[10] Air Historical Branch, unpublished draft narrative history of The Borneo Campaign (nd) p81. Hereafter AHB Narrative.

[11] www.arcre.com/archivve/brunei/bruneirevolt accessed 6/10/2014. Document: 'Events 8 and 9 December 1962, Brunei and Tutong,' Annex D to Part III, COMBRITBOR PERINTREP No 3. Hereafter 'Events 8 and 9 December'.

[12] TNA AIR 27/2920, No 34 Sqn F540, December 1962.

[13] *Ibid.*

[14] AHB Narrative p81.

[15] Brigadier E D Smith, *Counter Insurgency operations 1: Malaya and Borneo* (Ian Allan, London, 1985), p.50 and www.arcre.com/archivve/brunei/bruneirevolt accessed 6/10/2014. Document: 'The Gallant Story of the Defence of Limbang'.

[16] 'Events 8 and 9 December'.

[17] AHB Narrative, p85.

[18] TNA AIR 27/2920, No 34 Sqn F540, December 1962.

[19] *Ibid* and TNA WO 305/2190, Historical Record Queen's Own Highlanders.
[20] TNA AIR 27/2992, No 209 Sqn, F540 December 1962 and TNA WO 305/2190 Historical Record Queen's Own Highlanders. Some sources suggest that the runway had not been blocked but the 209 Squadron F540 is clear in stating that it was.
[21] TNA WO 305/219,Historical Record Queen's Own Highlanders.
[22] AHB Narrative p88. See also C G Jefford, *The Flying Camels: The History of No 45 Squadron RAF*, (Privately Published, High Wycombe, 1995), p405.
[23] TNA AIR 27/2920, 34 Squadron F540, December 1962; TNA WO 305/2190, Historical Record Queen's Own Highlanders; AHB Narrative pp87-88.
[24] TNA AIR 27/2992, No 209 Sqn F540, December 1962 and TNA WO 305/2190 Historical Record Queen's Own Highlanders and AHB Narrative p87.
[25] TNA AIR 27/2992, No 209 Sqn F540, December 1962; AIR 27/2920, No 34 Sqn F540, December 1962.
[26] TNA WO 305/2190 Historical Record Queen's Own Highlanders.
[27] *Ibid.*
[28] *Ibid.*
[29] *Ibid.*
[30] TNA AIR27/2909, No 20 Sqn F540, December 1962, the AHB Narrative p88 and Jefford *op cit* p406 all indicate that one Hunter opened fire whilst WO 305/2190, Historical Record Queen's Own Highlanders, states they did not. It is likely that the Hunter did fire but the Highlanders in the midst of the action were not aware of it.
[31] AHB Narrative p88.
[32] TNA WO 305/2190 Historical Record Queen's Own Highlanders.
[33] AHB Narrative p88.
[34] E D Smith, *op cit.*, p52. www.arcre.com/archivve/brunei/bruneirevolt accessed 6/10/2014. Document 'The Assault on Limbang', Annex III Part 4 to COMBRITBOR PERINTREP4.
[35] AHB Narrative pp88-89.
[36] TNA AIR 23/8655 Operation ALE – Borneo Territories, Transport Command Operational Research Branch Report 10/63 pp2-3. Of the 2,672 passengers, 2091 were Army (including Marines of 'L' Company) and 571 were RAF – it is assumed the odd ten were civilians or police. *(Ibid.* Part 2, Annex A. p9*).*
[37] *Ibid*, Part 2, Annex A, p8.
[38] *Ibid*, p9.
[39] AIR 27/2920, No 34 Sqn F540, December 1962.
[40] *Ibid.*
[41] Dowling, John; *RAF Helicopters – the first twenty years*, (HMSO, London, 1995), p320.
[42] TNA AIR 27/2992, 209 Squadron F540, December 1962 and WO305/2191 1 Queen's Own Highlanders, Commander's Diary Narrative, December 1962.
[43] Ritchie, *op cit*, p102.

MORNING DISCUSSION

Mike Meech. How useful, to the US Air Force, were the RAF advisers and pilots who were sent to Korea? Were their experiences of WW II really any different from their own?

Ewan Burnet. There does seem to have been an American perception that the RAF had something that they didn't. They specifically sought the RAF's advice on interdiction operations and when Peter Wykeham-Barnes was relieved he was replaced by 'Joe' Bodien who was replaced in turn by Jack Sach, so it is clear that the Americans wanted to sustain that link. As I said, it's an aspect that could stand further research but it does seem that the Americans believed that the RAF had something to offer and they weren't embarrassed about asking for help.

Sebastian Cox. Perhaps I could add a couple of points. During WW II, the Americans had accumulated little experience of specifically *night* interdiction operations, whereas the RAF had flown many such sorties, so there were operational techniques in which the USAF lacked expertise. I suspect that there may also have been a 'political' aspect to this. At the time, the USAF was only three years old and it may well have been useful to them, in their discussions with the US Army, to be able to cite the opinions of a much older *independent* air force, one whose officers had *not* begun their careers as soldiers – or if they had it had been thirty years before.

Gp Capt Min Larkin. Thank you Seb for your excellent account of the Brunei operation, which quite rightly, included the activities of the transport aircraft that uplifted the troops on 8 December, as was also described by Sir David Lee in his book.[1] At the time I was on No 205 Sqn and on 8 December, being Saturday night, along with a lot of other young twenty-somethings, I was getting well-oiled at a crew party, when we were summoned to Ops along with another Shackleton crew – they were all sober, as they had been on SAR stand-by. Shortly afterwards we were airborne with thirty-three fully-armed Gurkhas on board. We delivered them to Labuan early on the 9th and the Shackleton troop lift ran on into the 10th. So, apart from its routine maritime and SAR duties, the Shackleton made a significant contribution to the deployment of soldiers and it is an aspect of the

operation that tends to be overlooked. It is also worth recording that those Gurkhas had been well trained in rapidly disembarking from an aircraft. We were flying with only a five-man crew, but anyone familiar with the Shackleton can imagine how crowded it was to have thirty-three soldiers and all their kit squeezed in down the back. As soon as the door was opened, the troops were scrambling over the spar and down the ladder and they had all gone in what seemed like seconds.

Wg Cdr Mike Dudgeon. Thank you for your comprehensive review of the Korean war. Can you confirm that some RAF pilots were seconded to fly with the Navy? The Navy does tend to tweak our noses over the fact that the RAF didn't deploy any combat aircraft, but I think that we may had some aircrew flying with the Fleet Air Arm.

Burnet. The Royal Navy did have carriers operating off Korea, of course, and their aircraft did make an important contribution to the campaign but I'm afraid that I didn't explore that particular facet of operations, so I'm unable to provide a definitive answer to that one.

Wg Cdr Colin Cummings. For the record, I can confirm that a number of RAF aircrew did fly with the FAA during the Korean War and at least one of them, a navigator, Flt Lt D W Gray, was killed in a Firefly of No 810 Sqn operating from HMS *Theseus*.

Peter Crispin. We heard about our activities in Indochina. How busy were we in support of the Dutch in the East Indies?

Cox. Very – at times. It's another largely unsung conflict. I did cover it to some extent in a previous seminar (*see Journal 56*. Ed) that focused on the repatriation of prisoners of war, and that is, in part, why the British got involved in Java, and elsewhere, because large numbers of Commonwealth and allied POWs were being held there – and there were the Japanese troops to be rounded up, of course. The Indonesians were intent on gaining independence from the Dutch, whom they did not like at all, and there were outbreaks of violence, including a number of massacres. Commonwealth troops, including RAF personnel, were inevitably drawn into this conflict in their efforts to keep the two sides apart without appearing to favour either faction. But it was a bloody business and the priority was to get people out before they got killed. RAF combat aircraft were involved, notably

Thunderbolts and Mosquitos, and the Dakota was, as always in the Far East, crucial. Ironically enough, as in Indo China, the Japanese were roped in to provide manpower.

Sqn Ldr Chris Paish. I was with the first three Sycamores detached to Brunei. It was an unforeseen, and fortunate, consequence of the rebellion that we happened to be there because there was a week of torrential Monsoon rain in January which left an area the size of Wales flooded with an estimated 15,000 people homeless. The entire RAF and RN helicopter force, and most of the Beverley flying effort, was switched from chasing rebels to flood relief which undoubtedly saved a lot of lives that would otherwise have been lost.

Cox. Yes, I didn't have time to mention it, but that's quite true. It emphasised, of course, one of the positive results of the rebellion having been suppressed because a PRB/TNKU administration would not have had the resources to cope with an emergency on that scale. That said, the higher echelons of the military complained about having to deliver foodstuffs to the local population, as they did not see that as their primary role. They wanted to know when the local administration was going to sort itself out – and, by the way, were they paying for it all?

Dudgeon. I am fascinated by the co-opting of the Japanese in both Indochina and Indonesia. Given the vitriolic relationship between the two sides over the previous three years how easy was it to marshal Japanese troops and persuade them to co-operate?

Cox. It think the answer is that it varied – it certainly did in Indonesia. It was necessary to remove some of the stroppier Japanese officers and replace them with more malleable individuals but there were instances of what amounted to atrocities. In one notable case Japanese troops protecting a refugee camp were attacked by Indonesian nationalists and sustained a number of casualties. The Japanese took umbrage, reacted violently and their revenge was somewhat extreme, certainly far more so than Commonwealth troops would have been permitted to exact. So there was certainly no love lost between the Japanese and the Indonesians, but the situation appears to have been less extreme in Indochina, and I'm not really sure why. I would speculate that, certainly among the junior ranks,

once they had accepted that they had lost, their priorities would have been survival and getting home. The Vietnamese were not going to help in either respect, so they were more or less obliged to co-operate with the allies – and that would have been equally true in the East Indies, of course.

Then again, basic military discipline may have been a major contributory factor in ensuring the co-operation of Japanese troops. They were still administered by their own officers who may well have decided that, in order to maintain discipline and control over a body of, what must have been, demoralised men it was necessary to keep them fully occupied – which meant discharging whatever tasks were required by the allies.

David Bale. I recently had a book published on the history of RAF Labuan[2] and in researching it I found that a number of war crimes trials had been held there in 1945. That aside, several Japanese officers were co-opted to teach Japanese to the RAAF personnel who were preparing to move up to Japan to join the Commonwealth occupation force. Another interesting anecdote was that one of the captured senior Japanese naval officers was found to be wearing the 1914-18 Victory Medal!

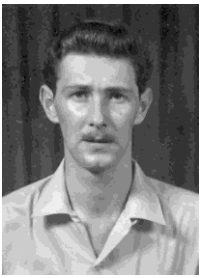
Cox. Interesting. The Japanese were on our side in WW I of course.

Burnet. In this general context, I came across a reference to conveying Japanese prisoners in the early post-war ORB of one of the Sunderland squadrons. The language was a little emotive but it mentioned the Gurkha troops being employed as guards being armed with kukris, rather than firearms, and how, as a result, and here I quote, 'the unwelcome passengers gave no trouble.'

1 Lee, Air Chief Marshal Sir David; *Eastward* (HMSO, 1984).
2 Bale, David *RAF Labuan – Borneo* (Hove; 2014).

AIR REINFORCEMENT OF THE FAR EAST SINCE 1948

Wg Cdr 'Jeff' Jefford



'Jeff' joined the RAF in 1959 as a pilot but (was) soon remustered as a navigator. His first tour was on the Tengah-based Canberras of No 45 Sqn. He subsequently flew in Vulcans with Nos 83 and 50 Sqns and instructed at No 6 FTS. Administrative and staff appointments involved sundry jobs at Manby, Gatow, Brampton and High Wycombe. He took early retirement in 1991 to read history at London University. He has three books to his credit and has been a member of the Society's Executive Committee since 1998 and has edited its Journal since 2000.

Throughout this paper, the term 'reinforcement' generally means a temporary supplement to the ORBAT, as distinct from the permanent reassignment of an additional squadron or the routine re-equipment of a resident unit. That said, the 'flexibility of air power' has been exercised where appropriate, permitting that self-imposed constraint to be broken whenever it has seemed appropriate.

The origins of what many will remember as 'FEAF' lay in the wartime HQ Air Command South East Asia – ACSEA – which was in Ceylon and on the point of launching Operation ZIPPER, the invasion of Malaya, when the war suddenly ended. Now unopposed, a slightly toned down version went ahead anyway and Malaya was duly liberated from the beastly Japanese imperialists (or, as some saw it, re-occupied by the beastly British imperialists). In November 1945 HQ ACSEA moved across from Ceylon to the Fullerton Building in Singapore city with its staff accommodated in Tanglin Barracks. In 1946 title to the very desirable piece of real estate that was Changi was transferred from the Army to the RAF and the HQ's officers moved into Temple Hill Mess but a few years later this became the mess for station officers and the HQ staff took over the equally splendid Fairy Point Mess. In the meantime, in November 1946 ACSEA had become ACFE – Air Command Far East. But that title lasted for less than three years and in June–1949 it was restyled yet again to become HQ Far East Air Force – FEAF – and that name stuck

until the shutters finally came down in November 1971. Having outlined its genealogy, in the interests of simplicity, FEAF will be used indiscriminately from here on.

FEAF was always a reasonably comprehensive mini-air force with a broad range of operational potential. It had a day fighter/ground attack capability but, with no regional air threat, until the 1960s the accent was heavily on the ground attack aspect. The aircraft ranged from Spitfires, Tempests and Hornets via Vampires and Venoms to Hunters with the RAAF contributing Sabres in 1959 which they replaced with Mirage IIIs from 1968. There was also a resident light bomber squadron, initially, and somewhat paradoxically, equipped with Beaufighters, these were replaced by Brigands and, after a five-year hiatus, Canberras.

Photo reconnaissance was provided by Spitfires and Mosquitos, both of which saw out their front line service with FEAF[1] – as did many other aeroplanes because FEAF was at the end of a very long supply chain when it came to allocating resources. The PR Spitfires and Mosquitos were replaced by Meteors and ultimately Canberras, while maritime patrol was covered by Sunderlands and Shackletons.

Transports ranged from the ubiquitous wartime Dakota via the Valetta, Hastings and Beverly to turbine-powered Argosys, Andovers and, eventually, Hercules. For getting into tight spaces there were Pioneers and Twin Pioneers and the contemporary range of helicopters, starting with the Dragonfly and ending up with the Wessex. There was no all-weather fighter cover until the end of the 1950s but from then on FEAF had Meteors, Javelins and Lightnings plus, from 1964, Bloodhound SAMs.

So what is missing? A big stick. FEAF had no serious bombers. Why? Because it did not need them, certainly not when the RAF was initially setting itself up for the post-war era when its commitment in the Far East was expected to be a matter of colonial administration. That would involve issues such as air transport, air-sea rescue, anti-piracy patrols and, if really necessary, perhaps a little internal security work; there was no external ‘strategic’ threat so no need for heavy metal.

The internal politics of early post-war Malaya were complicated by the multi-racial Malay, Chinese, Indian and, of course, colonial British composition of its population but, for the purposes of this paper, it

suffices to say that ‘a little internal security’ soon became a serious insurrection. It was conducted by, predominantly Chinese, Communist Terrorists – CTs – or ‘bandits’ in the contemporary service *argot*. They were organised under various titles, but eventually settled on the Malayan Races Liberation Army – the MRLA. In June1948 the increasingly violent nature of the insurgency, which by then embraced sabotage and murder, led to the declaration of a State of Emergency. This lasted until 1960 with military operations being conducted under the overall umbrella of Operation FIREDOG.

Bombers for FIREDOG

Lancasters of No 7 Sqn had been detached to Tengah on Exercise RED LION as early as 1947 and the exercise was repeated by No 97 Sqn in 1948, this time with Lincolns, but these had both been routine overseas training events, not operational deployments. Ironically, No 97 Sqn flew back to the UK in June 1948, just as the situation in Malaya began to spiral out of control.

Early in 1950 FEAF requested the deployment of sixteen Lincolns. The provision of eight was promptly approved as the somewhat inappropriately named Operation MALARIA. Within 24 hours that had been changed to MUSGRAVE[2] and before the end of March eight Lincolns of No 57 Sqn were at Tengah whence they flew their first mission on the 26th. There was some sensitivity about this development, not least because it was not at all certain that the Lincoln was the right answer for attacking jungle targets. As a result CAS directed that any publicity was to be low key and he stressed, in particular, that the aircraft should be referred to as medium, *not* heavy, bombers and that no mention should be made of the use of, specifically, 1,000 lb bombs. This was only five years after the war, of course, so this may have been a touch of ‘Dresdenitis’.

What had really been wanted was two squadrons of Lincolns and the Australian Government was invited to provide the second on the grounds that this would be a contribution to the anti-communist Cold War in South East Asia, rather than assisting in, what some clearly saw as, a campaign of colonial suppression. It agreed to do so and No 1 Sqn RAAF arrived at Tengah in July 1950 with six (later eight) more Lincolns. In the event this became a permanent arrangement, rather than a reinforcement, and the Australian Lincolns remained in

Unit	Aircraft	Base	Period
Op MUSGRAVE			
No 57 Sqn	Lincoln	Tengah	Mar 50-Jun 50
No 100 Sqn	Lincoln	Tengah	May 50-Dec 50
No 61 Sqn	Lincoln	Tengah	Dec 50-Apr 51
Op BOLD			
No 83 Sqn	Lincoln	Tengah	Aug 53-Jan 54
No 7 Sqn	Lincoln	Tengah	Jan 54-Apr 54
No 148 Sqn	Lincoln	Tengah	Apr 54-Jul 54
No 7 Sqn	Lincoln	Tengah	Jul 54-Oct 54
No 148 Sqn	Lincoln	Tengah	Oct 54-Apr 55
Op MILEAGE			
No 101 Sqn	Canberra B6	Changi	Feb 55-Mar 55
No 101 Sqn	Canberra B6	Butterworth	Mar 55-Jun 55
No 617 Sqn	Canberra B6	Butterworth	Jul 55-Nov 55
No 12 Sqn	Canberra B6	Butterworth	Oct 55-Mar 56
No 9 Sqn	Canberra B6	Butterworth	Mar 56-Jun 56
No 101 Sqn	Canberra B6	Butterworth	Jun 56-Sep 56

Table 1. Bomber deployments in support of Op FIREDOG.

theatre for the next eight years.

The RAF sustained its contribution for only twelve months, however, and when No 61 Sqn flew home in April 1951 it was not replaced. This was mainly because Bomber Command was in the throes of a major re-equipment programme with its Lincolns being replaced by Washingtons and the introduction of the first Canberras. All of this meant that, in order to sustain its commitment to NATO, it was unable to continue to mount deployments to the Far East. This was not of immediate concern because, as previously noted, there had always been some doubt as to the effectiveness of bombing area targets in jungle and in 1952 FEAF's policy actually changed in favour of strikes by tactical aircraft, like Brigands and Hornets, against specific pinpoint targets. While these were effective in themselves, they were accompanied by a significant decline in the number of CTs who were surrendering which was considered to

An Op BOLD Lincoln of No 7 Sqn over Malaya in 1954.

represent conclusive proof that area bombing had been effective after all.

By the summer of 1953 the Washington was being displaced by the Canberra, which was now becoming available in really large numbers, making Bomber Command's remaining, and now outclassed, Lincolns available for another round of Far East detachments. These were mounted as Operation BOLD[3] with No 83 Sqn arriving at Tengah in August 1953 to be replaced in turn by Nos 7 and 148 Sqns, both of which did two stints, with the last one ending in April 1955.

By that time, the first Canberra detachment, four B6s of No 101 Sqn, was already in theatre, having arrived at Changi in February before moving up to Butterworth in March as Operation MILEAGE.[4] The aim was to carry out operational trials to establish whether the Canberra could serve as a substitute for the Lincoln. It was concluded that it could and Butterworth became the destination for all subsequent six- or eight-aircraft Canberra deployments. These were mounted in succession by Nos 617, 12 and 9 Sqns. No 101 Sqn completed its second three-month MILEAGE deployment in September 1956 but they were not replaced because the focus of attention had moved from Malaya to Egypt and the ill-starred Suez campaign. By that time, however, Operation FIREDOG was beginning to run out of steam anyway. Furthermore, FEAF would have a resident Canberra squadron of its own before the end of 1957 and in 1958 the RAAF's Lincolns were replaced by more Canberras and the RNZAF provided a third squadron so the need for reinforcement from the UK had

Op PROFITEER

Unit	Aircraft	Base	Period
No 214 Sqn	3 × Valiant	Changi	Oct 57-Nov 57
No 90 Sqn	2 × Valiant	Changi	Mar 58-Apr 58
No 101 Sqn	2 × Vulcan	Butterworth	Oct 58
No 83 Sqn	2 × Vulcan	Butterworth	Nov 58 - Dec 58
No 148 Sqn	4 × Valiant	Butterworth	Feb 59
No 138 Sqn	4 × Valiant	Butterworth	Jun 59-Jul 59
No 49 Sqn	4 × Valiant	Butterworth	Sep 59-Oct 59
No 617 Sqn	1 × Vulcan	Butterworth	Oct 59-Nov 59
No 101 Sqn	4 × Vulcan	Butterworth	Jan 60-Feb 60
No 83 Sqn	4 × Vulcan	Butterworth	Jun 60
No 10 Sqn	4 × Victor	Butterworth	Jul 60-Aug 60
No 57 Sqn	4 × Victor	Butterworth	Nov 60-Dec 60
No 90 Sqn	4 × Valiant	Butterworth	Jan 61-Feb 61
Nos 10 & 15 Sqns	4 × Victor	Butterworth	Jun 61-Jul 61
Nos 10 & 15 Sqns	4 × Victor	Butterworth	Jan 62-Feb 62
Op CALAMANDER			
No 55 Sqn	4 × Victor	Tengah	Nov 62-Dec 62

Table 2. MBF deployments to exercise contingency plans.

evaporated.

Medium Bombers for the Cold War

While that may have been true in the context of the strictly localised Malayan Emergency, there were growing concerns about the Communist threat in the wider Far East. By the late 1950s, the Valiant squadrons were up and running and in 1957 the first of several iterations of Operation PROFITEER[5] was drawn up to cover two-to-three-week deployments of up to four aircraft at a time to exercise Bomber Command's ability to reinforce FEAF. First up was No 214 Sqn which sent three Valiants to Changi in October 1957. They were followed on an irregular basis, two or three deployments per year, by elements of most of the Valiant squadrons, although the receiving airfield was now Butterworth rather than Changi. Having reached Malaya, the opportunity was sometimes taken to show the aircraft off

Victor B1s of Nos 10 and 15 Sqns at Butterworth on a PROFITEER in 1962.

elsewhere. In 1958, for instance, No 90 Sqn sent Valiants to Manila, Saigon and New Zealand and 1959 No 49 Sqn's Valiants paid a visit to Australia while one of No 10 Sqn's Victors went to Clark AFB in 1962.

Vulcans joined the programme in 1958 followed by Victors in 1960. A nominal Vulcan exercise, mounted in 1959, had involved only one aircraft of No 617 Sqn which remained at Butterworth as reserve for three others that went on to complete a, not entirely trouble-free, round-the-world flight via Australia, NZ and the USA.[6]

The experience gained from PROFITEER underpinned a contingency plan that would have provided FEAF with a really big stick – a nuclear one. As at December 1959, Operation MASTODON stated that, in the event of limited war – note *limited* war:[7]

> '. . . Bomber Command may be required to provide one Valiant and one Vulcan squadron to operate in the nuclear role. The Valiant squadron will deploy to Butterworth and the Vulcan squadron to Changi. Each aircraft will carry a Blue Danube store in transit. […] Thereafter the squadrons are to carry out nuclear strikes as directed by CinC FEAF. Twenty-four hours' notice will be given and thereafter aircraft are to be despatched at a rate of four per day.'

As with all such plans, MASTODON was periodically reviewed and amended and by July 1960 it said that the sixteen aeroplanes (eight, plus ten crews, per squadron) would now be available to

operate in both nuclear and conventional roles and, for the former, the weapons to be carried had been changed to RED BEARD.[8] A year later the plan had changed yet again; it now involved eight Victors deploying to Butterworth while the Vulcans were to go to Tengah,[9] but within a matter of months the Vulcans had been deleted and it had become the intention to use two squadrons of Victors.[10]

By May 1962 the codename for the plan was changed, so MASTODON became DESDEMONA and in September it was updated again, the revised plan now providing for up to twenty-four Victors, rather than the previous sixteen.[11] Furthermore, forty-eight RED BEARDS had now been pre-positioned at Tengah, obviating the need for nuclear weapons to be ferried about the globe by bombers in, what would have had to have been, a time of increased international tension.[12]

To keep the crews current, PROFITEER had been superseded by Operation CALAMANDER,[13] but only one CALAMANDER was ever mounted. That was by No 55 Sqn in November-December 1962, just as the Brunei Revolution was beginning to disturb the tranquillity of FEAF where the recent Cuba Crisis had attracted relatively little attention.

The Background to Confrontation.

The Brunei Revolution was followed by 'Confrontation' – which has been described as, an undeclared war with Indonesia. Very briefly, *Konfrontasi* was the manifestation of Indonesian opposition to British plans for the political future of the region. In the early 1960s the UK had sought to rationalise its obligations in the Far East, and to reduce their costs, by divesting itself of its colonial responsibilities, particularly (in a post-conscription era) those involving manpower-intensive internal security, while maintaining its ability to contribute to regional stability, not least through its membership of SEATO.[14] In return for retaining a military base in Singapore the UK would accept responsibility for defence against external threats – of which there appeared, at the time, to be none of any immediate consequence.

Malaya had become an independent state in 1957 and the UK proposed to achieve its aim by granting Singapore independence (although still a colony, Singapore had been internally self-governing since 1959) and grafting it onto Malaya to create Malaysia. This was

unacceptable to the administration in Kuala Lumpur, however, as the addition of the large, and primarily Chinese, population of Singapore would have unbalanced the racial equation. The proposed solution was to add the protectorate of Brunei and the colonies of Sarawak and North Borneo whose indigenous peoples would restore the balance, although neither colony was really ready for independence.

President Sukarno of Indonesia objected to this plan on the grounds that the creation of Malaysia would be no more than a thinly-disguised construct intended to permit Britain to maintain its imperial influence. He also disputed the status of the Borneo territories, claiming (not entirely unreasonably) that if the British were pulling out, the whole island really ought to become part of Indonesia. President Macapagal of the Philippines also objected to the creation of Malaysia on similar anti-neo-colonial grounds and maintained that there were equally valid historical Filipino claims to parts of Borneo. Undeterred, despite Sukarno's declared intention actively to 'confront' the UK's plan, the British persevered and in September 1963 Malaya, Singapore, Sarawak and North Borneo (which reverted to its original name of Sabah) were merged to create the new state of Malaysia (the Sultan of Brunei declined to participate).

The upshot was that the UK's policy had actually created an external threat where there had been none before and, since the Malaysians were unable to cope with it, rather than divesting themselves of responsibility for internal security the British found themselves saddled with a prolonged, and very expensive, large-scale counter-intruder campaign in Borneo.

Medium Bombers for Confrontation

As Confrontation grew in intensity the codename for the medium bomber reinforcement plan was changed again and in June 1963 the short-lived Operation DESDEMONA became Operation ORCHID.[15] The associated Operation CALAMANDER, had become Operation CHAMFROM in the previous December, but it still provided for detachments of four Victors and was first exercised by No 10 Sqn in January 1963.[16] In the following December the option was doubled up when four aircraft each from Nos 15 and 57 Sqns were flown out to Tengah. A few weeks later No 15 Sqn's detachment moved up country to Butterworth while responsibility for the Victor element at

One of No 57 Sqn's Victors taking on fuel from a Valiant of No 90 Sqn.

Tengah passed to No 55 Sqn.

No 57 Sqn's four-aircraft deployment in December 1963 had been carried out as two pairs using air-to-air refuelling with just one stop en route at Khormaksar, but within a few months the tanker fleet would be in serious trouble and even the handful of Valiants assessed as still being flyable were grounded in December 1964.[17] By that time both of Cottesmore's Victor squadrons, had already been disbanded to release their aircraft for conversion into tankers to replace the Valiants. The increasing scarcity of Victor bombers meant that Vulcans had to be re-introduced into the FEAF reinforcement scheme. In August 1964, Operation ORCHID, was amended to reflect eight Vulcans going to Butterworth and sixteen Victors to Tengah, with the exercise facility, CHAMFROM, amended to provide for in-theatre detachments of four Victors and/or four Vulcans, so up to eight bombers at a time.[18] This option was exercised in September 1964 when four of No 12 Sqn's Vulcans, each loaded with twenty-one 1,000 pounders, were deployed at short notice, initially to Aden and then to Gan, in response to Indonesia's having adopted an increasingly hostile posture. In October the Vulcans moved on to Butterworth to relieve No 15 Sqn's Victors, but they were home in time for Christmas.

Meanwhile, the grounding of the Valiant and the wholesale

Unit	Aircraft	Base	Period
Op CHAMFROM			
No 10 Sqn	4 × Victor	Butterworth	Jan 63-Feb 63
No 57 Sqn	4 × Victor	Tengah	Jul 63
No 57 Sqn	4 × Victor	Tengah	Dec 63-Feb 64
No 15 Sqn	4 × Victor	Tengah	Dec 63-Jan 64
No 15 Sqn	4 × Victor	Butterworth	Jan 64-Sep 64
No 55 Sqn	4 × Victor	Tengah	Feb 64-Oct 64
No 12 Sqn	4 × Vulcan	Butterworth	Oct 64-Dec 64
Op SPHERICAL			
No 57 Sqn	4 × Victor	Tengah	Oct 64-Apr 65
No 35 Sqn	8 × Vulcan	Gan	Apr 65
No 57 Sqn	4 × Victor	Butterworth	Apr 65-Jul 65
No 57 Sqn	4 × Victor	Tengah	Jul 65-Aug 65
Op MATTERHORN			
No 9 Sqn	4 × Vulcan	Tengah	Aug 65-Mar 66
No 35 Sqn	4 × Vulcan	Tengah	Mar 66-Aug 66

Table 3. MBF deployments during Confrontation.

conversion of Victor Mk 1s to tankers had amounted to a significant reduction in Bomber Command's ORBAT which dictated a further revision of its obligation to FEAF. In January 1965 Operation ORCHID was amended yet again. It now called for eight Vulcan Mk 2s at Butterworth and another twelve plus four Victors at Tengah.[19]

In late 1964 Operation CHAMFROM was superseded by Operation SPHERICAL.[20] This involved the permanent detachment of four of the remaining Victors from Honington to either Tengah or Butterworth with up to a maximum of twenty Vulcan 2s of the newly established Cottesmore Wing at 24 hours' notice to move to Gan, Tengah, or Butterworth as required – so only four bombers actually in-theatre, rather than the previous eight. Groups of support personnel, who would have to be deployed down route in advance to handle the Vulcans in transit, were at 2, 12 and 24 hours' notice. As with PROFITEER, aircraft detached to FEAF under SPHERICAL were

sometimes deployed elsewhere, notably to Australia, Victors of No 57 Sqn, for instance, spending a few days at Darwin in February 1965 to participate in the RAAF's Exercise HOT SQUIRREL.

The standby element of SPHERICAL was successfully exercised, at no notice, in 1965. It was initiated on 26 April by CinCFE (Adm Sir Varyl Begg) requesting reinforcement. The Air Force Department promptly issued the necessary warning signals, for just eight aircraft rather than the full twenty, and began to arrange diplomatic clearances for overflights of Turkey and Iran. After an appropriate interval to simulate bombing-up, the execute signal was released and all eight conventionally 'armed' Vulcans of No 35 Sqn were on standby at Gan on 28 April – 32 hours after receipt of the execute signal and just 42 hours since the CinC's request. Clearly, they could have been dropping bombs on Indonesia within 48 hours. The following day four of the aircraft moved on to Butterworth and four to Tengah. A few days later the exercise was terminated and all eight aircraft were back at Cottesmore by 6 May.[21] It had been an impressive and convincing demonstration and one would like to think that its significance had not been lost on the Indonesians – but there is, at least anecdotal, evidence to suggest that they had been quite unaware of it.[22]

By this time, mid-1965, Honington's squadrons were converting to the tanker role so the Victor had to be relieved of the FEAF task which now became a 100% Vulcan commitment. The current edition of the contingency plan, still Operation ORCHID, would now have involved the deployment of up to twenty-four Vulcan 2s from Cottesmore.[23] To keep the wheels oiled and to maintain a presence in theatre SPHERICAL was superseded by Operation MATTERHORN which provided for the permanent presence of four Vulcans in-theatre with a further twelve on standby in the UK, the first of these to be capable of departing within 16 hours.[24] The first MATTERHORN detachment, which was mounted by No 9 Sqn, arrived at Tengah in August 1965 to relieve the last of the Victors. They were replaced by No 35 Sqn in 1966 but Confrontation was formally ended by a treaty signed in Bangkok on 11 August and the Vulcans promptly returned to the UK, bringing to an end the Medium Bomber Force's permanent presence in FEAF which had lasted for more than 2½ years.

Unit	Type	Base	Period
No 14 (NZ) Sqn	Canberra B(I)12	Tengah	Sep 64-Oct 64
No 73 Sqn	Canberra B15	Tengah	Sep 64-Nov 64
No 3/14 Sqn	Canberra B(I)8	Kuantan	Oct 64-Nov 64
No 14 (NZ) Sqn	Canberra B(I)12	Labuan	Oct 64-Nov 64
No 14 (NZ) Sqn	Canberra B(I)12	Tengah	Nov 64-Jun 65
No 32 Sqn	Canberra B15	Tengah	Nov 64-Feb 65
No 16 Sqn	Canberra B(I)8	Kuantan	Feb 65-Jun 65
No 249 Sqn	Canberra B16	Kuantan	Jun 65-Aug 65
No 14 (NZ) Sqn	Canberra B(I)12	Gong Kedak	Jun 65
No 14 (NZ) Sqn	Canberra B(I)12	Tengah	Jun 65-Nov 66
No 6 Sqn	Canberra B16	Kuantan	Aug 65-Sep 65
No 73 Sqn	Canberra B15	Kuantan	Sep 65-Nov 65
No 32 Sqn	Canberra B15	Kuantan	Nov 65-Dec 65

Table 4. Canberra bomber deployments during Confrontation.

Canberras for the Cold War and Confrontation

By 1958 FEAF had its three resident eight-aircraft Canberra squadrons, B 2s of No 45 Sqn RAF and No 75 Sqn RNZAF at Tengah and Australian-built Mk 20s (effectively B 6s) of No 2 Sqn RAAF at Butterworth. All three were available for Operation FIREDOG but there was little demand by this time and only a handful of missions had been mounted before stumps were pulled on the Emergency in 1960. In the context of the Cold War, FEAF's Canberras represented the core of the air element of the Commonwealth Strategic Reserve (CSR) which had been set up in 1955,[25] but in January 1962 No 75 Sqn was disbanded and its leased B2s were returned to the RAF.

Prior to this, the New Zealanders had bought themselves nine 'fast-back' B(I)12s which were used to equip the RNZAF's No 14 Sqn in 1959. Like No 75 Sqn before it, No 14 Sqn was committed to FEAF and, as such, it was listed in its ORBAT under 'theatre forces' but it was agreed that it would actually be home-based at Ohakea, on-call at short-notice if required, a capability that it demonstrated by periodic deployments to Singapore as Exercise VANGUARD. That being the case, it is convenient for the purposes of this paper to treat No 14 Sqn as a *de facto* reinforcement.

No 32 Sqn's Op REGALITY Canberras lined up at Tengah in 1965.

The intensity of Confrontation increased markedly in mid-1964. It began with simmering inter-racial unrest in Singapore, exploited by Indonesian propaganda, and possibly provocateurs, leading to an outbreak of rioting in July in which 23 people were killed and 450 injured, order finally being restored by the imposition of a curfew. In August and September there were amphibious and airborne landings in Malaya, and another burst of inter-communal violence in Singapore all of which served only to exacerbate the political tension created by the ongoing 'Sunda Straits crisis' involving HMS *Victorious*. An air attack seemed increasingly likely and the readiness state hit its all-time peak.

No 14 Sqn happened to have been exercising its routine reinforcement commitment at the time and it was retained in theatre until further notice; it was more than two years before it was finally released to fly home. At the same time aircraft at Tengah were armed and dispersed around the airfield and, in some cases, moved to more remote sites, the resident No 45 Sqn, for instance, taking its Canberras to Kuantan, while the New Zealanders took theirs to Labuan.[26]

In short order FEAF was provided with two more Canberra squadrons by redeploying a squadron of B(I)8s, jointly manned by Nos 3 and 14 Sqns, from Germany (Operation ACCORDION)[27] and No 73 Sqn from Akrotiri (Operation REGALITY).[28]

Both deployments were terminated in November and from then on the external Canberra reinforcement, nearly always at Kuantan, was reduced to just one squadron. RAFG only did one more stint – No 16

Op PLANTERS PUNCH

Unit	Aircraft	Base	Period
No 542 Sqn	Canberra PR7	Changi	May 55-Aug 55
No 540 Sqn	Canberra PR7	Changi	Aug 55-Nov 55
No 82 Sqn	Canberra PR7	Changi	Nov 55-Mar 56
No 58 Sqn	Canberra PR7	Changi	Mar 56-Oct 56
No 58 Sqn	Canberra PR7	Changi	Jan 57-Apr 57
No 58 Sqn	Canberra PR7	Changi	Jul 57-Sep 57
No 58 Sqn	Canberra PR7	Changi	Jan 58-Mar 58
No 58 Sqn	Canberra PR7	Changi	Jul 58-Aug 58
No 58 Sqn	Canberra PR7	Changi	Jan 59-Mar 59
No 58 Sqn	Canberra PR7	Changi	Sep 59-Oct 59

Table 5. PR Canberra deployments during Op FIREDOG.

Sqn in mid-1965[29] – probably because withdrawing a nuclear-capable unit that had been formally declared to SACEUR was always diplomatically difficult. That interval aside, the commitment was covered by the four squadrons of the Akrotiri Wing taking it in turns two-months at a time. The tension eased progressively during 1965 and the requirement for an in-theatre presence was withdrawn in December of that year.

Photo Reconnaissance Reinforcement

Throughout its existence FEAF always had an organic photo reconnaissance capability in the shape of No 81 Sqn, but the demands placed upon it could sometimes exceed its resources. There were two periods when assistance was requested. The first began in 1955, in the context of FIREDOG, when four Canberras of No 542 Sqn were deployed to Changi for three months under Operation PLANTERS PUNCH.[30] They were followed by each of Wyton's four squadrons taking it in turns, with the commitment being reduced to just two aircraft in 1956, not least because the UK's PR force was being drastically reduced in size, one squadron disbanding in 1955 and two more in 1956. That left just No 58 Sqn as Bomber Command's only Canberra PR unit and the impending Suez crisis led to the detachment at Changi being withdrawn in October. Once the dust had settled in the Middle East, the Changi commitment was resumed but Bomber

Unit	Aircraft	Base	Period
Op PERSPECTIVE			
No 58 Sqn	Canberra PR7	Tengah	May 64-Jul 64
Op ABRUPT			
No 58 Sqn	Canberra PR7	Tengah	Sep 64-Apr 65
No 13 Sqn	Canberra PR9	Tengah	Apr 65-Aug 65
No 58 Sqn	Canberra PR7	Tengah	Aug 65-Dec 65
No 13 Sqn	Canberra PR9	Tengah	Dec 65-Apr 66
No 39 Sqn	Canberra PR9	Tengah	Apr 66-Jun 66
No 58 Sqn	Canberra PR7	Tengah	Jun 66-Aug 66

Table 6. PR Canberra deployments during Confrontation.

Command's now somewhat depleted resources meant that it was reduced to, usually a pair, of aircraft for just two months twice a year and this continued until 1959.

The second period when reinforcement was required was during Confrontation. It began with three of No 58 Sqn's Canberra PR7s being sent out to Tengah for a few weeks in May-July 1964 as Operation PERSPECTIVE, specifically to assist with the never-ending attempt to complete the aerial survey of British (now Malaysian) Borneo. But that sudden increase in tension in September, to which reference has already been made, led to the detachment being reinstated under Operation ABRUPT,[31] now on a permanent basis, as an all-purpose reinforcement and maintained for the next two years. Although notionally based at Tengah, as with those of the resident No 81 Sqn, the reinforcement aircraft also operated from Labuan and Kuching. Canberra PR9s of Nos 13 and 39 Sqns from Cyprus and Malta were incorporated into the rotation but it was No 58 Sqn and its PR7s that were holding the fort, for the third time, when the commitment was terminated with the end of Confrontation in August 1966.

Incidentally, the Mediterranean-based PR9 crews were a trifle taken aback by the constraints imposed by the weather in FEAF. Part of their task was to assist in the everlasting attempt to complete the survey of 'our bit' of Borneo, a project that had been under way since 1947 but had been constantly frustrated by cloud cover. This is well

Op AFFLUENT (ANTLER from May 1966**)**

Unit	Aircraft	Base	Period
No 204 Sqn	Shackleton MR2	Changi	May 64-Jun 64
No 210 Sqn	Shackleton MR2	Changi	Sep 64-Nov 64
No 203 Sqn	Shackleton MR2	Changi	Nov 64-Jan 65
No 204 Sqn	Shackleton MR2	Changi	Jan 65-Apr 65
No 210 Sqn	Shackleton MR2	Changi	Apr 65-Jul 65
No 203 Sqn	Shackleton MR2	Changi	Jul 65-Oct 65
No 204 Sqn	Shackleton MR2	Changi	Oct 65-Jan 66
No 206 Sqn	Shackleton MR3	Changi	Jan 66-Apr 66
No 201 Sqn	Shackleton MR3	Changi	Apr 66-Aug 66
No 120 Sqn	Shackleton MR3	Changi	Aug 66-Dec 66

Table 7. Maritime reconnaissance deployments during Confrontation.

illustrated by No 13 Sqn's ORB which complains that of twenty such sorties mounted with PR9s in June 1965 only one had produced useable results.[32]

Maritime Reconnaissance for Confrontation

As with photo recce, by the spring of 1964 it was clear that the demands for maritime patrol work arising from Confrontation were exceeding the capacity of the resident No 205 Sqn so Coastal Command was required to assist by detaching additional Shackletons to FEAF. These were provided by No 204 Sqn which deployed four aircraft to Changi in May-June 1964. The increase in readiness state in September 1964 meant that the exercise had to be repeated, but now on a permanent basis. As Operation AFFLUENT,[33] the commitment was assigned to Ballykelly whose three squadrons took it in turns to maintain a notionally four-aircraft detachment on a roughly three-month cycle. That said, although a particular squadron was nominally in the lead, there was a degree of flexibility in the constitution of both the manpower and the aircraft, with crews and aeroplanes being drawn from across the station as required, the situation being further complicated by the need to rotate the aeroplanes from time to time. Thus, for instance, while No 203 Sqn was nominally in the lead at the turn of 1964-65 at one stage it had six Shackletons, rather than four,

One of No 210 Sqn's Op AFFLUENT Shackleton MR2s at Changi in 1964. (David Taylor – http://www.focalplanes.co.uk)

only one of which actually belonged to No 203 Sqn, two had been contributed by No 210 Sqn and three by No 204 Sqn.

Notionally based at Changi, the reinforcement Shackletons were absorbed into the local tasking programme, primarily HAWKMOTH patrols which were introduced in September 1964 and sought to detect infiltrators attempting to cross the Straits of Malacca between Sumatra and Western Malaysia. In addition, two aircraft were routinely detached to Labuan, and later to Kuching, whence patrols were flown over the South China Sea, and there was the periodic requirement to provide SAR coverage from Gan. In January 1966 the task was transferred to Kinloss, so Ballykelly's tail-dragger Mk 2s were replaced by the MR3s of Nos 206, 201 and 120 Sqns, in that order, with the final detachment, restyled as Operation ANTLER since May, returning to the UK in December 1966.

Helicopters for Confrontation

FEAF had had helicopters ever since 1950, indeed in many respects it had pioneered their use by the military. By the time that Confrontation began to develop the resident units were No 66 Sqn with Belvederes and No 110 Sqn with Sycamores. In mid-1963 No 110 Sqn was re-equipped with turbine-engined Whirlwind Mk 10s and, at the same time an element was hived off to create No 103 Sqn. External reinforcements, came from No 38 Group at Odiham which contributed No 225 Sqn with ten more Whirlwind 10s in 1963 and No 230 Sqn, Whirlwinds again, in 1965. Both were deployed in Borneo, No 225 Sqn at Kuching, with detachments at Lundu and Simanggang, and No 230 Sqn at Labuan with detachments at Tawau,

Unit	Aircraft	Base	Period
No 225 Sqn	Whirlwind HAR10	Kuching	Nov 63-Nov 65
No 26 Sqn det	Belvedere HC1	Kuching	Nov 63-Aug 64
No 230 Sqn	Whirlwind HAR10	Labuan	Mar 65-Nov 66

Table 8. Helicopter reinforcements during 'Confrontation'.

Reinforced by a detachment from No 26 Sqn, No 66 Sqn's Kuching-based Belvederes provided FEAF with an invaluable medium lift capability during Confrontation.

Sepulot and later Bario. With the Confrontation beginning to cool down, No 225 Sqn was disbanded in November 1965, but No 230 Sqn remained in-theatre for another year.

No 38 Group had contributed a second unit in 1963, three of No 26 Sqn's Belvederes and a number of personnel. This was a little complicated because No 26 Sqn had actually left the UK in February 1963, initially with just two helicopters which self-deployed all the way to Khormaksar – a record-breaking 4,260 mile expedition. A substantial element was left behind at Odiham where it was parented by No 72 Sqn pending call forward to Aden.

That never happened, at least to some of them, and No 26 Sqn's Aden-based ORB makes no further reference to its lost sheep who were still at Odiham in November 1963 when most of them were shipped out to FEAF. There they were deployed forward to Kuching in December, doubling the medium lift capability available to support the troops in Western Brigade. Servicing at Kuching was integrated with that of FEAF's own No 66 Sqn. No 26 Sqn's detachment appears not to have maintained an ORB of its own, although there are occasional references to its presence in the records of other units and it

is clear that the detachment did manage to preserve a discrete 26 Sqn identity. The personnel were repatriated, without their helicopters, in July/August 1964 when No 66 Sqn specifically expressed its appreciation of the contribution that they had made at Kuching.

FEAF was not the only command under pressure at the time, of course, as AFME was dealing with problems in the Radfan and it too needed helicopters. That led to the somewhat ironic situation in which FEAF, itself the recipient of substantial reinforcement, found itself having to reinforce AFME. It wasn't a lot but No 66 Sqn was obliged to give up one of its precious Belvederes (XG474) which was transferred to No 26 Sqn at Khormaksar via HMS *Centaur* in May 1964. FEAF eventually got it back again, of course, because, as with so many other aeroplanes, Singapore became the elephant's graveyard for the Belvedere, most survivors of the breed finding their way to Seletar, which included those bits of No 26 Sqn that still had any mileage left on them when it disbanded in Aden in November 1965.[34] Incidentally, the much-travelled XG474 is the Belvedere currently on display at Hendon.

Air Defence for Confrontation

No 23 Sqn began air-to-air refuelling (AAR) with Javelins in 1960 and in October of that year, in order to establish the feasibility of reinforcing FEAF, four of its aircraft were tanked out to Singapore as Operation DYKE.[35] It was a relatively complex undertaking but two of the aircraft had stopped only at Akrotiri, Bahrain, Mauripur and Gan. This was still quite early days for AAR and the exercise highlighted some significant limitations. For instance, the lack of a suitable homer meant that a rendezvous could not be guaranteed, which meant that the trails had to be accompanied by two Valiants – two in order to cover the possibility of a hose failure in the single-point tankers. The paucity of diversions on the over-sea leg between Gan and Malaya meant that in order to maintain an ability to divert, the fighters had to be topped up six times en route and to do that each pair of Javelins required six Valiants to be launched, because the tankers had to indulge in mutual transfers of fuel as well.

We have heard a lot about this sort of thing in the extreme case of the BLACK BUCK missions in 1982 but the truth is that problems of this kind were very familiar to the tanker planners who had been

solving them for more than 20 years by that time. The underlying weakness here was that the RAF's tankers were simply too small and this tended to become apparent whenever the system was placed under stress.

FEAF's resident all-weather fighter squadron, No 60 Sqn, was upgraded from Meteors to Javelins in 1961. All of its sixteen new aeroplanes were ferried out, without recourse to AAR, via a fifteen-stage route. Two aircraft were written off in the process, one when a starter motor exploded at Luqa, the other due to engine failure over East Pakistan. With the Javelin established in FEAF a contingency plan, Operation SICKLE, was published that would have provided for up to two further squadrons being deployed from the UK in an emergency.[36]

In January 1963 this option was exercised when No 23 Sqn flew out to Singapore with twelve aeroplanes as Operation CANTER-LUP.[37] Supported by ten Valiants of Nos 90 and 214 Sqns, the route was Coltishall – Akrotiri – Muharraq – Mauripur – Gan – Tengah and the transfer took seven days. The Javelins arrived just after the Brunei revolution had been nipped in the bud and there was no reason to detain them so they went home again.

Over the next few months, however, Confrontation began to gain some traction and by the autumn of 1963 it had become necessary to provide more Javelins, not least because a permanent detachment at Butterworth began to be mounted from October onwards. A convenient opportunity to do this presented itself in November when twelve of No 64 Sqn's Javelins were tanked out to India to participate in Exercise SHIKSHA. Instead of returning to Binbrook, four of these aircraft were flown on down to Tengah to join No 60 Sqn.

As Operation MERINO,[38] FEAF was provided with four more Javelins in January 1964. They staged through Orange and Luqa to El Adem where five Valiants were waiting to take them the rest of the way via Muharraq, Karachi, Gan and Butterworth. By this time Confrontation was beginning to warm up with Indonesian aircraft making incursions into Malaysian airspace in Borneo. This led to the imposition of an ADIZ with Javelins being deployed to both Labuan and Kuching from February onwards. Treaty constraints meant that FEAF could have only one all-weather fighter squadron so by March 1964 No 60 Sqn had ballooned to twenty-six aircraft and thirty-eight

Unit	Aircraft	Op/Ex	Date	Disposal
No 23 Sqn	4 × Javelin	DYKE	Oct 60	RT UK
No 23 Sqn	12 × Javelin	CANTERLUP	Jan 63	RT UK
No 64 Sqn	4 × Javelin	SHIKSHA	Nov 63	to No 60 Sqn
ex-storage	4 × Javelin	MERINO	Jan 64	to No 60 Sqn
No 23 Sqn	2 × Javelin	HELEN	Apr 64	to No 60 Sqn
No 64 Sqn	8 × Javelin	COLASTINE	Sep 64	to No 64 Sqn
All additional Javelins were subsequently delivered by sea.				

Table 9. Javelin deployments and reinforcements.

crews but they were spread across four airfields, with two aircraft routinely being held at five minutes' readiness at each, with others mounting border patrols, escorting transport aircraft and so on. Managing these arrangements, not least the engineering aspects, must have been demanding, to say the least. Incidentally, the last time that the RAF had fielded a twenty-six-aircraft fighter squadron had been the summer of 1918. Another pair of in-flight-refuelled Javelins was flown out to Singapore as Operation HELEN in April.

The hiking up of tension in September 1964 meant that FEAF would need even more air defence. At the time, however, the RAF was about to reshuffle its scattered fleet of Javelins with the aim of concentrating all of the Mk 9(R)s in Cyprus where No 29 Sqn was to become the global flight-refuelling-capable reinforcement squadron. This involved a complicated movement plan, Operation HEAVENLY,[39] which was to begin on 25 September with aeroplanes being shuttled back and forth between the UK, NEAF and FEAF with the assistance, where appropriate, of Valiant tankers. The urgent demand for additional Javelins to be sent out to FEAF could have been met by activating the 'up to two squadrons' Operation SICKLE, an updated edition of which was still current, or the recently introduced Operation ASPECT,[40] that called for only up to fourteen fighters to be moved. In the event, however, in view of the short warning time, as had been the case with HELEN, a plan was devised and published by signal in lieu of a conventional hard-copy Op Order. The resulting Operation COLASTINE[41] was carried out between 12 and 19 September with eight of No 64 Sqn's Javelins FAW9(R)s being successfully flown out to FEAF using AAR via Akrotiri,

A Javelin of No 60 Sqn over Borneo. This aeroplane, XH877, was an ex- 64 Sqn AAR-capable Mk 9(R) that had found its way to FEAF via Exercise SHIKSHA in December 1963. On 3 June 1965 it was re-allotted to the, now Tengah-based, No 64 Sqn only to be lost as a result of compressor failure over Sabah on the 22nd. The crew ejected and survived.

Bahrain, Karachi and Gan. There they were to remain, operating as a detachment of No 64 Sqn.

This redeployment had confounded the movement plan for HEAVENLY, of course, so that would have to be completely revised. But HEAVENLY had already been compromised by the Burmese government banning overflights of its territory, which had foreclosed on the possibility of ferrying 'dry' Javelins to/from Singapore by overland stages. Furthermore, the deteriorating situation had been compounded by the Valiant's structural integrity problems. By the end of September only twelve Valiants were categorised as still being fit to fly, and only six of those were tankers – just 30% of the total tanker fleet – and even they were grounded in December. Op HEAVENLY having been abandoned in November, any additional Javelins required by FEAF thereafter would have to be sent out by sea, and many more were.[42]

In April 1965 it was finally agreed that we could have two Javelin squadrons in Malaysia so No 64 Sqn was reassigned to FEAF. Its UK echelon at Binbrook disbanded and the squadron was now home-based at Tengah alongside No 60 Sqn, both units having a UE of 22 aircraft. This permitted responsibility to be divided between the two units – No

60 Sqn covering Tengah and Butterworth while No 64 Sqn took on Labuan and Kuching with the longer-legged Mk 9(R)s.

In 1968 FEAF's Javelins were finally superseded by the Lightnings of No 74 Sqn which had been moved to Singapore a year before with the assistance of Victor tankers as Exercise HYDRAULIC,[43] but the potential need for reinforcement remained and the RAF's ability to do this was demonstrated in 1969 – twice. First by No 11 Sqn in January when it flew ten F6s out to Singapore via Muharraq and Gan. The exercise was repeated by No 5 Sqn in December, this time via Masirah with twelve Lightnings (three of which were to be swapped for three of No 74 Sqn's which needed to be brought back to the UK for engineering work that was beyond the capacity of local resources) plus a pair of No 54 Sqn's new Phantoms for good measure.[44]

It is interesting to note that when No 23 Sqn had done this with Javelins as recently as 1963 they had stopped four times en route. In 1969 No 11 Sqn stopped only twice but No 5 Sqn did it in just two hops. That represented significant progress and it is worth observing that reducing the number of stages has two advantages. It minimises problems arising from aeroplanes going unserviceable during stop-overs while reducing the total elapsed time for the exercise.

Reinforced Theatre Plan (Far East) 9 – ADDINGTON

Before beginning to draw this paper to a close, it is appropriate to sharpen the focus on the context in which the large-scale reinforcement activity of the mid-1960s had taken place. Why did FEAF need all of these aeroplanes, particularly bombers? What was it going to do with them? In September 1964 the most significant theatre contingency plan was Plan ALTHORPE, and it was to satisfy the needs of ALTHORPE that most of the mid-1964 burst of reinforcement activity took place. Thereafter Plan ADDINGTON probably became the more likely option. ADDINGTON aimed to neutralise the opposition's offensive air capability in a retaliatory strike, following an initial attack by the Indonesians against airfields or cities in Malaysia and/or Singapore. Like all such plans it was constantly being revised and amended but, as at July 1965, HQ FEAF had a list of 100 targets in Indonesia of which forty-nine were radar installations or airfields mostly in Sumatra, Java and Kalimantan, although some were as far east as the Celebes and even Papua. The airfields ranged from strips

Offensive	Defensive
15 × Badger	20 × MiG-17
6 × Il-28	6 × MiG-19
15 × B-25, B-26, Mustang	12 × MiG-21

Table 10. The effective Indonesian Air ORBAT (assuming 60% serviceability)

capable of handling Mustangs, Mitchells and Dakotas to concrete runways that could cope with a Badger.[45]

The Indonesian Air Force was assessed as having about 60% serviceability which meant that its actual offensive potential amounted to some fifteen Badgers backed up by half-a-dozen Il-28s plus another fifteen or so WW II-vintage B-25s, B-26s and Mustangs. The fact that these veterans had piston-engines did not mean that they could be easily dismissed – all of these aeroplanes were still quite capable of carrying out effective low-level attack missions.

A strike by FEAF could expect to be opposed by up to twenty MiG-17s, half-a-dozen MiG-19s and a dozen MiG-21s. There were three SA-2 sites around Djakarta and AAA and small-arms fire might be encountered anywhere (*Table 10*).

It was not a 'given', but assuming that the governments of New Zealand and Australia were on board, which implied the option of using Darwin as an operating base, FEAF's ORBAT would have been as summarised at Table 11. The four permanent in-theatre V-bombers, the three resident Canberra squadrons, a remarkable 44 Javelins plus as many DF/GA Hunters and Sabres, although the Australian Sabres were actually day fighter only, plus No 81 Sqn's resident PR Canberras and No 205 Sqn's Shackletons. Also immediately available in-theatre were the Canberra squadron from Cyprus, three additional PR Canberras and four more Shackletons. To which could be added, given four or five days' notice, a dozen more V-bombers under Operation MATTERHORN, another Canberra squadron from Cyprus or Germany, four more RAAF squadrons, two of Canberras and two of Sabres, plus another pair of Shackletons.

In all, that would have represented a strike force of about 70 bombers backed up by 100 fighters (less, of course, whatever had been lost in that initial Indonesian strike). To this could be added the Royal

		MB	LB	AWF	DF/GA	PR	LRMP
Theatre Forces	RAF	4	8	44	16	6	8
	RAAF	-	8	-	28	-	-
	RNZAF	-	6	-	-	-	-
	Total	4	22	44	44	6	8
Retained Ex-Theatre Forces	RAF	-	8	-	-	3	4
On Call Ex-Theatre Forces	RAF	12	8	-	-	-	2
	RAAF	-	16	-	16	-	-
Grand Total		**16**	**54**	**44**	**60**	**9**	**14**

Table 11. FEAF's potential ORBAT circa mid-1965.

	Buccaneer	Scimitar	Sea Vixen
HMS *Victorious*	8	-	12
HMS *Eagle*	10	4	14
HMS *Ark Royal*	-	16	12
HMS *Hermes*	6	-	11

Table 12. FAA assets provided by one, or sometimes two, RN strike carriers.

Navy which, in those days always had one, and sometimes two, strike carriers east of Suez which, apart from the obvious additional striking power, would have provided a lot of tactical flexibility in terms of the directions from which strikes could be launched.

Despite the massive build-up of British military strength, not just air power, Confrontation would drag on until 1966, but the prompt British response to increasingly overt aggression in the summer of 1964 and the subsequent maintenance of a tenacious operational stance effectively served to impose a limit on subsequent Indonesian initiatives. As CinC FEAF, Air Mshl Peter Wykeham put it at the time, there was 'a fair indication that the events of September 1964 had been a bloodless victory somewhat on the lines of Kuwait in 1961.'[46]

Vulcans of No 50 Sqn on a MOONFLOWER in 1969.

Post-FEAF – the rundown and aftermath.

In 1966 the enormously expensive undertaking that Confrontation had become was successfully concluded, but the victory had been somewhat pyrrhic. Singapore had proved to be a poor fit within Malaysia and in August 1965 it had been expelled from the federation. The newly independent Singapore was no longer as secure an environment as had been anticipated. It would probably continue to be friendly towards the UK so long as Lee Kuan Yew's People's Action Party remained in power, but there was no guarantee that it would and the alternative might be far less hospitable.

That aside, a series of balance of payments crises in the 1960s had obliged the UK to reconsider its global situation. Some thought was given to establishing a new British strategic position in Australia but this never became a realistic prospect and, albeit reluctantly, the Government was obliged to conclude that it could no longer afford to maintain a permanent presence east of Suez. As early as July 1967, less than a year after the end of Confrontation, the UK announced that it would reduce its regional forces by 50% by 1971 and would have withdrawn completely by 1976. Less than six months later, in January 1968, following a devaluation of Sterling by 14.3% in the previous November, the date for complete withdrawal was brought forward to 1971.

Since the UK would cease to be a presence in the region and its original concept of a federated state based on the union of Singapore and Malaya had signally failed, it could reasonably be argued that, while the British may have won the military campaign, it had lost the 'war'. In geopolitical terms, Confrontation had actually been more of a victory for Indonesia rather than for the British.

Unit	No of a/c	Exercise	Date
Nos 12 & 50 Sqns	8	MOONFLOWER	Apr-May 67
No 9 Sqn	4	SUNFLOWER	Nov-Dec 67
No 101 Sqn	8	MOONFLOWER	Jun-Jul 68
No 44 Sqn	8	SUNFLOWER	Nov-Dec 68
No 50 Sqn	8	MOONFLOWER	Jun-Jul 69
No 101 Sqn	8	SUNFLOWER	Jan-Feb 70
No 27 Sqn	4	SUNFLOWER	Nov-Dec 70
No 617 Sqn	4	SUNFLOWER	May 71
No 44 Sqn	4	SUNFLOWER	Jan-Feb 72
Nos 50 & 101 Sqns	4	MOONFLOWER	May-Jun 72
No 617 Sqn	4	SUNFLOWER	Jul 72
No 50 Sqn	4	SUNFLOWER	Feb-Mar 73
No 101 Sqn	4	MOONFLOWER	May-Jun 73
No 44 Sqn	4	SUNFLOWER	Nov-Dec 73
No 50 Sqn	4	SUNFLOWER	May-Jun 74
No 101 Sqn	4	SUNFLOWER	Nov-Dec 74

Table 13. Exercises MOONFLOWER (eastabout) and SUNFLOWER (westabout).

The British drawdown began very promptly and FEAF began to contract; three squadrons had gone before the end of 1967, two in 1969 and three more in 1970. Nevertheless, the UK wished to indicate that it still intended to maintain, if not a presence, at least a commitment to regional defence and in 1967, to offset the steady decline in FEAF's ORBAT, Bomber, later Strike, Command introduced two contingency plans that would have permitted the deployment of Vulcans. One would have gone eastabout via the Mediterranean, Middle East and Gan (Operation TURBAN[47]), the other westabout via the USA and Pacific (Operation STETSON[48]). These were practised as Exercises MOONFLOWER and SUN-FLOWER respectively, although recoveries to the UK were not always the reverse of the outbound route, so these sometimes involved round-the-world flights.[49] Originally eight aircraft at a time, supported by three or four Britannias they were later reduced to four bombers

Unit	Exercise	Date
No 57 Sqn	HOT SQUIRREL	Feb 65
No 57 Sqn	SHORT ACRUX	Jun 65
No 9 Sqn	HIGH RIGEL	Dec 65
No 35 Sqn	SHORT SPICA	Mar 66
No 35 Sqn	HIGH CASTOR	Aug 66
No 9 Sqn	HIGH MARS	Nov 67
No 101 Sqn	HIGH JUPITER	Jun 68
No 44 Sqn	RUM KEG	Dec 68
No 50 Sqn	TOWN HOUSE	Jun 69
No 101 Sqn	CASTOR OIL	Feb 70
No 27 Sqn	OPAL DIGGER	Nov 70
No 44 Sqn	WHISKY SOUR	Feb 72
Nos 50 & 101 Sqns	TOP LIMIT	May 72
No 617 Sqn	DRY MARTINI	Jul 72
No 50 Sqn	SILVER SPADE	Mar 73

Table 14. Examples of RAAF exercises involving MBF detachments to Darwin.

and the appropriate number of Britannias.

While detached to Butterworth or Tengah, the opportunity was often taken to visit other places. The odd Vulcan occasionally got as far as Kai Tak, but the usual extension was down to Darwin to permit participation in RAAF air defence exercises. This Darwin connection had been established well before the end of Confrontation and Vulcans played in at least fifteen such Australian exercises (*Table 14*).

The RAAF exercises were not exclusively Vulcan affairs and in 1969, for instance, a pair of Canberra PR7s and four of No 74 Sqn's Lightnings flew down to Darwin for Exercise TOWN HOUSE, the latter being provided with AAR support by Victor tankers of No 55 Sqn as Exercise SILVER SWALLOW. Four of No 74 Sqn's Lightnings visited Darwin again in November 1969, the Victors being provided this time by No 214 Sqn, as Exercise HIGH SWALLOW and in April 1971 Exercise TIGER TREK took the Lightnings all the way to Adelaide in order to participate in the celebration of the

Lightnings of No 74 Sqn and friend over Laverton, April 1971.

RAAF's 50th birthday,

As the rundown of the British presence accelerated, the UK was concerned to reassure its regional partners that it could still honour its defence obligations and in mid-1970 it participated in the widely publicised Exercise BERSATU PADU. This involved all three Services, the RAF's major contributions being ten Phantoms of No 54 Sqn which were tanked out to Tengah, two per day via Masirah – two pairs did it in a single bum-numbing 14-hour non-stop flight – along with six Vulcans of No 44 Sqn and three PR Canberras of No 58 Sqn.[50]

HQ FEAF finally closed for business on 31 October 1971 and most of what remained, notably No 65 Sqn's Bloodhounds, was taken over by the Republic of Singapore Air Force. But the RAF still maintained a presence at Tengah for a while, principally No 103 Sqn, which was upgraded from Whirlwinds to Wessex, and a handful of No 205 Sqn's legacy Shackletons, although these were soon replaced by a two-aircraft Nimrod Maritime Detachment (MARDET). Both of these units had gone before the end of 1975 and the RAF Support Unit at Tengah finally closed down in February 1976 marking the end of a permanent RAF presence in Singapore that had first been established in 1928.

The Five Power Defence Arrangements – the FPDA

The British withdrawal from the Far East had pulled most of the teeth from the Commonwealth Strategic Reserve which had formed the basis of regional defence since 1955. The UK's long-term obligations were now defined by the Five Power Defence

Unit	Aircraft	Name	Date
No 39 Sqn	2 × Canberra PR9	MANDAU	May-Jun 71
No 12 Sqn	4 × Buccaneer	PIRATE TRAIL	Feb-Mar 72
No 6 Sqn	6 × Phantom	PALE JADE	Apr-May 72
No 39 Sqn	2 × Canberra PR9	CHAFFINCH 1	Jun 72
Nos 54 Sqn & 41 Sqns	6+1 × Phantom	PALE JADE II	Oct-Dec 72
No 39 Sqn	2 × Canberra PR9	CHAFFINCH 2	Dec 72-Jan 73
No 6 Sqn	6 × Phantom	PALE JADE III	Apr-May 73
No 41 Sqn	6 × Phantom	PALE JADE IV	Aug-Sep 73
No 39 Sqn	2 × Canberra PR9	CHAFFINCH 3	Jan-Feb 74
No 39 Sqn	2 × Canberra PR9	CHAFFINCH 4	Oct 74
No 39 Sqn	2 × Canberra PR9	CHAFFINCH 5	Jan-Feb 75
No 39 Sqn	2 × Canberra PR9	CHAFFINCH 6	Jul-Aug 75

Table 15. Examples of post-FEAF detachments to Singapore.

Arrangements – the FPDA – that had been signed in 1971. These involved – and still do – the British Government's consulting with those of Australia, New Zealand, Singapore and Malaysia in the event of external aggression or threat of attack against Singapore or Western Malaysia (Borneo is not included). There is no specific undertaking to intervene militarily, although this could, of course, be the eventual outcome.

The UK demonstrates its commitment to this obligation by mounting occasional detachments to the region and the RAF did this quite regularly until the final withdrawal from Tengah. At least eight MOONFLOWERS and SUNFLOWERS were mounted post-1971 (*see Table 13*), which is to say post-FEAF, and there were a number of other deployments some of which, until 1973, involved participation in regional exercises (*Table 15*).

But the RAF failed to show for the next fifteen years and it was 1988 before it had a presence again when four Tornado F3s that were making a round-the-world flight happened to be in Malaysia, at Butterworth, in time to participate in that year's Exercise LIMA BERSATU – although the UK actually dominated proceedings that year, as it also contributed a Naval Task Force, including HMS *Ark*

FPDA Exercise BERSAMA SHIELD 2011 – Typhoons of No 6 Sqn and a VC10 exercising with F/A-18s (Geoff Lee and BAE Systems)

Royal and its Sea Harriers.

The RAF was there again in 1990 when Tornados of Nos 5 and 27 Sqns operated from Butterworth in ADEX 90-2. Much more recently, Typhoons of No 6 Sqn deployed to Butterworth for Exercise BERSAMA SHIELD 2011. The UK's participation does not always involve hardware, sometimes being confined to a C2 element, but 2013 the UK played twice, with Typhoons of No 1 Sqn deploying to Butterworth in April for Exercise BERSAMA SHIELD and a Sentry of No 8 Sqn taking part in Exercise BERSAMA LIMA in November. In 2014 Typhoons were at Butterworth again, this time fielded by No 3 Sqn for BERSAMA LIMA, supported by Voyager tankers and a C-17 Globemaster. One suspects that the frequent deployment of Typhoons may not be entirely unconnected with the fact that the Royal Malaysian Air Force just happens to be looking to replace its MiG-29s at the moment.

So while FEAF *per se* may have been consigned to oblivion more than 40 years ago, the RAF does still maintain an, at least, occasional presence east of Suez.

Notes: It should be appreciated that, while those TNA references cited below which relate to an Operation (Op) Order will lead to a copy, it will not necessarily be the first

edition or the last. It will, however, suffice to indicate broadly what was involved in each case, but it should be born in mind that some Op Orders were reissued with a new number, while retaining their original title/codeword (as was clearly the case with MASTODON) while all were subject to, sometimes frequent, amendment. Operation CHAMFROM, for example, had been amended at least six times before it was ever exercised in practice.

[1] It may be of interest to record that the Tengah-based No 60 Sqn disposed of the last operational Spitfire in January 1951 and to commemorate this milestone, on 30 April 1953 Rolls-Royce and Vickers-Armstrong jointly presented the squadron with a silver model of 'the last Spitfire' – a Mk 18. The following day, however, a Spitfire of No 81 Sqn from Seletar dropped toilet rolls on No 60 Sqn's dispersal along with a banner urging them to 'get some operational Spitfire hours in'. When No 81 Sqn retired *their* last operational Spitfire in 1954 Rolls and Vickers presented them with another silver model of 'the last Spitfire' – a Mk 19. In the 1960s these trophies shared the same display case in the foyer of Tengah's Officers Mess.

[2] TNA AIR24/1733. HQ Bomber Command Op Order 45/50 (MUSGRAVE).

[3] TNA AIR24/2170. HQ Bomber Command Op Order 17/53 (BOLD).

[4] TNA AIR24/2180. HQ Bomber Command Op Order 52/54 (MILEAGE).

[5] TNA AIR24/2378. HQ Bomber Command Op Order 34/57 (PROFITEER).

[6] The plan had been for three aircraft to make a round the world trip with a fourth, as a reserve, proceeding no further than Butterworth. In the event the spare was not called for and stayed in Malaya to constitute a nominal PROFITEER. Once in New Zealand one of the three aircraft had to be left behind having sustained significant damage in a landing incident. The two survivors succeeded in crossing the Pacific without any further drama but one had to return to Offutt AFB with an undercarriage malfunction. Instead of the anticipated three Vulcans, therefore, only one landed at Scampton, roughly on schedule, on 8 November 1959. The second arrived on the 20th but it was June 1960 before the lame duck in NZ was fit to fly home.

[7] TNA AIR23/8589. HQ Bomber Command Op Order 54/59 (MASTODON). On arrival in theatre operational control was to be vested in CinC FEAF and discharged via the Bomber Command Force Commander who would accompany the bombers, the necessary preparations to receive the bombers being made under HQ FEAF's Op Order 11/61 (HARMONIUM) (TNA AIR24/2653).

[8] TNA AIR23/8589. HQ Bomber Command Op Order 31/60 (MASTODON).

[9] *Ibid*. HQ Bomber Command Op Order 12/61 (MASTODON).

[10] TNA AIR24/2645. HQ Bomber Command Op Order 50/61 (MASTODON).

[11] TNA AIR24/2726. HQ Bomber Command Op Order 11/63 (DESDEMONA).

[12] The intention to pre-stock a total of forty-eight RED BEARDs in-theatre (thirty-six No 1s and twelve LABS-capable No 2s, the latter for use by the resident No 45 Sqn) had been noted as early as 1960 in, for instance, a loose minute of 22 August by VCAS (TNA AIR2/13738). On 20 August 1962, with the construction of the necessary Supplementary Storage Area (SSA) now complete at Tengah, the Prime Minister sanctioned their deployment. The planned despatch of the first consignment, by two Britannias on 18 September (one carrying a number of carcasses, the other the nuclear components), was noted in Air Ministry letter AUS(A)/594 of 4 September

(TNA DEFE7/2382). The route was to be Lyneham – El Adem (reached via the Straits of Gibraltar) – Khormaksar (via 'Nasser's Corner') – Gan – Tengah. The weapons were flown back to the UK between May and September 1970 in accordance with HQ Air Support Command Op Order 13/70 (BODYBELT). This involved eighteen VC10 flights routing via Guam (Anderson AFB), Honolulu (NAS Barbers Point) and the USA (March and Seymour Johnson or Myrtle Beach AFBs). A copy of the Command Op Order has proved elusive but the gist is reflected in RAF Brize Norton Op Order 12/70 (BODYBELT) (TNA AIR28/1752).

[13] TNA AIR24/2687. HQ Bomber Command Op Order 16/62 (CALAMANDER).

[14] SEATO – the South-East Asia Treaty Organisation – was an anti-communist military alliance set up in 1955. Its members were the USA, the UK, Australia, New Zealand, France, Thailand, Pakistan and the Philippines. While some major exercises were held, SEATO never attracted the level of commitment afforded to the equivalent NATO. Since few members had been prepared to become involved in the growing instability in Laos and Vietnam in the 1960s, the alliance was seen to be increasingly irrelevant and it was dissolved in 1977.

[15] On 7 June 1963, Amendment List 1 to HQ Bomber Command Op Order 11/63 changed its name from DESDEMONA to ORCHID (TNA AIR24/2727) but it was September 1964 before a revised plan, HQ Bomber Command Op Order 14/64, was published in that name (TNA AIR24/2777).

[16] TNA AIR24/2727. HQ Bomber Command Op Order 4/63 (CHAMFROM). The change of name from CALAMANDER to CHAMFROM had been implemented by ALs 4 and 5 to Op Order 16/62, dated 18 and 20 December 1962, respectively.

[17] While No 57 Sqn's aircraft had used AAR, No 15 Sqn had staged out to Singapore, three aircraft via Akrotiri, Khormaksar and Gan, the fourth via Akrotiri, Nairobi and Gan. It had been intended that both of Honington's squadrons should be AAR capable but during a work-up training flight on 24 January 1964, there was a serious leak from the fuel trunking in No 55 Sqn's XH594 resulting in several inches of fuel in the crew compartment. Further use of the facility was banned while the problem was investigated.

[18] TNA AIR24/2779. HQ Bomber Command Op Orders 25/64 (ORCHID) and 24/64 (CHAMFROM).

[19] TNA AIR2/17400. HQ Bomber Command Op Order 3/65 (ORCHID).

[20] TNA AIR24/2780. HQ Bomber Command Op Order 34/64 (SPHERICAL).

[21] TNA DEFE4/184. CAS, Sir Charles Elworthy, provided the Chiefs of Staff with a situation report on 27 April, at which time six Vulcans were en route between El Adem and Muharraq with the other two about to leave El Adem; in support, one Comet and three Britannias were 'proceeding as planned'.

[22] In informal post-Confrontation correspondence, Humphrey Wynn asked retired Indonesian Air Force AVM R J Salatun what he thought 'the deterrent effect was of the RAF V-bombers and Canberras'. Salatun had responded that he had consulted a number of colleagues, who had been involved at the time, only to find that none of them 'mention the Canberras, Victors and Vulcans'; indeed a MiG-21 Squadron Commander stationed at Medan had questioned whether the British had 'deployed any bombers at all.' See *RAF Historical Society Journal, No 13*, p71.

[23] TNA AIR24/2783. HQ Bomber Command Op Order 25/65 (ORCHID).
[24] *Ibid*. HQ Bomber Command Op Order 24/65 (MATTERHORN).
[25] The key roles of the land, sea and air forces assigned to the CSR was to provide forward defence for Australia and New Zealand and protection for Commonwealth interests in Malaya and South East Asia against attack or subversion by communist forces. Until 1960 it was actively engaged against the MRLA and was subsequently employed during Confrontation while also being committed to SEATO.
[26] TNA AIR24/2792. HQ FEAF Op Order 20/64 (PARSONAGE).
[27] TNA AIR24/2754. HQ RAF Germany Op Order 21/63 (ACCORDIAN).
[28] TNA AIR24/2819. HQ NEAF Op Order 18/64. This document had no assigned codename but the deployment was conducted under the terms, and was referred to by the codename, of HQ NEAF Op Order 102/62 (REGALITY). Incidentally, while this eight aircraft/ ten crews enterprise was notionally carried out by No 73 Sqn, it actually involved the whole Akrotiri Wing. After some early adjustments the aircraft at Tengah eventually comprised five Canberra B 15s of No 73 Sqn and one from No 32 Sqn and a B 16 from each of Nos 6 and 249 Sqns. Seven crews were fielded by No 73 Sqn plus three from No 6 Sqn with No 32 Sqn contributing another in October.
[29] TNA AIR24/2826. HQ RAF Germany Op Order 10/65 (NICO).
[30] TNA AIR24/2184. HQ Bomber Command Op Order 9/55 (PLANTERS PUNCH).
[31] TNA AIR24/2780. HQ Bomber Command Op Order 32/64 (ABRUPT).
[32] TNA AIR27/2904. ORB for No 13 Sqn 1961-65.
[33] TNA AIR24/3049. HQ Coastal Command Op Order 6/62 (AFFLUENT, renamed ANTLER on 5 May 1966).
[34] When No 26 Sqn disbanded at Khormaksar in November 1965, its last four Belvederes (XG457, ‘467, ‘468 & ‘474), along with two master pilots and seven groundcrew were transferred to No 66 Sqn at Seletar. XG474 was the helicopter that No 66 Sqn had been obliged to send to Aden in 1964.
[35] TNA AIR24/2618. HQs Fighter and Bomber Command Joint Op Order 28/60 (DYKE).
[36] TNA AIR24/2642. HQs Fighter and Bomber Command Joint Op Order 10/61 (SICKLE).
[37] TNA AIR24/2689. HQs Fighter and Bomber Command Joint Op Order 23/62 (CANTERLUP).
[38] TNA AIR24/2733. HQs Fighter and Bomber Command Joint Op Order 32/63 (MERINO).
[39] TNA AIR24/2803. HQs Fighter and Bomber Command Joint Op Order 20/64 (HEAVENLY).
[40] TNA AIR24/2777. HQs Fighter and Bomber Command Joint Op Order 5/64 (ASPECT).
[41] Copies of the signals containing the instructions for Operation COLASTINE do not appear to have been preserved and No 64 Sqn’s ORB is thin on detail.
[42] At least fifty-eight Javelins reached FEAF of which twenty-four arrived by sea.
[43] TNA AIR24/2854. HQs Fighter and Bomber Command Joint Op Order 7/67 (HYDRAULIC).

[44] No 11 Sqn's deployment was Exercise PISCATOR (HQ Strike Command Op Order 48/68 – TNA AIR24/2917); No 5 Sqn's was Exercise ULTIMACY with the accompanying Phantoms as Exercise CARFAX (HQ Strike Command Op Orders 42/69 and 53/69 respectively – TNA AIR24/2924).

[45] A complete record copy of RTP(FE) 9 ADDINGTON has proved elusive. As Op Order 1/65, it is listed as Appx 69 to the Plans and Operations section of HQ FEAF's F540 for March 1965 (TNA AIR24/2795), but, alone among the appendices for that month, it is missing; however, a summary may be found at TNA DEFE5/154 and some specific details as at July 1965 are on file within TNA AIR23/8663 and 8665. While ADDINGTON has been discussed as a representative contingency plan to illustrate this paper, there was a variety of other options; the very similar RTP(FE) 7 COUGAR (later renamed HEMLEY and then ALTHORPE), for instance, included naval, as well as air, targets. RTP(FE) 5 SALAAM (later renamed SPILLIKIN and, later still, INSWINGER) was concerned with the defence of Eastern Malaysia and Brunei in the event of Indonesian aggression while RTP(FE) 6 ALE dealt with internal security reinforcement of the Borneo territories, and was actually implemented in 1962 in the context of the Brunei Revolution. Other Confrontation-era contingency plans included JTP(FE) 52 SHALSTONE (renamed MASON with effect from December 1964) which would have involved action by air, land and sea against irregular commando-style forces operating from bases in the Riau Islands, and was perceived to have been likely to provoke an Indonesian response which would, in turn, have triggered ADDINGTON or ALTHORPE. JTP(FE) 62 FLORID concerned possible offensive operations confined to Kalimantan while JTP(FE) 63 HEDGEHOG covered action against locations in Sumatra that might have been involved in launching an invasion of the Malay peninsula. These are examples; this list may not be exhaustive.

[46] TNA AIR23/8666. Letter FEAF/TS106/8/6 dated 29 October 1964 from CinC FEAF to VCAS.

[47] TNA AIR24/2850. HQ Bomber Command Op Order 21/66 (TURBAN).

[48] TNA AIR24/2852. HQ Bomber Command Op Order17/66 (STETSON).

[49] Representative HQ Bomber/Strike Command Op Orders 4/67 (MOONFLOWER) and 15/67 (SUNFLOWER) may be found at TNA AIR 24/2852 and 24/2853 respectively, but there will have been earlier and/or later editions in both cases.

[50] Needless to say, Air Support Command was heavily involved in BERSATU PADU with 2,300 soldiers and their equipment being airlifted from the UK by Hercules, Britannias, Belfasts and VC10s which also moved, more than 2,000 RAF personnel and several Wessex helicopters of No 72 Sqn. In all this involved some 85 sorties to move the Army and another 40 to move the RAF. Other RAF aircraft involved were the ubiquitous Victor tankers and locally based Lightnings, Shackletons, Wessex and Hercules. The core of the RN's participation was HMSs *Bulwark*, *Blake* and *Fife* along with 40 and 42 Commandos while the Army contingent included 2nd Btn, Royal Anglian Regiment and 2nd Btn, Light Infantry Regiment of 19 Brigade and 38 Field Sqn, RE.

HELICOPTERS IN FEAF – SYCAMORES TO BELVEDERES

Gp Capt Paul Gray

Paul graduated from Cranwell in 1953 and, after a QFI tour on Vampires, flew Hunters before moving on to helicopters. He did two stints in the Far East, the second as OC 66 Sqn. Subsequent tours included OC 18 Sqn in the UK and RAFG, OC Flying at Odiham and, from 1978, Station Commander at Akrotiri. His ground tours were with the Air Ministry and MOD in London and the National Defence College at Latimer. After retiring in 1987 he worked part time for the Foreign Office and spent 9 years flying cadets with Nos 1 and 6 AEFs.

Introduction to Helicopters

In early 1958, when I was coming to the end of my second flying tour, a signal arrived on the station from the Air Ministry asking for volunteers to fly helicopters in Malaya. Having read an excellent article in *Air Clues* about Nos 194 and 155 Sqns' operational role in the Malayan Emergency, and a certain fascination for rotary wing flying, I decided to put my name forward. It is perhaps worth mentioning the well-known Sandys White Paper of that time, which caused severe cuts to the front line and thus diminished one's chances of three flying tours on the trot. It was also known in that era that only the older generation went onto helicopters. But my luck was in; the RAF in its wisdom started accepting younger pilots onto the force and in September1958 I had the good fortune to be posted to No 194 Sqn based at Kuala Lumpur.

I reported to South Cerney for training in June and the course in those days took two months. We flew just under 50 hours – the course was fine for learning how to handle the Sycamore but we had no opportunity to fly into confined spaces, which was very much part of the day to day work in Malaya. There were only a few of us on the course, some on the Whirlwind, and I remember our senior student – AVM Grundy – who was being acclimatised on to helicopters before taking up his appointment as AOA at HQ FEAF.

The move to the Far East in the September was interesting. In those days movement was by troopship, RAF Hastings or air charter.

At the time my family and I were due to fly out, there had been an Emergency in the Middle East taking much of the airlift and to our delight we were booked onto a BOAC Britannia. The routine trooping flights went out with a night stop in Karachi and ended up in Singapore. Word had it that the vast majority of passengers night stopping in Karachi finished up with stomach problems! Those posted up-country to Malaya had to be processed through Singapore before going north by train. You can imagine our added delight when we found that the BOAC flight landed at Kuala Lumpur before reaching its final destination of Singapore. I assumed that we would disembark at KL but you may be surprised to learn that the Air Force planned otherwise! It took me numerous calls to the Movements Staff for common sense to prevail. I would, however, add that the BOAC flight was a bit of a nightmare. Nowadays of course you can fly to KL overnight in one hop. In 1958 the flight landed at Frankfurt, Beirut, Tehran, Karachi, Bangkok and then KL. With an hour's stop at each airport it was a nightmare with a 9-month old baby. Flying back two and a half years later, this time by a chartered Britannia, with, by then, two youngsters was a relative doddle.

Nos 194 and 110 Sqns

Turning now to RAF Kuala Lumpur. It was a fairly busy airfield with the helicopters of Nos 194 and 155 Sqns, No 52 Sqn with Valettas for supply dropping, No 267 Sqn with a Voice Flight of two Dakotas and another flight of Pioneers and Twin Pioneers plus a Comms Flight with Pembrokes. At the time it was also Malaya's main commercial airport for both internal and overseas flights but not a great hive of activity for civil traffic in those days. There was great excitement when the first BOAC Comet 4 came through.

When I arrived at the end of 1958 operations were dying down in the southern states of Malaya which had been covered by No 155 Sqn's Whirlwinds. The plan was for their aircraft to be withdrawn in 1959 and returned to the UK, I believe to be converted into the Mk 10s. Operations were still active in the north of the country but, with Malayan Independence scheduled for 1960, the RAF was moving out of KL with the Sycamores and Valettas going to Butterworth on the north west coast and remaining assets being moved south or the units disbanded.

This picture provides some indication of the size of the spaces within which a Sycamore was expected to land.

Our theatre training on the helicopters was quite extensive as it was a totally new environment for new rotary wing operators. Within ten days of arrival I was off to Changi to do the two-week Jungle Survival Course. The first week was based on an old coastal gun site on the perimeter of Changi airfield and the second in the jungle around Mersing in Johore. The course finished with an escape and evasion exercise back to Changi from the outskirts of Singapore. The two weeks' training gave us the confidence to survive and focused the mind on what items we should stuff into our survival Bergens which we always carried in the 'boot' of our Sycamores on operations and training flights over the jungle.

On return from Changi, operational training started in earnest – learning the techniques of flying in and out of clearings and navigating over the jungle with rather poor maps. We had a training clearing at a kampong called Ulu Langat just outside KL and I can still remember being flown over it by the training officer and thinking it unbelievable that we could make it into such a small space. The Sycamore was an early generation helicopter, better suited to flying passengers in and out of heliports or stately homes rather than carrying large numbers of

A Sycamore of No 194 Sqn landing in a jungle clearing..

troops in and out of the jungle. As you can see from the model here in the Museum (there's an actual example on display at Cosford), it has two seats up front and we had a canvas seat for three behind the pilot. But the number of times you could carry a full load were few and far between. The Sycamore was not blessed with a great deal of power, had manual controls and, to put it mildly, required a degree of concentration to maintain your rotor revs at the designated 265 rpm. It was said that helicopter pilots in those days had squint eyes with one on the rotor gauge and the other doing other things.

Going back to the operational training, I see from my log book that it took around two months and about 45 hours' flying. After the clearing training at Ulu Langat we went on various navigation exercises around the country, particularly to the Police Field Forts in the central highlands. Navigation was not easy, as maps were poor, and during the monsoon season you could get caught out trying to get from east to west through the highlands as the cloud base came down. It was a case of trying up one valley and, if you could not get through the top, you had to go back down and try the next one. Although we practised instrument flying, the Sycamore was manually controlled without an autopilot and flying in cloud out there was to be avoided. We had no navigation aids and no communications when away from the few airfields we used. At the end of operational training we carried out trooping and casevac tasks with the squadron instructors before being declared operational.

Refuelling away from main base was done by hand from 4-gallon 'flimsies'.

We had twelve aircraft on establishment and, as most of our operations were up in the north of the country, a detachment of two or three aircraft was based with the Malayan 2nd Infantry Brigade at Ipoh. The aircraft were located next to the MT Section – air and ground crew rotated every fortnight. We worked with British, Australian, New Zealand and Malayan battalions as well as the SAS and if we had big trooplifts extra aircraft came up from KL. The aircraft at Ipoh were particularly valuable for short notice insertions and casevac sorties.

As you can imagine, moving a company in and out of their operating area took some time if you were only able to take two or three soldiers on a lift. The cruising speed of the Sycamore was only 80 kt and to take the maximum payload you normally had to refuel between sorties. This was done from 4-gallon 'flimsy' cans, stocks being positioned by the Army at the designated assembly point, which was often the airstrip at Grik, north of Ipoh, or on open ground around kampongs. When lifts were done from the Police Field Forts the fuel would be dropped by Valetta. There were no specialist crewmen in

No 110 Sqn's lines at Butterworth.

those days due to weight restrictions but engine and airframe technicians came along to assist with refuelling and help sort out minor technical problems during trooplifts and also to give assistance on casevac sorties. Aircraft were often tasked to carry out individual missions around the country and fuel was kept at a number of police stations in case you were caught short due to weather diversions.

In February 1959 one of our aircraft crashed on a local training sortie a few miles south of the airfield at KL killing a new training officer and a trainee pilot. Two months later another aircraft crashed not far from the centre of KL killing both pilots and the station Accountant Officer. We were then grounded until the cause was found. It turned out to be blade failure and as there was no quick solution we were re-equipped with the Whirlwinds which should have been going back to the UK. It was a few months before the squadron's move to Butterworth and our number plate was changed from 194 to No 110 Sqn. Some of No 155 Sqn's pilots joined us and those of No 194 Sqn who were going to make the move north did a reasonably quick conversion.

Our move to Butterworth worked well. It was much easier from the operating point of view as we were closer to the Army's main area of operations south of the Thai border where, at that time, there was no east-west highway across north Malaya. Grik remained the main launching point for trooplifts; casevacs could be recovered more

quickly to the BMH at Taiping and there was no longer a need to maintain a detachment at Ipoh.

Butterworth was the Australian-run base for two squadrons of RAAF Sabres and one of Canberras. We got on pretty well and one of the great benefits we received was our entitlement to their scale of flying rations. It seemed to be extremely generous and the story went that the original allowance had been queried and a trial had been set up on one of the Sabre squadrons to check weight loss of pilots after a number of sorties. It was rumoured that the pilots flew around at low level with the heating full on and the results from the tests proved that the ration allowance needed to go up rather than down!

We only had seven Whirlwinds on strength while our Sycamores were out of action with, I think, thirteen pilots to fly them. Most of us had hirings on Penang Island with only the CO on base. Soon after the move we started to receive some of the new breed of first-tour helicopter pilots who integrated well. Three joined the squadron in my time and lived in the Mess, as did the duty pilot who was on call mainly for casevacs.

The Whirlwind Mk 4 with its Pratt and Whitney engine was as limited in performance as the Sycamore but it had the advantage of a better cabin for carrying troops. The Sycamore had more of a 'matey' feel about it with the troops just behind you and very often a tracker dog breathing down your neck! With the Whirlwind you had no communication with the troops below you in the cabin and when loading you had to indicate on your fingers how many you would be able to take on board. As you can imagine, the two finger salute was not always appreciated!

After nine months at Butterworth the Sycamore blade problem was resolved. We rotated pilots down to Seletar, where the aircraft had been stored, to do air tests and ferry the aircraft up north while returning the Whirlwinds to Singapore for despatch to the UK. It took seven months to get all twelve of our Sycamores back.

As with most helicopter squadrons the engineers were always hard pressed to keep enough serviceable aircraft on line. Engines took quite a pounding. Flying in and out of jungle clearings using maximum power with a lot of rubbish flying around did not help matters. One of our Sycamores had an engine failure on the approach to a clearing. Fortunately the pilot managed to get it down in some scrub just short

A replacement engine for a downed Sycamore, delivered courtesy of the RN.

of the landing platform. It was assessed as recoverable and the New Zealand platoon on the spot built a new platform for a Royal Navy Whirlwind 7 to fly-in a new engine which was duly installed and the old one flown out. A very successful operation and great experience for the groundcrew

I left No 110 Sqn in March 1961 and had five years away from the Far East working in London in the Air Force Department followed by a year at Staff College before having the good fortune of being appointed OC 66 Sqn.

No 66 Squadron

I took over in June 1966 and we were the last Belvedere squadron. Only twenty-six aircraft were produced and they had a number of technical problems throughout their life, which proved very taxing for the engineers. The great benefit, both for the Royal Air Force and for the Army was that we, at last, had a helicopter with a decent disposable payload of 5,000 lb giving us the ability to lift guns and up to nineteen fully-equipped troops.

The aircraft was quite challenging to fly, as rotor revs still had to

be maintained manually by throttle adjustment rather than the computer-linked systems introduced on the Whirlwind Mk 10 and later helicopters. Although troublesome, the two Gazelle engines gave good power and the aircraft was able to perform well on one engine in an emergency. After the Sycamore and piston-engined Whirlwinds it was a pleasure generally to have power to spare when carrying reasonable loads.

The Belvedere started entering service in 1961. No 66 Sqn was the first of three squadrons and was deployed to the Far East in April 1962 with an initial complement of six aircraft. Of the other units, No 72 Sqn had Belvederes for around three years before re-equipping with the Wessex in 1964. The third squadron, No 26 Sqn, had them for around three years in Aden and when the UK withdrew from there in 1965, their Belvederes were transferred to No 66 Sqn. As a footnote I would add that some of No 26 Sqn's aircraft and personnel provided reinforcement to No 66 Sqn during the 'Confrontation' with Indonesia and at least one aircraft, XG474 (which is in the Museum) from No 66 Sqn helped No 26 Sqn out during the Radfan campaign.

Going back to No 66 Sqn's deployment to the Far East in 1962. Soon after their arrival at Seletar the squadron was busy up in Malaysia doing a wide variety of jobs, trooping, resupply, casualty evacuation and jungle rescue. In December 1962 three Belvederes made the sea crossing to Kuching constituting a helicopter record at that time. They flew on, on the same day, to Labuan to assist in the suppression of the Brunei rebellion and covered 1,000 miles in the day. Following the move, the squadron established a permanent detachment in the Borneo territories working in the trooping and supply roles and lifting heavy or awkward items of freight, which included ten crashed helicopters. During the Confrontation campaign the 'Flying Longhouses' (as the locals christened them) lifted approximately 10 million pounds of freight and 100,000 troops to and from the border outposts. During this time the complement of aircraft on the squadron's detachment based at Kuching rose to six. Aircrew were rotated at two-week intervals from Seletar and a high percentage of the groundcrew were on one-year unaccompanied tours. This was not ideal for maintaining a good level of expertise.

With the end of Confrontation the squadron looked forward to consolidating back at Seletar, but this was not to be until October

The 'flying longhouse'.

1967. An additional stretch of hardstanding and extra accommodation had to be built to cater for twelve aircraft and additional air and groundcrew. In the meantime the remaining four aircraft at Kuching were shipped to Butterworth where we maintained a detachment for eight months. They had a variety of tasks which included positioning a new radar on the top of Western Hill in Penang.

Meanwhile, at Seletar the squadron went from strength to strength with the consolidation of a very good engineering team and a reasonable supply of spares. From the autumn of 1966 until March 1969 when the squadron disbanded we took part in ten major army exercises up country in Malaysia with the Whirlwinds of Nos 110 and 103 Sqns. The exercises usually went through a number of phases, moving troops forward, consolidating and then the assault on the enemy's position. The Gurkhas seemed to pick the short straw as they always appeared to be the exercise enemy. Exercises usually ran for a week or longer involving four to eight aircraft. I noted that we lifted 14,000 troops and 3·5 million lb of freight during the course of these exercises. The Belvedere was not a particularly troop-friendly aircraft and the following quote from a New Zealander conveys some idea of their feelings:

If climbing into a Belvedere encumbered by a pack and a rifle was awkward, getting out could be even more of a challenge.

> ‘Climbing into a Belvedere with full battle kit, seven days’ rations and an SLR was a mission in itself with the entry at head height and only a narrow ladder to use in this endeavour. Exiting at our destination was another matter on a bare slippery flat floor. The chopper, already perched atop high wheel struts, landed with its forward and aft wheels on small rises in the terrain, but straddling an indenture between the rises. With all that heavy gear we had no option but to jump to the ground, a jump of between 8 and 10 feet. That doesn’t sound much when you are looking up but that distance begins to look fearful when you’re looking down.’

Our final exercise, CROWNING GLORY, finished only eight days before we disbanded, and involved eight of our remaining ten aircraft; we flew 289 hours over twelve days. Quite an achievement by our engineers, as it was only 11 hours short of our task for the whole month.

Outside the main exercises we carried on routine training with army units and flew search and rescue missions and a variety of trials. Three worth noting were trials for landing on LSLs, an extra-long winch cable for jungle rescue and a modification for rotors-running refuelling. The LSL trial went well and showed that we could lift troops and freight on and off the main deck and the helicopter platform at the rear. The winch modification used a Beverley loading winch which could be installed temporarily in the Belvedere fuselage

to allow 200 ft of runout. It was cleared for use but never had to be employed in an emergency. The rotors-running modification would have been a great boon to reduce turn-round times and avoid the engine start-ups, which often gave problems. The modification could be called an 'enema' system, as fuel was pumped in through the fuel jettison pipes to the front and rear tanks. Unfortunately there was no way of monitoring the amount of fuel going in. The trial was halted when over-fuelling occurred on one sortie and the excess fuel entered the air intake for the front engine causing the rotor to overspeed.

Interspersed with our commitments we managed to run two squadron camps on the airstrips at Mersing in Johore on the east coast of Malaya to enhance squadron training, particularly with night flying. The contrast with night flying at Seletar was very stark when using a minimum lighting approach system in complete darkness.

Aircrew and Engineering

Two subjects I would like to end on are crewing the Belvedere and the engineering challenges.

The aircraft was designed so that it could be flown by one pilot and that was the case when we carried out much of our continuation training. However, for operations and nearly all of tasked sorties, we carried two pilots and a crewman. All pilots were trained as captains, initially at Odiham, but from 1966 onwards all Belvedere training was done on the squadron. First-tour pilots started joining us in 1967 and after their conversion to type were able to gain experience in the left hand seat and share the flying and navigation before being declared fully operational.

Crewmen were a very important part of the team. Initially they came from the ranks of air engineers and signallers but latterly they were air quartermasters. Some were a little bemused at first, having been accustomed to the more orderly environment of the fixed-wing cockpit. Most soon warmed to their new role of loading troops and hanging out of Belvedere doors talking pilots into confined areas or onto underslung loads. They had many other duties and on non-task sorties often took the second pilot's seat and helped with the radios and navigation.

Finally, great credit goes to the squadron's engineers who, against all the odds, produced a very high number of serviceable aircraft for

A final group shot prior to disbandment in March 1969

exercises and other commitments. This took a great deal of planning, as the Belvedere was plagued by numerous out-of-phase items which had to be dealt with. Vibration, engines and starter motors gave most problems. I have seen it quoted that rectification man hours per flying hour for the Belvedere were four times higher than those for the Whirlwind and Wessex and that the Belvedere was more costly to maintain than the Valiant. In 1967 the squadron and its second line engineers changed fifty engines! Despite all their hard work, in the tropical conditions the groundcrew seemed to establish a love/hate relationship with the aircraft. The groundcrews' views were summed up very well by one of my sergeants in an excellent article he wrote on the Belvedere for *Aeroplane* magazine in 2000:[1]

> 'In the Belvedere we had a unique helicopter whose history, difficulties and somewhat unorthodox characteristics engendered a justifiable elitism. I worked harder and longer, had more responsibility and authority and enjoyed myself more than at any time in my service career.'

Disbandment

We had hoped to become the first Chinook squadron in 1969 but when the buy was cancelled in 1967 the decision was made to disband No 66 Sqn with the rundown of Seletar and the move of the Whirlwinds to Changi. It was ironic that, on start-up for our final flypast around the island the day before we disbanded, one starter motor blew up and we were reduced from nine aircraft to eight. We

The end – XG474 trundling through Hampshire to take its place, eventually, at the RAF Museum at Hendon.

finished in good style at our disbandment ceremony flying-in four 105 mm guns to the slipway at Seletar where the first flying boats had arrived in 1928. After a final salvo, the guns were towed off and XG474 did a final landing to round off a memorable occasion.

Conclusion

The Belvedere had a chequered history over its relatively short life. It filled an important gap between the first generation helicopters with their modest payload capability and the more technically advanced machines leading up to the superb Chinook.

As the last of the line of British helicopters designed and built by the famous Bristol Aeroplane Company it is very appropriate that a Belvedere has a special place in the RAF Museum, and in particular XG474, known as 'Oscar'. It was one of the first on No 66 Sqn's establishment and it took part in the record 1,000-mile flight to Brunei before giving sterling service during Confrontation. In 1964 it was shipped to Aden to help out during the Radfan Campaign and was then returned to No 66 Sqn for its last four years of valuable service. It logged the highest number of flying hours of all the Belvederes and was the last aircraft to land at the squadron's disbandment ceremony. Undoubtedly the pride of the fleet.

[1] Branchett, Dave; 'Maintaining the Belvedere', *Aeroplane*, Vol 28, No 4 (April 2000), pp26-35.

RAF FIGHTER ACTIVITIES IN FEAF – 1961 TO 1970

Gp Capt 'Jock' Heron

Jock Heron graduated from Cranwell in 1957 to fly Hunters and, during a later USAF exchange tour, F-105s. Following a stint working on the MRCA project, he spent ten years in the Harrier world, flying it in Germany, and as a staff officer at both Rheindahlen and MOD. He commanded RAF West Drayton and RAF Stanley before leaving the air force to spend the next ten years with Rolls-Royce as their Military Affairs Executive. He is currently Vice-Chairman of this Society and a Director/Trustee of the Bristol Aero Collection.

After the Second World War, the Far East Air Force comprised mainly fighter-bombers and transports. Air defence was not a priority until, on 16 April 1959, the Air Council endorsed the need to face the developing threats from China and Indonesia. To provide such a capability, one Javelin and one Hunter squadron based at RAF Tengah, were to be deployed by 1961, supported by the appropriate radars and later by surface-to-air missiles, reinforced from the UK if necessary.

Historically, ground attack activities in FEAF had been covered by Nos 45 and 60 Sqns in Singapore and Malaya, with No 28 Sqn in Hong Kong, flying a variety of offensive support aircraft. No 45 Sqn re-equipped with Canberra light bombers in 1957 as an attack squadron and No 60 Sqn acquired Meteor NF 14s in 1959. Venoms were retained in Hong Kong until 1962 but, for a time, there was no DF/GA presence in Singapore. The ill-conceived 1957 Defence Review cancelled all manned combat aircraft beyond the Lightning and TSR2, but there was still the need to replace the Venom for 'out of area' operations. Following trials in 1957, by my CFE predecessors, of an armed Jet Provost, the Folland Gnat and the Hunter, the latter was selected for the role. In 1958 a reduction in UE from 16 to 12 on the fourteen front line Hunter F6 squadrons based in Britain and Germany released airframes for conversion. The changes were designed to improve range, payload, handling, airfield

A Hunter FGA9 of No 20 Sqn.

performance, and overseas navigation and the modification programmes started in 1959 at Hawkers and RAF Maintenance Units.

Hunter FGA9s were introduced from 1960 equipping two squadrons in Aden, two in reserve in the UK, one in Cyprus and, in FEAF, one at Tengah, No 20 Sqn, and a small squadron, No 28 Sqn, in Hong Kong. In August 1961 the new OC 20 Sqn, Sqn Ldr Dick Calvert led his first four Hunters from the UK to Tengah staging via Luqa, Nicosia, Teheran, Karachi, Delhi, Calcutta and Bangkok. The planned four-day trip took seventeen with bad weather and unserviceabilities causing delays en route. Others followed and by November, No 20 Sqn was formed at Tengah joining the Canberras of No 45 Sqn as the FEAF Offensive Support Wing under Wg Cdr Ian Pedder. Alongside them were the PR Canberras of No 81 Sqn. Meanwhile the air defence of Singapore was being enhanced as No 60 Sqn's Meteors were replaced by Firestreak-armed Javelin FAW9s. In January 1962, No 20 Sqn was declared operational with a complement of experienced pilots, twelve Hunter 9s plus two 'in use reserves' and one T7.

French Indochina was politically unstable after the WW II and, as Britain was part of SEATO, to support the region No 20 Sqn took part in Exercise PINK GIN**,** deploying to a simulated bare base at Butterworth in March for weapons training and dissimilar air combat against the resident RAAF Sabres. In April, Hunters flew to Korat in Thailand for the annual SEATO Exercise, AIR COBRA, for offensive air support training within the alliance and shortly afterwards the King

No 20 Sqn's Hunters at Chieng Mai in 1962. (David Taylor – http://www.focalplanes.co.uk)

of Thailand sought assistance to protect his country from an increasing Communist ground threat. Although his request was outside the SEATO accord, the US, Australia and UK sent fighters to the kingdom, including USAF F-100s to Takhli, RAAF Sabres to Ubon and, in June, via a brief stop in Bangkok No 20 Sqn's Hunters to Chieng Mai. This was Operation BIBBER which involved aircraft being on standby for the remainder of the month while the pilots became familiar with the air space and diversion airfields in Thailand. Conditions at Chieng Mai, a genuine bare base, were basic with fuel being delivered by road. Permanent accommodation was scarce with personnel living in tents and most of the logistic support relying on the regular Hastings resupply flights from Changi. As a sign of Thai hospitality, shortly after the squadron arrived at Chieng Mai, the Queen of Thailand visited the detachment. Within a few months the RAF reciprocated with a 'Station Open Day', demonstrating overt support to Thailand. Other FEAF aircraft flew into the remote base, and the event was very well attended by the locals.

I visited Chieng Mai in the September from No 54 Sqn on behalf of No 38 Group to assess the challenges which the UK squadrons might face from operations such as BIBBER and learned from the Detachment Commander, surprisingly, that apart from the installed gun packs, there were no weapons at the base. BIBBER was just a political statement, but flying from Chieng Mai provided valuable

theatre familiarisation with few restrictions and the opportunity to train with American aircraft.

The demands on No 20 Sqn, split between Tengah and Thailand, increased substantially so additional Hunters reinforced FEAF, increasing the UE to 16 and more pilots arrived to cover the expanding commitment. At the same time No 60 Sqn detached twelve Javelins to Butterworth for Exercise JOHN COLLINS and No 28 Sqn's Venoms in Hong Kong were replaced by Sqn Ldr Ian Stanway's four Hunter Mk 9s and a Mk 7. No 28 Sqn was to remain a flight-sized unit throughout its brief existence, merely providing a political presence in the Colony.

In marked contrast, after the return to Singapore from Chieng Mai in November 1962, the operational tempo increased. Hunters were sent to Labuan, at the request of the Sultan of Brunei following an attempted coup by the Brunei Peoples' Party, but they were unable to use their weapons without Forward Air Control and instead performed shows of force, in other words, noisy beat ups! OC 20 Sqn did fire a single 30 mm burst over the police station at Seria which was in rebel hands. This had the desired effect and the dissidents promptly surrendered to the Army. Later the same day a further presence over the Sarawak town of Limbang, in support of Royal Marines, enabled troops to retake the town. By the end of December the revolt had been contained and the Hunters returned to Tengah.

In 1962 the air threat in the theatre was minimal so Hunter squadron training focused on low level armed reconnaissance and ground attack using the four Aden guns and a battery of up to twelve 3" rockets. Although an inaccurate WW II weapon, it possessed a substantial punch, carrying a selection of warheads, each of up to 60 lb, but it did require regular training in the several attack profiles. However Hunters and Javelins continued air-to-air firing, practice interceptions and air combat tactics in recognition of a potential air threat. The plan to create the new Federation of Malaysia later in 1963 demanded better radar cover, comprising Bukit Gombak just south east of Tengah, a mobile GCI at Butterworth and an additional unit at Labuan. Low level cover to the south of Singapore was poor, relying on standing patrols by Javelins and Hunters during periods of tension with visual Observation Posts (OP) on the outlying islands. Over North Borneo the terrain meant that these random patrols were flown,

Bukit Gombak with its Marconi search radar and Plessey height finder.

mainly as a deterrent. Before the new Federation came into being in September, the squadrons were back on alert when the Indonesians were detected flying patrols along their borders with Malaya, Singapore and the North Borneo Territories. The threat assessment included Badger, Beagle and B-25 Mitchell bombers and MiG-21, MiG-17 and P-51 Mustang fighters. When this became public knowledge in Britain, the press enjoyed a cheap jibe at the RAF's capability in FEAF thus:[1]

> '**Biggles v the MiG.** If there is despondency in the gallant rank and file of the Royal Air Force today, it can be explained by an intelligent reading of its production programme and its present strike-fighter performance. Without peering into the future and asking what aircraft the RAF will have in the seventies, it is no exaggeration to say that its operational Hunter aircraft Mk 9 compares with other NATO strike fighter forces much as a London taxicab compares with the best racing model. In South-East Asia, where Britain sometimes appears to be on the brink of war with President Sukarno, the Hunter would have to fight the MiG-21, which flies 700 mph faster than the maximum speed of the Hunter. What sort of confrontation would that be? The supersonic Lightning is simply a home defence type and has no strike capability.'

At CFE in early 1963 we had conducted trials matching the Hunter against the Lightning, representing the supersonic adversary. At the other end of the scale, to assess tactics for both types facing a slower piston-engined fighter, the Mustang was represented by Binbrook's own Spitfire PR19, PS853 (later with the Battle of Britain Memorial Flight and still flying today as Rolls-Royce's display aircraft). It took only a couple of sorties to confirm what we already knew, that our

In late 1963 a CFE Lightning was flown in mock combat against Binbrook's Spitfire, PS853, although the Lightning would have been an F2, not the Mk 3 shown in this picture.

fighters were not suited to the task. We observed that, should the Lightning ever be deployed to the Far East to counter the threat, the Mark 3, without guns, could not match the nimble gun and missile armed *Fishbed*. While the Javelin's Firestreaks could engage the *Beagle* and *Badger*, particularly at medium and high altitudes, the Hunter without a missile had a more difficult challenge because the bombers had tail armament. Approaching from the rear for a guns attack, with a marginal overtake speed, the Hunter was vulnerable and the recommended tactic, again developed at CFE, was a risky snap-up manoeuvre against the underside of the bomber from a position outside the arc of fire of the tail guns. Despite our recommendations, MoD refused to equip the Hunter with an air-to-air missile.

A quiet period allowed a joint flypast with the Royal Navy over Singapore at the request of Prime Minister Lee Kuan Yew as a show of political solidarity. Weapons training by No 20 Sqn was conducted locally on China Rock Range and at Song Song near Butterworth during the routine three-week detachment. In June, No 20 Sqn returned to Chieng Mai for a two-week SEATO exercise, DHANARAJATA**,** which reacquainted crews with the rudimentary living conditions and an excellent flying environment with live firing at ground targets as part of the deployment.

In September 1963 the Federation of Malaysia was formed comprising Malaya, Singapore, Sarawak and Sabah. This committed Britain to guarantee the defence of the territories in return for continued use of the bases there. Indonesia's President Sukarno, who

A Javelin FAW9 of No 60 Sqn at Labuan.

opposed the formation of the Federation, launched a propaganda campaign, and guerrillas attacked North Borneo and Johore. Bolstered by the growing influence of the Indonesian Communist Party, riots broke out in Djakarta, and the British Embassy was attacked. Malaysia and Indonesia broke off diplomatic relations and the campaign known as 'Confrontation' began. Along the 900-mile frontier with Sarawak and Sabah, guerrillas attacked villages, ambushed the security forces and landed raiding parties by sea and air on Johore and other parts of the Federation. Hunters and Javelins were deployed to Kuching and Labuan to police the border, although maps describing it were ill defined and inadequately surveyed so squadron Ops Rooms had master maps from which pilots, returning from a sortie, briefed their colleagues and added specific features to help in the planning of subsequent tasks. This pattern of operations became routine for the next three years with the detachments being led by a Flight Commander or a deputy which gave young officers an opportunity to gain command and leadership experience. One Hunter first tourist recalls being briefed to fly to Kuching as No 2 to his Flight Commander. Take off was programmed for 0500 hrs and when the JP observed that it would still be dark the Flight Commander's reply was 'I know, so stay close!'

Escorting transport aircraft on resupply sorties added variety to, sometimes boring, flying and it was physically draining particularly while the wearing uncomfortable and bulky safety equipment necessary for jungle survival. Hunters were flown at low altitude, with

a full gun pack and sometimes with four drop tanks for maximum endurance. Javelins were armed with two or four Firestreaks plus Aden guns and a pair of ventral tanks. In October 1963, at short notice, Javelins again reinforced Butterworth to complement the Sabres. This commitment, which lasted for ten days, had been prompted by a Javelin intercepting a *Badger* at night, flying without lights, over international waters off the west Malaysian peninsula. Shortly afterwards ten Javelins returned to Butterworth for Exercise JOHN COLLINS under the command of the new OC 60 Sqn, Wg Cdr Jock Fraser.

1964 was a demanding year for the squadrons with regular deployments to Kuching and Labuan on patrol and escort duties. A Borneo ADIZ was created in February using the radars near Labuan and Kuching although low level cover was poor and regular visual patrols by both types continued. Crews were cleared to engage Indonesian aircraft overflying the ADIZ without first obtaining authority from the ground. Throughout the presence over Borneo, the weather was a constant challenge to flight safety with 'cunims', sometimes reaching up to 50,000 ft, and heavy rain.

Tasks included accompanying the slow DH Heron of the Malaysian Prime Minister, touring his expanded territories, and escorting the British Minister of Defence in his speedier Comet on a familiarisation tour of Borneo. As the intensity of guerrilla infiltration grew, the detachments to North Borneo increased to four Hunters and two Javelins for QRA duties. In March, C Flt of No 60 Sqn was formed at Butterworth to enhance the air defence of northern Malaysia and its eight aircraft remained there for almost three years, while at Tengah, Operation TRAMP maintained Javelins on permanent alert.

As confrontation escalated, Whitehall restricted offensive action against infiltrators within Malaysia to forward firing weapons only, so Canberras were unable to bomb targets and their offensive support was limited to podded 2" rockets. The Hunter's 3" rockets and 30 mm guns were the main offensive weapons and training included simulated attack profiles against small garrisons in poorly mapped jungle. In March four Hunters were scrambled from Labuan to support a Royal Marine operation against a force of eighty guerrillas which had captured a settlement but, because ground attacks had not been authorised, the aircraft were again limited to showing force.

Seen here with no 64 Sqn, while en route to India for Exercise SHIKSHA in November 1963 (a tanker with a pair of fighters is just discernible in the background), this Javelin, XH887, was one of four flown on down to Singapore where they were transferred to No 60 Sqn in December (see page 78).

The loss of an experienced and highly regarded Hunter pilot near Labuan in March, following a fire just after take-off and the failure of his ejection seat, was a blow to morale as it was the first serious accident on No 20 Sqn since its re-formation in 1961. During the year, the squadron lost three more Hunters and one junior pilot who, it was thought, had flown into the sea during a lengthy patrol at low altitude in hazy conditions off Singapore. On a separate occasion, having abandoned his spinning Hunter, Heinz Frick was reported by *The Straits Times* to have 'ejaculated into a swamp'!

Wg Cdr Tim Lloyd took over the FEAF Offensive Support Wing in early 1964 and I am told, by his successor, that he changed the name to Strike Wing because 'Offensive Support' implied soiled sporting underwear! Sqn Ldr Max Bacon arrived as OC 20 Sqn in early April and shortly afterwards he led a detachment of ten Hunters to Udorn in northern Thailand to participate in the SEATO Exercise AIR BOON CHOO, a No 28 Sqn pilot joining the detachment from Kai Tak. The King of Thailand visited the squadron after four aircraft had escorted his aircraft into Udorn. Having returned to Tengah, via a short stop in Bangkok to participate in a ceremonial flypast over the city, the Hunters in Labuan also returned to base bringing together the

whole squadron after several months spread around south east Asia.

As the flying task became more intensive, additional support arrived from the UK to boost the numbers. No 64 Sqn at Binbrook sent Javelin FAW9(R)s as reinforcements later that year to ensure that there were enough airframes to cover the operational task during a period of poor availability when No 60 Sqn was providing aircraft for the detached C Flt and the Labuan commitment.

Squadron training was interrupted when another operation detached aircraft to Labuan in response to three Indonesian vessels preparing for a possible landing on Sebatik Island. Four Hunters remained there with the Javelins for three days, flying patrols at low altitude as a show of force before returning to Tengah via Kuching when matters had stabilised. Some small arms damage to Javelins was recorded during these sorties. The overflight of Kuching airfield by a low flying *Badger* caused the alert state to be raised, but this provocation was not repeated. However, at the end of July rioting broke out in Singapore and a twenty-four hour curfew was imposed. One junior pilot on No 20 Sqn had just returned from the UK with his new wife, so they were confined to their hotel bedroom in Singapore City. The squadron took pity on them and, under cover of an armed convoy, sent a Monopoly board and other games to keep them occupied; nine months later their first child was born!

More serious civil disorder in September coincided with Malaysia Day, the anniversary of the foundation of the Federation. Sukarno exploited the situation to the full and Indonesian seaborne guerrilla forces landed on the coast of Johore together with an airborne assault at Labis some fifty miles to the north of Singapore. A state of emergency was declared throughout Malaysia and Operation FRANCISCAN put the squadrons on alert, with aircraft on the ORP at two minutes standby and others at 30 minutes. Between 4 and 11 September pairs of Hunters flew coastal patrols and fourteen sorties attacked the invaders in the Labis region with rockets. Four more operational sorties were flown on the following day supporting the Gurkhas who flushed out pockets of infiltrators and by the end of the month the squadrons was stood down from FRANCISCAN**.**

In late 1964 the air defence system was enhanced when Bloodhound missiles were deployed with No 65 Sqn at Seletar, and No 33 Sqn at Butterworth the following year, with the RAF Regiment

providing local point defence.

In October No 20 Sqn was again in action on Operation LIVER against infiltrators at Pontian, north west of Singapore, where attacks drove the enemy towards the security forces. During this period the air defence organisation had improved but the performance of the search radar was limited. There were low level blind spots in the cover from Bukit Gombak towards the Indonesian border, only a few miles to the south west, where enemy aircraft could use the cover of the outlying islands to make surprise attacks on Singapore itself. To counter this risk, OPs were established on some of these small islands and on RAF marine craft. Each was manned by a junior aircrew officer plus five airmen who maintained a 24-hour visual watch, reporting any suspected enemy activity to Bukit Gombak. Recently arrived and still unfamiliar with the area, one Hunter pilot tells of being given the OP task by his new Boss. Armed with a Sterling sub machine gun and ammunition he and his team were delivered by helicopter with tents, radio and provisions for several days on an island barely a mile south of Singapore and left to get on with it. For two weeks, resupplied by Belvederes, they neither saw nor heard any aircraft, but had two alarming experiences.

The first was during the night when an unlit motor launch was heard near the island. Bukit Gombak confirmed that there were no known friendly naval units in the area so, convinced that the Indonesians might be landing troops to knock out the OP, they prepared to defend themselves with small arms. Daylight came, without the expected attack, and much later they were told that the ‘intruder’ had been identified as a Singaporean customs launch on an anti-smuggling patrol, with its lights out! The second event, again at night, was caused by rustling sounds in the undergrowth. This alerted the defenders so the JP decided to flush out the enemy by firing a couple of bursts from his Sterling in the direction of the noise. At daybreak, a search revealed no sign of intruders but they later learned that large monitor lizards had been sharing their island. There were no casualties!

Operation BIRDSONG, which spanned Christmas 1964, was a series of Hunter rocket attacks on guerrillas in Johore, south of Pontian, controlled by a helicopter-borne FAC and joined by Canberras of No 45 Sqn. Enemy casualties were unknown but many

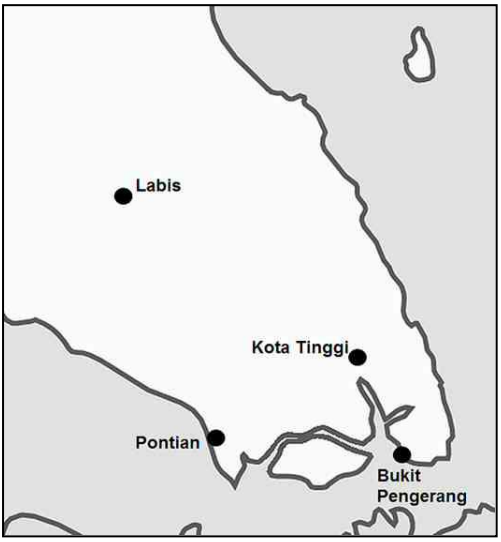
One of No 20 Sqn's Hunters armed with 3" rockets.

of their number surrendered to security forces.

By 1965, No 64 Sqn had moved to FEAF permanently to complement No 60 Sqn at Tengah. But by this time there was concern about the Javelin's structural integrity and a major rectification programme commenced. Despite the existence of these two large squadrons, Javelin availability remained poor so Hunters were deployed to Kuching to escort transports during supply drops to army units in North Borneo. To reorganise the widespread air defence task, East Malaysian airspace was allotted to No 64 Sqn with their longer-ranged Javelin Mk 9Rs while No 60 Sqn was tasked with protecting Singapore and Western Malaysia.

Infiltrations at Kota Tinggi, some 20 miles north of Changi, in February were opposed by army units and Operation OAKTREE, was supported by Hunters providing an armed escort for Belvederes deploying infantry. This operation was followed in May by a seaborne incursion involving 24 Indonesian troops who had landed by boat on Johore only a few miles across the straits east of Changi. They occupied an ex-WW II Japanese fortification at Bukit Pengerang which was attacked by four Hunters firing rockets and guns under the control of a FAC. Operation TOPHAT was successful and all the infiltrators were either killed or captured.

Singapore and Western Malaysia became another ADIZ but it was not until four years after No 60 Sqn's re-equipment with the Javelin that authority was given to launch Firestreak missiles on exercise. Initially tried against target rockets fired by RAAF Sabres, this proved



Locations of Indonesian infiltrations engaged by Hunters in 1964-65.

to be an unsuccessful procedure. However, flares dropped from Canberras gave more promising results and in November 1965 a successful Missile Practice Camp, Operation CONGER EEL, was carried out with an initial allocation of fifteen live and flash head missiles. Thereafter this training was repeated periodically but during one detachment at Butterworth a Firestreak launched itself. The subsequent investigation revealed that a recent maintenance task, performed in Hong Kong, had involved excessive use of paint stripper which had penetrated and shorted several wiring looms, including those for the missiles. To minimise risk, the Javelins flew back to Tengah via Kuala Lumpur with the undercarriage down, for more maintenance.

Nos 20 and 28 Sqns exchanged pilots to gain experience with the other's operating environment. Unfamiliarity with the Hong Kong Chinese border caused the occasional incident such as that when a 20 Sqn pilot, having been briefed to conduct dry rocket attacks against a moving target, spent an enthusiastic flight tracking a train as it slowed to enter a station which, it later transpired was on the Chinese border. This 1963 infringement led to Chinese fighters being scrambled with the inevitable diplomatic consequences. The Kai Tak Station Commander and OC 28 Sqn were involved intimately in the disciplinary proceedings before the pilot's interview with the AOC who duly reprimanded the transgressor and ordered him back to Tengah, although Air Mshl Crowley-Milling went on to tell him that if it had been a war he might have been awarded a gong!

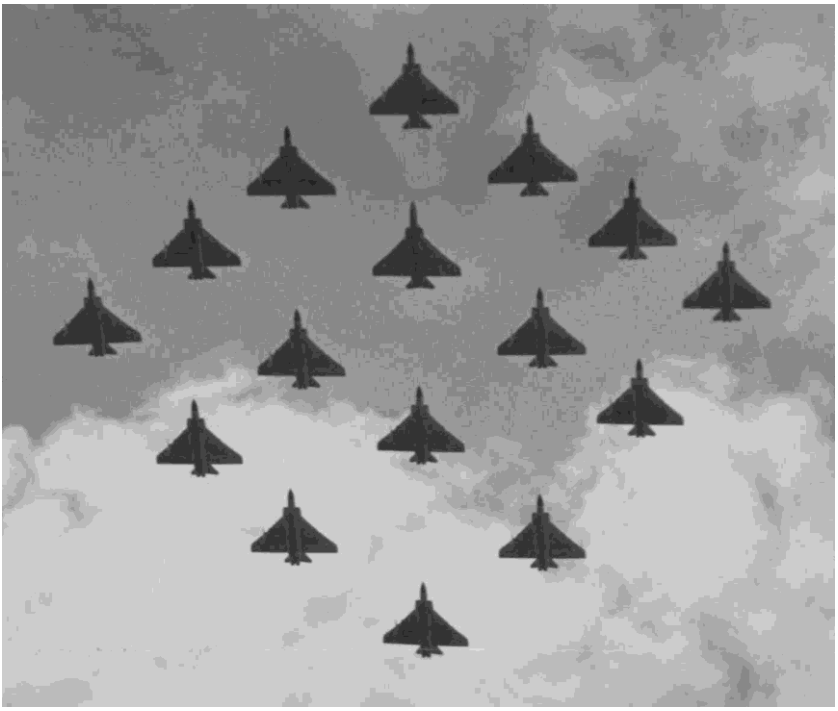
Some years later a pilot from No 20 Sqn was on runway readiness

A Belvedere of No 66 Sqn redeploying a Bloodhound II of No 65 Sqn's detached flight at Kuching.

at Kai Tak because a pair of Chinese MiGs had harassed an RN minesweeper about 60 miles out to sea. Armed only with ball ammunition, he and his No 2 sat for some time with engines running before they were cleared to take off. The final decision to launch was in the hands of the Governor of Hong Kong and by the time they found the minesweeper the MiGs were long gone – probably as short of fuel as were the Hunters.

Singapore left the Federation on 9 August 1965 to become an independent republic under Prime Minister Lee Kuan Yew and this led to the RAF being housed in two separate states, Malaysia and Singapore, with responsibilities for protecting both. Hunters returned to Labuan in August flying armed patrols and exercising the GCI radar which had been installed there on a trial basis. Having returned to Tengah to join a flypast to mark the squadron's 50th birthday, there was another threat to the integrity of Malaysian air space. Two B-25 Mitchells strafed a village 100 miles south of Labuan, inside Sarawak and while Hunters were scrambled to engage the intruders, nothing was seen. Additional Hunters were deployed so that regular patrols could be mounted but most of the aircraft returned to base towards the end of the month.

Further Hunter detachments to Labuan provided air defence cover because the Javelins were still undergoing major rectification work for their structural problems. Sabres flew in from Butterworth as reinforcements and Hunters were sent to Kuching to provide air defence for western Sarawak. In November, a Whirlwind helicopter was shot down when it strayed into Indonesian air space and Hunters were placed on standby at Kuching, armed with rockets and guns. At the end of a very busy tour as OC 20 Sqn, Sqn Ldr Max Bacon handed over command to Sqn Ldr Chris Doggett and at the same time Wg Cdr Michael 'Dusty' Miller succeeded Jock Fraser as OC 60 Sqn.



To celebrate its 50th birthday No 60 Sqn flew this diamond sixteen in August 1966.

Fighter detachments in North Borneo maintained regular border patrols and in February a section of No 65 Sqn's Bloodhounds deployed to Kuching for six months. The Hunters returned to Tengah before sending ten aircraft to Butterworth for the annual APC where gunnery and social competitions between the Hunter and Sabre crews continued. Following the APC, three aircraft returned to Kuching for a ten-day detachment but the Bangkok Accord between Malaysia and Indonesia was ratified in August and so Confrontation came to an end. The last Confrontation Hunter sortie over Eastern Malaysia was an informal task to compare the height of Mount Kinabalu with a nearby peak to satisfy the then Minister, Lord Shackleton, who had a wager about its height with a friend and fellow climber. The pilot doubts that this exploit was ever recorded in the FEAF ORB but it is in his log-book!

Hunters of No 28 Sqn which disbanded at Kai Tak in December 1966.

August coincided with No 60 Sqn's 50th birthday which was celebrated by a ceremonial flypast. Thereafter, QRA was reduced to one aircraft at 15 minutes' readiness with another in reserve, but activity continued with a night scramble to intercept a fast unknown intruder which was visually identified as an RAF VC10 without a flight plan. On 31 December 1966 No 28 Sqn was disbanded at Kai Tak and in January their Hunters were flown down from Hong Kong to bring No 20 Sqn's strength up to twenty-three aircraft including the two-seaters.

Normally, Javelins were not detached to Hong Kong but within a few weeks of 28 Sqn's disbandment, No 60 Sqn was tasked with a short-notice deployment to the colony to counter communist disorder and to provide a presence. Javelin FAW9(R)s flew there via Labuan and the USAF's Clark AFB in the Philippines. Between Clark and Kai Tak there was no viable diversion so, at the point of no return, the decision whether or not to continue was dependent on a Canberra's report of the actual weather at Kai Tak. There were three further deployments between July 1967 and early 1968 when the squadron continued its routine training programme. Also, four Javelins returned to Butterworth to provide a presence over North West Malaysia and to exercise the air defence organisation, but by October this commitment ceased. On 30 September the FEAF Strike Wing, by now commanded by Wg Cdr Mike Knight, became Flying Wing.

During the Javelin's seven years of operation in FEAF many were

A local modification that installed a sideways-looking F95 camera in place of the gun ranging radar in two of No 20 Sqn's Hunters to provide a notional tactical recce capability.

lost, together with five lives, and both airframes and engines were becoming tired so the force was reduced by disbanding No 64 Sqn. Practising for their ceremonial flypast in June two Javelins collided and tragically two men died, a further blow to morale at a time of the unit's disbandment. The remaining healthy aircraft were transferred to No 60 Sqn to provide the unit with a mix of Javelin Mks 9 and 9(R) for several months until it too was disbanded on 30 April 1968, shortly after the Defence White Paper had announced that the UK intended to withdraw from the Far East in 1971. The twilight flypast was spectacular with reheat selected on the Sapphires, and station keeping controlled by selection of the variable air brakes, and so the career of the 'drag master' or 'flying flat iron' came to an end after only thirteen years in the front line.

The arrival of No 74 Sqn's Lightnings the previous year had eased the load on the engineers who had been dealing with the Javelin's structural problems, and the flying priorities changed. The Hunters and Lightnings developed tactics for dissimilar air combat, both against each other and against the Australian Mirages which had replaced the Sabres at Butterworth. Exercise SHAVING BRUSH was a joint trial for Nos 20 and 45 Sqns to develop night attack procedures using a Shackleton to drop flares. Separately, to evaluate fire bombs (or napalm) as an optional weapon for the Hunter, No 20 Sqn conducted a successful trial using 100-gallon tanks containing whitewash as a marker, but the rules of engagement, which limited offensive action to forward firing weapons, prohibited the use of bombs of any type but its potential had been demonstrated. A further 20 Sqn initiative was a local modification to the Hunter's nose to provide a notional tactical recce capability by removing the ranging

radar from two aircraft and installing an F95 camera. By 1968 the far more accurate 68 mm SNEB podded rocket had been introduced to replace the old 3-inch RP and in March the PAI from No 208 Sqn, Flt Lt Mike Stear, came from the Gulf to assist with training. No 20 Sqn took part in several other trials, including night formation, night ground attack on flare illuminated fast patrol boats (FPB), fire bomb dropping on China Rock and FAC using smoke canisters dropped from Pioneers to mark the targets. The squadron fired both SNEB and 3" rockets participating in a fire power demonstration on Asahan Range, at the end of December, exhausting stocks of the obsolete 3-inch 'drainpipe'.

Exercise BEANSHOOT was a series of Hunter detachments to Hong Kong to maintain political awareness in the colony, repeating the earlier Javelin presence. Sqn Ldr Chris Strong took command of the squadron in September 1968 and a week later led the squadron to Kai Tak, via Labuan and Clark, to fly a diamond nine over the colony to mark the anniversary of the Battle of Britain. As Kai Tak had only the one runway, OC 20 Sqn carried out a landing on the short runway at Sek Kong to demonstrate that there was a token diversion. While preparing for the return to Tengah he received a classified signal from FEAF tasking him to demonstrate British support for Malaysia, after the Philippines had threatened to annex Sabah in North Borneo. He ordered four pilots to report to the squadron at 0500 hrs when he briefed them for a 'flag wave' over Sabah, while the remainder returned to base later. The intention was to refuel at Clark before flying high-low to Labuan. Arrival at Clark was straightforward but the departure was denied by Air Traffic Control. This, the leader ignored and the formation climbed to high level, before descending for the low level flag wave over Kota Kinabalu en route to Labuan. The Philippine government promptly denied RAF access to Clark AFB so the remaining Hunters were stranded in Hong Kong for about a month, although pilots were rotated by commercial airlines. It was only after one of the pilots flew a singleton direct from Kai Tak to Labuan, with a Canberra escort, that the Filipinos recognised that the Hunters did not have to rely on Clark and so the standard route was reopened to the squadron.

When No 209 Sqn disbanded in January 1969 four of its Pioneers were transferred to No 20 Sqn to become C Flight to provide an

A sheep in wolf's clothing – one of the four Pioneers acquired by No 20 Sqn in 1969.

integral airborne FAC capability. Initially, the CO was told to restrict his pilots to flying only one type but after a few months, selected Hunter pilots were also to captain the Pioneer. The latter had the run of the peninsula using a variety of small grass strips but night landings, on an airfield lit by just three goosenecks, were unusually demanding for Hunter men, as were the approaches to some of the more challenging strips. Despite this, C Flight recorded 1,400 accident-free hours before disbanding in December 1969.

It was in April 1969 on the return to Tengah from Kai Tak via Clark that a Hunter was lost. OC 20 Sqn was leading a pair, and at the top of climb after leaving Clark, his No 2 experienced a turret drive failure leading to the loss of both hydraulics and electrics. He was unable to jettison his underwing tanks, because of busy shipping in Manila Bay, and he was vectored to a safe area to dispose of them. Before he could do so the aircraft battery failed so he burned off fuel, but on the approach to land his engine failed and he had to eject. The subsequent technical investigation showed that the turret drive failure had led to loss of the mechanically-driven low-pressure fuel pumps and hence the flame out. The USAF fire and rescue team was on the scene within minutes of the crash and found that the ammunition had already been removed and hidden close to the crash site! One of the Aden guns was also missing but this was later recovered by the police who had found it on the back of a lorry in a nearby town. On the

airfield a USAF Ops Officer met OC 20 Sqn who asked if he could speak to HQ FEAF in Singapore to report the accident. The officer pulled a device out of his pocket, pushed some buttons, said a few words and handed it to a surprised Chris Doggett, saying, 'You're through.' This mobile device was being used in 1969!

At Tengah, the squadron continued its DF/GA training routine until, in February 1970, its last sorties were flown in a joint disbandment flypast with No 45 Sqn. Thereafter most of its aircraft were dismantled and shipped back to the UK for disposal. Throughout its life as Singapore's sole DF/GA squadron, it had performed with great credit in a wide variety of tasks, in rapidly changing circumstances, ranging from lengthy and relatively boring patrols, short notice detachments, border protection and flag waves to full blown operational ground attack,. The Hunter was well suited to the job but suffered from a lack of investment and its potential was never developed fully while serving the Royal Air Force. Although No 20 Sqn developed limited local enhancements, the Hunter had much greater potential and, for example, could have been equipped with missiles to engage bombers with tail guns. As a day fighter, this was its operational task in FEAF which thus begs the question – why was it not so equipped?

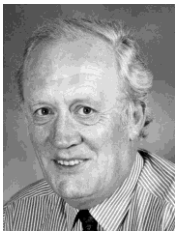
The Javelin was well-armed and fulfilled its FAW role, despite severe limitations and its structural problems with engines and airframes, but it required heavy maintenance. Its accident rate was alarmingly high compared to the more robust Hunter, but together these two elderly fighters lived out their operational careers with the Royal Air Force in the Far East with distinction. They had little public acknowledgement, but provided an essential airborne deterrent against Indonesian aggression in roles which F.3/48 and F.4/48 certainly did not foresee.

Finally it took almost eighty Hunters, Javelins and Canberras, including attrition reserves, to provide a deterrent in FEAF. They faced minimal air and ground threats and few weapons were actually discharged. So, should the unforeseen arise today, with only seven combat squadrons, one has to ask – could the Service handle a similar contingency?

[1] *Daily Telegraph*, 30 December 1964.

LIGHTNING DEPLOYMENTS AND EMPLOYMENT

Air Cdre Ian McBride



Ian McBride began his career as a fighter pilot on the Lightnings of No 74 Sqn in 1965, eventually becoming an instructor on type before converting to the Phantom and commanding first No 43 Sqn and then RAF Wildenrath. Other tours included a spell in the USA and two with what is now the Air Warfare Centre. His final appointment was at MOD as Director Air Defence, which also made him the London-based Director of Air Operations during the First Gulf War (Op GRANBY). Post-the RAF he spent ten years with FR Aviation before spending a further six years as an independent Defence Consultant.

This presentation has its origin in a request from my grandson for a semi-biographical account of my time in the Service. When I got as far as 1967 and the transfer of No 74 Sqn from Scotland to Singapore I realised that I had taken part in something out of the ordinary for those times. I then started to research Exercise HYDRAULIC and somehow or other became involved in today's proceedings.

Preparations and Planning

Consideration had been given to the global deployment of Lightnings for many years but the range of the basic aircraft, even the Mk 6 with its enhanced fuel capacity, was insufficient to cross the Indian Ocean safely. Thus it was that the over-wing fuel tank was conceived, there being nowhere under the wing that a large fuel tank could be accommodated. These tanks, when full, made the aircraft less agile in roll but had little effect in pitch because they generated their own lift. Their main performance limitation was in the speed and 'g' allowable. They could not be jettisoned whilst containing fuel so the back of the tank had to be blown off first to allow the fuel to escape. As I recall, the tanks gave the aircraft a prudent range of 1,400 nm after a top-up at cruising altitude. Along with the over-wing tanks (OWT) came a radio compass which had its antenna fitted to the missile pack. It performed well as a navigation aid but when operating within UK airspace it was more often used to listen to the BBC.

Prior to No 74 Sqn's move to FEAF there had been frequent

deployments of Lightnings to Akrotiri and a minor foray from there to Tehran in 1965. There had been several earlier deployments of Javelins to Singapore via the Gulf, Karachi and Gan supported by Valiants but HYDRAULIC would avoid the detour via Pakistan, thus easing the support task and minimising the risk of political interference. It also set the bar for future long-range and expeditionary operations by the RAF, and as such was of some significance.

This account of HYDRAULIC has been based upon informal recollections of those who took part, plus extracts from log books, Op Orders and Forms 540. Anecdotal accounts are very few and far between (lots of brain cells have perished over the intervening years!) and apart from F540s there are no official accounts of this operation. I have focused on HYDRAULIC, in which I took part, but have consulted members of Nos 11 and 5 Sqns to elicit any major differences that they encountered during their subsequent deployments which were mounted to test the UK's reinforcement plans for the region in which No 74 Sqn was by then permanently based.

No 74 Sqn's Lightnings and their over-wing tanks were all brand new and, in the case of the latter, not fully proven. They had been flown and certified by the manufacturer but no in-service trials had been carried out. Our early flights were beguilingly successful and did not reveal the major problems which were encountered later. The two-seat T 5 could not be deployed by air so a new aircraft was shipped out from Sydenham in Belfast to the MU at Seletar. There was little or no prospect of missile firing opportunities being available in FEAF so we needed to prove the new Red Top missile in UK before we left. Finally, the squadron manning plot was adjusted to ensure that there would be no early turnover of aircrew or groundcrew after our arrival in Singapore.

As is always the case when the RAF takes delivery of a shiny new aircraft it wants to show it off and No 74 Sqn was involved in demonstrations to the Saudis before they finalised their purchase of the Lightning. All good fun, but a bit of a distraction from the task in hand, which included successes on QRA when we started to see regular interceptions of Soviet aircraft.

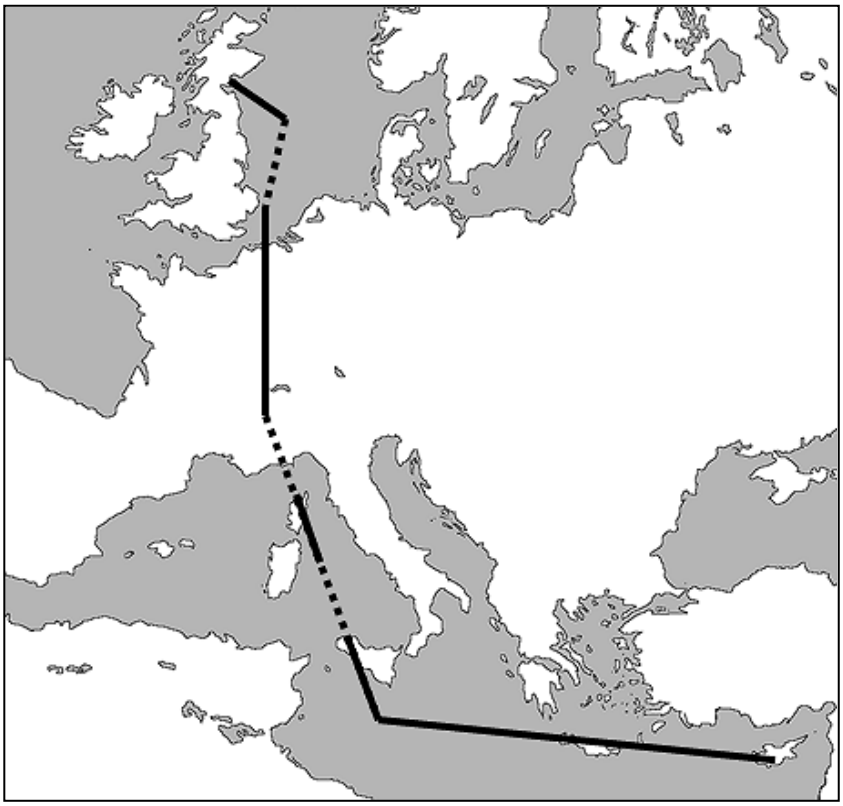
It is important to put HYDRAULIC into context. Although the Lightning now had a respectable ferry range, its systems – notably oil and oxygen – had never been tested in the long-duration environment

A 74 Sqn Lightning, XS897, in ferry configuration –refuelling probe under the port wing, OWTs and no missiles (this aeroplane was actually en route Singapore-Cyprus in 1971. (Dave Roome)

so we were limited to 5-hour sectors. Long-endurance trial flights were conducted by UK-based squadrons after we had arrived in Singapore and, as a result, deployments made some years later involved only two sectors as against the four that we had required. Another significant planning issue was a mixed fleet of two- and three-point tankers which constrained the planners to using the lowest common denominator, namely the two-pointer. This meant that it took seventeen Victors to move the thirteen Lightnings and was the dominant factor dictating the pace of the deployment.

Everybody recoiled at the likely impact of the Lightning's starter system on a deployment in which timing and the availability of aircraft with two engines running was a crucial element. The 'whee phutt' starter was the scourge of Lightning operations and, despite the use of ground spares, was almost certain to cause problems which would be beyond our control.

Eventually, we were ready to go. The aircraft had been fitted with their tanks; we had fired missiles at Valley; we had prepared our maps (in truth Flt Lt Clive Mitchell did all the work); we had packed up our sections, taken leave, said goodbye to families, had a series of epic



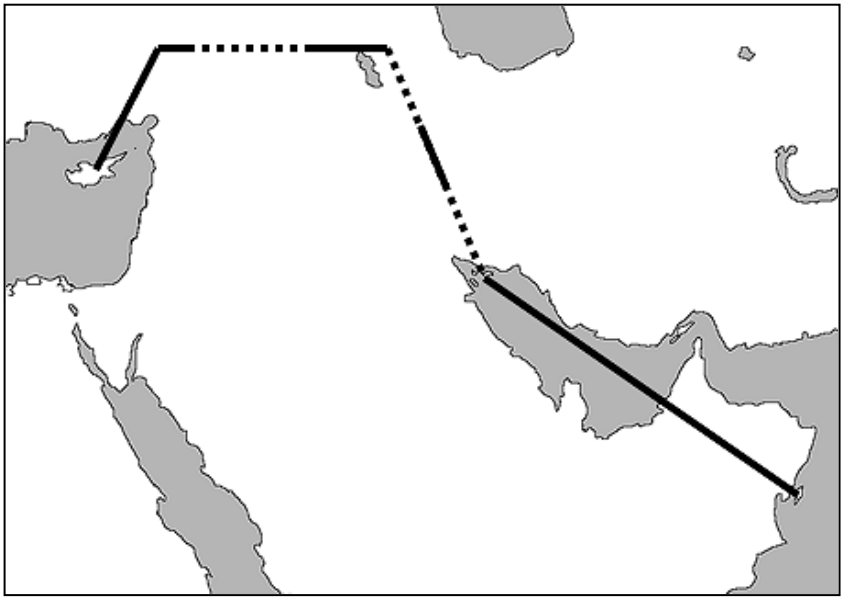
Sector 1 – Leuchars to Akrotiri – 2,342 miles;5 hrs 00 mins

parties and everybody (especially Nos 23 and 11 Sqns) could not wait for us to go.

Deployment

The Boss and two others flew from Leuchars to Akrotiri on 4 June (Day 1) where they were hosted by No 56 Sqn. Other than an elusive oxygen malfunction, which caused a low-level completion of this leg and the next, all aircraft reached Cyprus without any major issues.

I was scheduled to be in the last wave, leaving Leuchars on Day 3 but I had to act as a mounted spare for the second wave on Day 1. One aircraft failed to start so they called on me just before the others taxied. As a result, I suddenly, but as it turned out only briefly, found myself among the front runners.



Sector 2 – Akrotiri to Masirah – 2,186 miles ; 4 hrs 45 mins

On 5 June (Day 2) the lead formation of the Boss, Wg Cdr Ken Goodwin, plus two left Cyprus bound for Masirah, This second stage was uneventful – except that the Six Day War had kicked off that morning! As a result, the airwaves were full of air traffic agencies trying to do their stuff in the middle of hostilities. Lod and Beirut were constantly shouting at each other on the Guard frequency.

The Six Day War would have some impact on HYDRAULIC because observers of Akrotiri thought that they saw two Victor 'bombers' and a formation of fighters get airborne every morning and then land again several hours later. The observers jumped to the inevitable conclusion that the RAF was playing a part in the war, whereas we were merely going about our pre-notified, legitimate and peaceful business. As a consequence our route had to be adjusted to keep us well clear of Syria and Iraq.

Most crews reached Masirah on time without difficulty and were able to take time off to watch the turtles. The 'sweeper team' of Sqn Ldr Norman Want, Fg Off Richard Rhodes and myself left Akrotiri on Day 6 with a mixed bag of aircraft. All went well until Norman and I

confirmed by top of climb that the non-feeding OWT problem that we had both experienced on the flight out to Cyprus had defied rectification at Akrotiri. The tanker crews were aware of a possible problem and undertook to re-plan as we went along, typifying their workmanlike and flexible approach to the task.

During the first re-fuelling bracket a very English voice came up on the discrete AAR (ie *not* ATC) frequency with the following, 'RAFAIR Combine, RAFAIR Combine this is Goz Control. Please give me your aircraft types and destination.' We complied at the second time of asking. The next surprise call was from a Persian air defence unit inviting us to land at Tehran. After a few repeats and some 'Say again'-stalling from the lead tanker, the Iranians informed us that QRA was being scrambled from Meherabad to intercept us. Without a word being spoken our speed increased to about M 0.95 and we legged it out of their airspace SE of Abadan without any further R/T calls or any sign of Iranian aircraft. A quick fuel check indicated that the formation as a whole was by now below a prudent level to proceed to Masirah but, bang on time, our nominated diversion, Muharraq, announced that they were closed in sand-storms. The lead tanker reckoned that we could make it to Sharjah where there was a decent runway but little provision for a diversion of this type and magnitude. So on we went, enjoying uninterrupted views of empty and very hot desert with some of us being given just enough fuel eventually to reach Masirah.

The debrief, during which much cool beer was hoovered, was interesting. It appears from a D/F bearing taken by one of the Victor AEOs that 'Goz Control' had been in Russia. It also transpired at a later stage from other sources that two fighters had indeed been launched from Meherabad. The most interesting fact to emerge was that the lead Victor captain had given away so much fuel that his rear crew had donned their parachutes because their remaining fuel was below the level at which their gauges were accurate. This generosity was in the highest tradition of the tanker force whose priority was to ensure that their charges got through if at all possible.

Once we got airborne from Masirah it was a reasonably easy leg, apart from persistent cirrus at refuelling altitude. Masirah was very basic and most of us wanted to move on without delay. However, it was there that unserviceability reared its head and it was, inevitably,

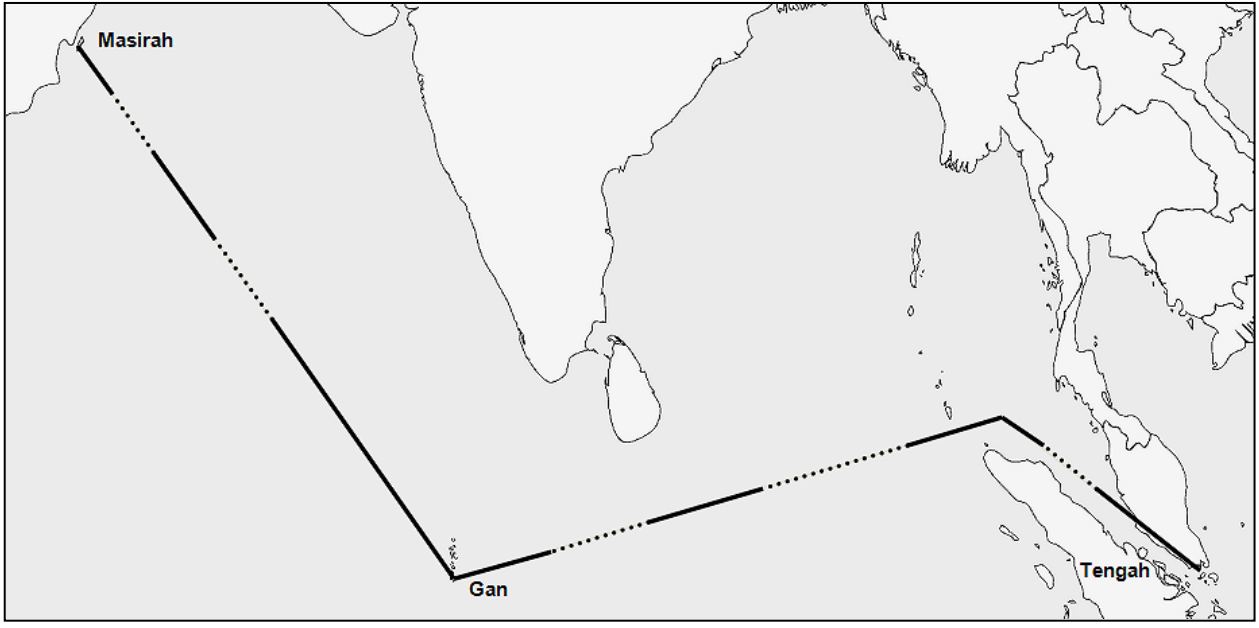
the Lightning's Achilles' heel – the starting system than began to slow us down. This provided Tankex Control with its second major challenge, the first having been the small matter of the Six Day War. This was the only major rectification effort required during the operation but Tankex Control were hard at work throughout the exercise, reshuffling the pack to keep the flow moving and replanning to take account of unserviceabilities that were being carried by the sweeper aircraft. The starter problems caused two aircraft to make the Masirah-Gan transit as singletons, the first of these being Ken Goodwin on Day 3.

The dominant images of our short stay at this remote staging post did not involve the Lightnings. The whole island was rendered speechless watching the Victor take-offs which were based upon 101·5% of normal rated power. Nor did they have a balanced field performance, either here or at Gan. In simple terms, if anything went wrong after V-stop, they were in trouble! One Victor captain, who shall remain nameless, lined up 135 feet down the runway at Masirah when the planning assumption had been 100 feet. Apparently he went 35 feet into the rolled coral over-run, thereby confirming, in spectacular style, the accuracy of the Victor ODM! He was lucky though, because, after the dust had settled, a string of camels chose that moment to meander through the overshoot area!

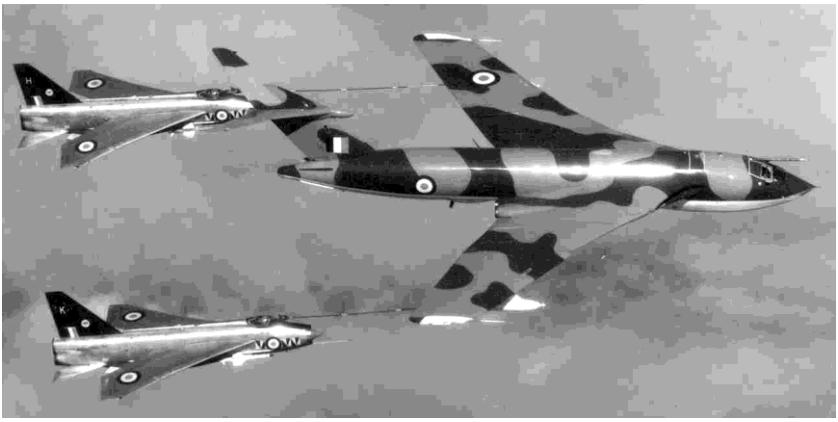
The Masirah to Gan leg was patrolled on each day by an SAR Shackleton, whilst another covered the Gan to Butterworth sector whenever there was a Lightning deployment scheduled. There is no record of their views on the Lightning starter system!

Recollections of the Masirah to Gan sector are scant. It was a relaxation after the previous leg and it was a relief to get away from Masirah. Once committed to Gan the Lightnings did not carry sufficient fuel to divert to Ceylon so we were required to reach the airfield with 'island holding fuel', enough to orbit for 30 minutes. This would allow a squall to pass through or a disabled aircraft to be removed from the runway. Gan's Crash Section had some very impressive equipment for this task.

Our stay at Gan was very pleasant with good climatic and living conditions. We had always expected the final leg to be a challenge and so it proved to be. Most people had a heart-stopping moment on this leg; the aircraft were getting tired, as were their crews. Canberras from



Sector 3 – Masirah to Gan –1,535 miles; 3 hrs 35 mins
Sector 4 – Gan to Tengah – 2,048 miles; 4 hrs 35 mins



The professionalism and flexibility of the tanker force was always impressive.

Tengah carried out weather checks on the first couple of days, flying from Gan to Tengah, to establish whether the inter-tropical convergence zone, and its attendant violent storms, were likely to cause trouble. In the event this was not an issue, but it indicates the degree of planning which went into HYDRAULIC. Most crews encountered turbulence in the cirrus, enough to make life difficult, but only rarely, and then only for short periods, impossible. It was, however, very tiring because we had to stay in reasonably close formation for long periods so the autopilot could not help.

Ken Goodwin and Clive Mitchell were the first to have a heart-stopper on Day 5. During the course of the last refuelling bracket one of the Victor's Mk 20 refuelling pods suffered a hydraulic failure, releasing the hose which duly snapped off the end of Clive's probe. The procedure to be followed under these circumstances was to divert to the nearest suitable airfield, in this case somewhere in Ceylon, now Sri Lanka. Clive takes up the story.

> 'When I had the probe break, the whole formation turned towards our diversion airfield in Ceylon. But Ken asked my fuel state and made the decision to go for Butterworth. *(Great call incidentally)* We landed there without any further ado; a spare 'chute had been flown up in a Canberra. Thence to our ultimate destination only a few hours late.'

End of Day	Leuchars	Akrotiri	Masirah	Gan	Tengah
0	**13**	0	0	0	0
1	**13** – 6 = **7**	+6 = **6**	0	0	0
2	**7** – 5 = **2**	**6** + 5 – 3 = **8**	+3 = **3**	0	0
3	**2** – 2 = **0**	**8** + 2 – 3 = **7**	**3** + 3 – 2 = **4**	+2 = **2**	0
4	**Rest Day**				
5		**7** – 4 = **3**	**4** + 4 – 4 = **4**	**2** + 4 – 2 = **4**	+2 = **2**
6		**3** – 3 = **0**	**4** + 3 – 4 = **3**	**4** + 4 – 4 = **4**	**2** + 4 = **6**
7			**3** – 3 = **0**	**4** + 3 – 4 = **3**	**6** + 4 = **10**
8				**3** – 3 = **0**	**10** + 3 = **13**

Table 1. The movement flow as planned.

One member of the three-ship which flew this leg on Day 6 was venting fuel very badly and first thoughts were that he was in a lot of trouble. At 30,000 ft any such venting probably looked more dramatic than it was because it would have discharged as a vapour rather than a stream of fuel. One of the Victor navigators did a thorough fuel consumption check for this aircraft and correctly calculated that, despite initial fears, he would have just enough fuel to reach Butterworth. Because the venting did not persist, Ken Goodwin was able to relax when the lad made it to Tengah after an extra refuelling bracket.

There was some sadness when we bade farewell to the tankers as they peeled off towards Butterworth. The working relationship between Victors and Lightnings had been excellent and we did not know when/whether we would meet up with them again. Most of the Victor crews spent a few days in the Penang area, sunning themselves, investing in ‘copy’ watches and other artistic masterpieces, and having some very expensive haircuts before heading home after a job well done.

We were met by families who had endured a dreadful flight out in a Britannia, and by the Station Commander who was accompanied by a very relieved Ken Goodwin who, in my case knew by then that the last pair were less than 30 minutes away.

Postscript

At Table 1 is the flow plan that had been drawn up for HYDRAULIC. In each entry, the first figure (in **bold**) is the planned number of

	Day 1 4 Jun	Day 2 5 Jun	Day 3 6 Jun	Day 4 7 Jun	Day 5 8 Jun	Day 6 9 Jun	Day 7 10 Jun	Day 8 11 Jun
Leuchars to Akrotitri	Goodwin	Burrows	Want					
	Mitchell	Lether	Rhodes					
	McD-B	Davidson		R				
				E				
	Doidge	Jewell		S				
	Freize	Mullan		T				
	McBride							
Akrotiri to Masirah		Goodwin	Doidge		Burrows	Want		
		Mitchell	Davidson	D	Lether	McBride		
		McD-B	Freize	A		Rhodes		
				Y	Jewell			
					Mullan			
Masirah to Gan			Goodwin	Davidson	Freize	Burrows	Doidge	
				Mitchell		Lether	McBride	
				McD-B				
						Jewell	Want	
						Mullan	Rhodes	
Gan to Tengah					Goodwin	Davidson	Lether	Doidge
					Mitchell	McD-B	Mullan	McBride
						Freize		
							Jewell	Want
							Burrows	Rhodes

Table 2. The actual movement flow.

aircraft present at the start of each day, plus and/or minus the scheduled movements, leading to the final figure which is (again in **bold**) the anticipated total at the end of the day, ie the number of pilots expected to spend the night at each location.

Table 2 shows what actually happened. The exercise ran broadly to plan, although there were some deviations while covering the third and final sectors, beginning on Day 3 when one aeroplane failed to start at Masirah. Ken Goodwin pressed on and flew the leg to Gan solo while one of the tankers, which was already airborne, was obliged to abort – and thus dump a lot of AVTUR into the Indian Ocean. To get ahead of the game, three aeroplanes made an unscheduled transit to Gan on Day 4 – the planned rest day, which primed the pump for the first wave to Tengah. The starter problem cropped up at Masirah again on Day 5 when another Lightning had to fly the leg to Gan as a

Tigers with an escort of Javelins from Nos 60 and 64 Sqns.

singleton with yet more AVTUR being jettisoned. On the plus side, the first pair reached Tengah that day, as planned, albeit an hour or so late after their diversion into Butterworth. There were one or two more minor hiccups on the last two days but in the end we all got to Singapore in reasonable shape – and, perhaps surprisingly, within the scheduled eight days.

There was great excitement when the Tigers reached Tengah. The first arrivals were escorted in by Javelins and HQ FEAF laid on a photographer to document the event but, disappointingly, he seems to have managed to produce only a handful of worthwhile pictures.

Future Lightning deployments would overfly Masirah and I am sure that our experience there influenced that planning consideration. The engineers and supply folk had done a grand job, but they were nearly overwhelmed. Nevertheless, the eventual outcome was a remarkable achievement, thanks in no small measure to the excellent work done by the tanker cells along the route. They were dealt some very dubious hands but kept their cool and made it all happen, opening up a new chapter of RAF operations in which this type of endeavour would become commonplace.

A few random afterthoughts on the deployment – from memory.

a. I have already mentioned the start-up problem; suffice to say that the introduction of improved servicing procedures meant that the situation did gradually get better over the next few years.

b. Cirrus and turbulence were a significant irritation and, at times, had it got much worse, it could have been a game-changer. I

Seen here on the ORP at Darwin, the Tigers mounted a detachment to Australia in 1969 to participate in Exercise TOWN HOUSE.

imagine that, by now, improved forecasting plus in-flight information exchanges will have largely overcome this problem.

c. Another major issue was fuel venting. We learned a little as we went along, notably that the problem appeared to go away after the OWTs had emptied. Nevertheless it reared its head again on later Lightning deployments and gave rise to a very hairy incident involving Wg Cdr George Black, then OC 5 Sqn, on his return from Tengah in 1969. His OWT seals both explosively disintegrated on the leg out of Gan, which allowed wing fuel to escape in addition to any remaining in the OWT. He reached Masirah by remaining plugged in to his tanker for the remainder of the sector.

d. Pilot fatigue was not a problem on HYDRAULIC and we were able to manage our fluid levels to avoid the nightmare of an 'in-flight pee'. Not so the heroes of No 5 Sqn who flew much longer sectors than we did, one of their pilots logging over 10 hours in a single day. There was a time, not long before, when 10 hours on Lightnings would have been a reasonable total for an entire month!

e. The planning and re-planning had been excellent.

Later Lightning Deployments

With the assistance of the ever-helpful Victor tankers, in 1969 we ventured as far as Darwin for an extremely interesting exercise, TOWN HOUSE, during which the directing staff exploited our night capability, as a result of which we saw many sunsets and dawns! Two

Exercise	Sqn	Night AAR?	3-pt AAR?	No of Aircraft	Target time	No of Sectors
HYDRAULIC	74	No	No	13	8 days	4
PISCATOR	11	Yes	Yes	10	6 days	3
ULTIMACY	5	Yes	Yes	10	5 days	2

Table 3. Salient points of the three FE Lightning deployments.

years later we went even further, to Edinburgh Field near Adelaide to participate in the celebration of the RAAF's Golden Jubilee.

The over-wing tank configuration that had been pioneered by the Tigers was employed on all subsequent long-range operations involving the Lightning, notably Exercises PISCATOR and ULTIMACY the deployments of Nos 11 and 5 Sqns to Tengah, and their subsequent recovery to Europe. Table 3 summarises the salient features of the three deployments of Lightnings from the UK to Singapore. HYDRAULIC had predated the employment of night air-to-air refuelling, which meant that sector lengths were relatively short and landings were limited to local daylight hours. Both PISCATOR and ULTIMACY enjoyed the flexibility conferred by the 3-point tankers (which meant that the Victors could pass fuel to each other as well as to the fighters) and consequently endured some long night refuelling legs.

Apart from exercising the reinforcement option, PISCATOR and ULTIMACY provided a convenient means of ferrying replacement aircraft out to FEAF and returning No 74 Sqn's high-hour Lightings to the UK for major servicing, something which could not be done in theatre. There was one more major AAR exercise, of course; when No 74 Sqn disbanded in 1971 its aeroplanes were flown to Cyprus, as Exercise PANTHER TRAIL, and transferred to No 56 Sqn at Akrotiri.

Acclimatisation

Life at Tengah was a joy once we had settled in. We were a good fit, although there were a few territorial issues, mainly in the Mess! Gp Capt Philip Lagesen laid into us with his customary sjambok at our welcoming briefing and left us in no doubt as to how he wanted things to be played. Most of us were far too scared of him to bat an eyelid, although there were a few later deportations to Changi – the basic

A Red Top-armed Lightning.

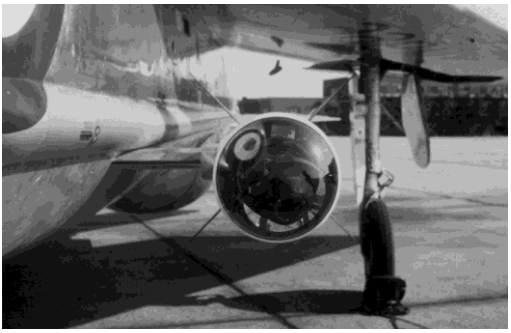
punishment for miscreants. There is no record of what the Changi folk thought of their fine station being used as a penal establishment!

The Lightning was by far the most exciting and impressive aircraft in the theatre, although most of us were pretty impressed by the RAAF's Mirage. We could outperform and outmanoeuvre it, provided we did not get drawn into a slow fight, but its simplicity, maintainability, inter-operability, cockpit environment and gun made it a formidable fighter. On a typical Lightning sortie we would shed buckets of perspiration whereas our Australian counterparts generally remained cool and dry.

Singapore was at the end of a very long pipeline from the UK so there was, for instance, a significant lag in the arrival and dissemination of information. Our lone Lightning staff officer in the Headquarters lacked the capacity to do much about this, certainly in the early days, as he was fully committed to integrating our new aeroplanes into FEAF's infrastructure and to preparing endless in-house briefings. This problem was highlighted during a visit by the CFS Examination Wing when they pointed out inadequacies in our documentation and emergency procedures. We had been confident that our local records were up to date, but clearly, they weren't.

Operating in FEAF

The basis of regional air defence was supposed to be the TINSMITH ADGE, but it was not much use for a very long time. A joint RAF/RAAF team finally got the Automatic Data Processing (ADP) system to work reasonably well but it was far too brittle and



Left – head-on view of Red Top and its vulnerable hemispherical glass nose. Right – the Tigers' aerobatic team.

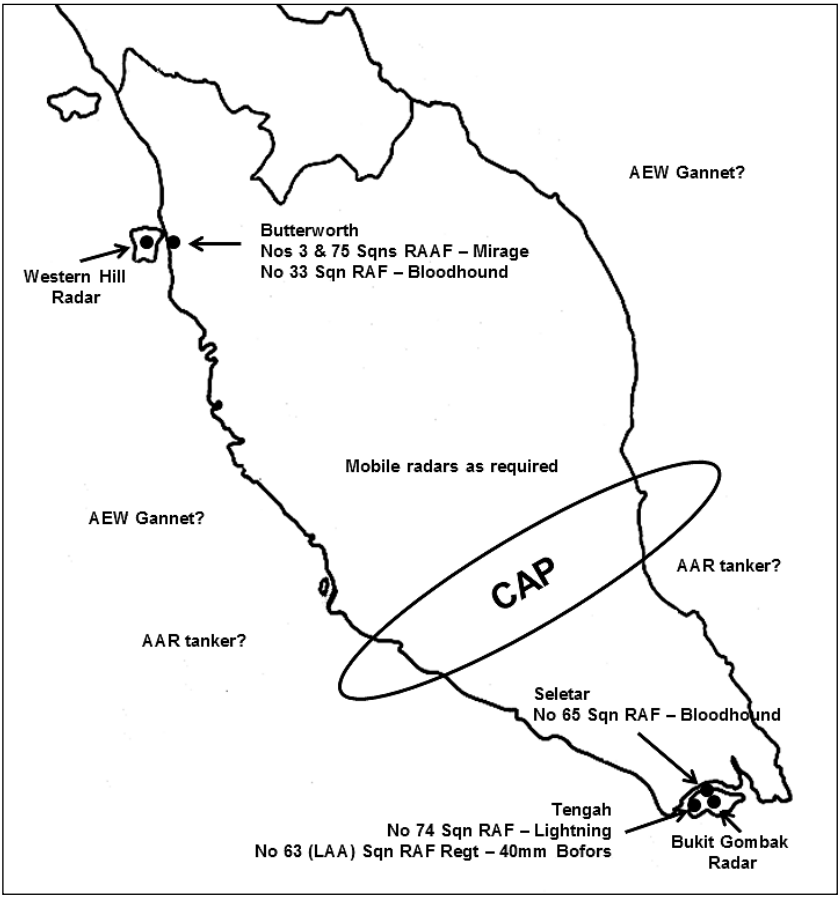
often went off-line just when you needed it.

Red Top was a good weapon, in theory, with a very useful off-boresight capability but its large glass frontal dome seldom survived passage through a rainstorm and the pure air required for its cooling system was not generally available, thus limiting its inter-operability. Gun claims were allowed during exercises but our guns were never actually fired in theatre.

To begin with we were committed to day-only QRA but after a few weeks we were stood down permanently. That freed us up to do some interesting training and also to work up a formation display team. We spent a considerable amount of time at Butterworth, exercising the system up there. Our Australian counterparts were dual-roled and spent much of their time doing air-to-ground training. When we fitted over-wing tanks for routine checks of the system we occasionally used the additional range they gave us to carry out hi-lo-hi recce sorties up-country. We were properly tasked and debriefed, and employed our nose-mounted G90 gun camera to good effect.

Just before we arrived in theatre an RAAF Mirage had broken the Penang to Singapore record, shattering a few windows in so doing. Inevitably, we rose to the challenge and reduced the time from 29 to 25 minutes. FEAF came down fairly hard on us and ordered no further attempts on the record, having previously embargoed this activity after the Aussie run. We spent several days in official disfavour – but we had regained the title, so it was worth it.

While the squadron was based at Tengah it lost four aeroplanes in



The arrangements for the air defence of Western Malaysia and Singapore prior to the establishment of the post-1971 IADS.

accidents, three of them fatal, but there was no common cause.

Finally, a few words about the provision of air defence to counter a threat from the north – the only likely direction once the Indonesian threat had receded. The assets available locally could be augmented by RN aircraft, especially Gannets, if/when a carrier was nearby and by tankers if any happened to be in-theatre. There were two main radar sites, one in Singapore at Bukit Gombak, the other at Western Hill on Penang island, both supported by the sometimes problematic

TINSMITH ADP. At Butterworth there were two dual-role RAAF Mirage squadrons and RAF Bloodhounds while Singapore had No 74 Sqn's Lightnings plus some RAF Regt Bofors guns at Tengah, and more Bloodhounds at Seletar. But, and this is important, there was little or no co-ordination between the north and the south and no central control.

Low level radar coverage over the mainland was exceedingly sparse so to defend the south a low level fighter Combat Air Patrol (CAP) was set up across the peninsula, far enough away from Singapore to give us a fighting chance of engaging attacking aircraft before they reached their weapon release point. This put the low-level fighters both below Bukit Gombak's radar cover and out of radio contact with them so we employed a Pioneer carrying a Lightning pilot or simulator instructor to act as a radio link and CAP Controller. He would warn Tengah of the need for replacement fighters, could relay target information on incomers seen by Gombak and could allocate fighters to the Gannets or release them to the tanker. It worked, but it was well short of the ideal which could have been provided by a properly configured and fully integrated air defence system – and, in time, that would be achieved.

The Legacy

Following the establishment of the Five Power Defence Arrangements – the FPDA – in 1971, the participants created an Integrated Air Defence System (IADS) for the peninsula. It had an Air Defence Operations Centre at Butterworth and the two host nations, Singapore and Malaysia, were persuaded to create Sector Operations Centres within their respective areas whilst the other signatory nations undertook to reinforce the area in times of tension. Both ourselves and the Australians had shown how this could be done and all participants provided permanent staff to manage training and control exercises.

The FPDA (or IADS as it is better known) was originally intended to be a short term arrangement pending the creation of robust AD capabilities within Malaysia and Singapore. However the agreement has now been in place for over 40 years and is the second longest running military partnership anywhere in the world.

If one were looking for a FEAF legacy, perhaps this would be it.

AFTERNOON DISCUSSION

Wg Cdr Mike Dudgeon. I was interested in the references to various nuclear weapons, BLUE DANUBE, RED BEARD and so on. Can we say anything more about these or they still 'secret squirrel'?

Wg Cdr Jeff Jefford. Very briefly – BLUE DANUBE was the RAF's first operational nuclear weapon, dating from the mid-1950s it was a large and relatively cumbersome device weighing about 5 tons with a yield of about 15KT. RED BEARD, euphemistically known as the 'bomb, aircraft HE 2,000 lb MC' (ie High Explosive, Medium Capacity) was a much handier second generation weapon introduced in the early 1960s; still having a yield of about 15KT, it was small enough to be carried by the likes of the Canberra and Buccaneer. YELLOW SUN, the 'bomb, aircraft HE 7,000 lb HC' (ie High Capacity) was also introduced in about 1960. Its RED SNOW warhead, which was also used in the BLUE STEEL stand-off missile, had a yield, it is said, of about 1 MT – this was a really serious bomb.

As I said, all nuclear weapons were originally retained in the UK, which would have obliged the V-bombers to bring their bombs with them, but in the early 1960s 48 RED BEARDs were stockpiled in Singapore. That has long been rumoured, but the relevant documents are now available at the National Archives so there is no doubt about it. Twelve were earmarked for the resident Canberra squadron, the rest were for the MBF when they turned up.

They were flown out in 1962 by pairs of Britannias routing via El Adem, reached via the Straits of Gibraltar, Aden and Gan so, apart from the desert sector via Nasser's Corner, the route was practically all over the sea. They were brought back to the UK in 1970 using VC10s routing via the Pacific and the USA.

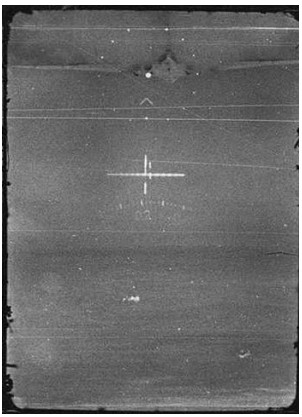
David Bradford. I spent four tours on Vulcans and I can confirm what you said about YELLOW SUN;[1] to my knowledge none were ever deployed to the Far East. I did all my target study prior to deployment with No 12 Sqn and that would have involved using RED BEARD against radar insignificant targets in China.

Jefford. Thank you. While the option was obviously available, I don't believe that that there was ever any serious thought given to using nuclear weapons against Indonesia. Did you have any RED

BEARD targets in Indonesia?

Bradford. Not in Indonesia, no. But I do recall that we sent, I think, three Vulcans down to Darwin, without a flight plan, at night, lights out at more than 50,000 feet which permitted the Nav Radars to have a look at some of the conventional war targets in Indonesia.

Jefford. We were still running the occasional Blue Ranger at the time, of course, which involved Vulcans ferrying BLUE STEELs from the UK to Australia to be fired at Woomera. They did the same thing – overflights of Indonesia at night, lights out at 50,000 feet plus. Indeed the list that I displayed of RAAF exercises flown out of Darwin began well before the end of Confrontation and the Vulcans that participated in those also flew back and forth covertly. Quite rude really!



Bradford. I have to say that I didn't really like the picture you showed of a Mirage with its gun sight pipper on the tail of a Vulcan. As a Vulcan nav, I found that image quite disturbing! (*Laughter*) On the other hand, during a local exercise with Butterworth as the target, after a long cruise climb the first of our aircraft 'attacked' at FL560 with the last one at about FL600. The Mirages were comforting themselves saying, 'It's OK, the missile will take out the last 30,000 feet.' (*Laughter*).

Air Mshl Sir Ian Macfadyen. Speaking of our Commonwealth cousins, could anyone expand on the capabilities of the people we were working with out there?

Air Cdre Ian McBride. We did a lot of work with the Mirages. We tried, as best we could, to be completely inter-operable. We flew mixed pairs and mixed four-ships and we did pretty well. Their radar wasn't too bad but it didn't match our AI 23B. That may have been because they didn't do as much air-to-air radar work as we did because they often flew using their radar in an air-to-ground mode, which provided various attack profiles and was very good for its time. That said, when we flew as collaborating pairs it would often end up

in a scrap – you just abandoned loyalty to your No 2 and tried to shoot him while he was trying to do the same to you! (*Laughter*) But it was all good flying, very productive and thoroughly debriefed. The Australians were a pretty professional bunch.

The New Zealanders that we met were good too. We flew against the Kiwi Canberras on exercise at Darwin where they were given a lot of night profiles, so if you were in the night business, which we were, you spent a lot of your time trying to catch them. They had a weak link that was no help to them at all. Their Doppler system, I think it was, just happened to be on very nearly the same frequency as our radar and you would sometimes pick up a stray 'spoke'. If you investigated that it would often turn into a Canberra. They could never work out how we did it – and we never told them . . .

Jefford. My apologies for having told this tale on a previous occasion but when I was on 45 Sqn we had, among our several attack options, a pop-up to about 7,000 ft which would guarantee no self-damage and minimise the risk of engagement by all but heavy AAA. The Australians were advocating popping up to 2,000 ft which would probably have been more accurate but carried some risk of damage and/or engagement by small arms fire. The Kiwis were just barrelling in at 250 feet. 'How are you going to get away with that?' we asked. 'Lay down bombs,' they said. 'But we don't have any lay down bombs,' we retorted (this was 1963). 'We know', said the Kiwis, 'but it's more fun that way.' (*Laughter*)

Air Chf Mshl Sir Michael Knight. I think it's worth observing that, for those of us fortunate enough to have served in FEAF, it was one of the most enjoyable tours of our careers. The flying was mixed, varied, exciting and sometimes challenging but we were certainly able to get around a good bit – from Chieng Mai, Kai Tak and the Philippines down to Australia and New Zealand. I would say a word about the RNZAF's No 14 Sqn. They were very professional and they flew their B(I)12s hard – and they socialised well too!

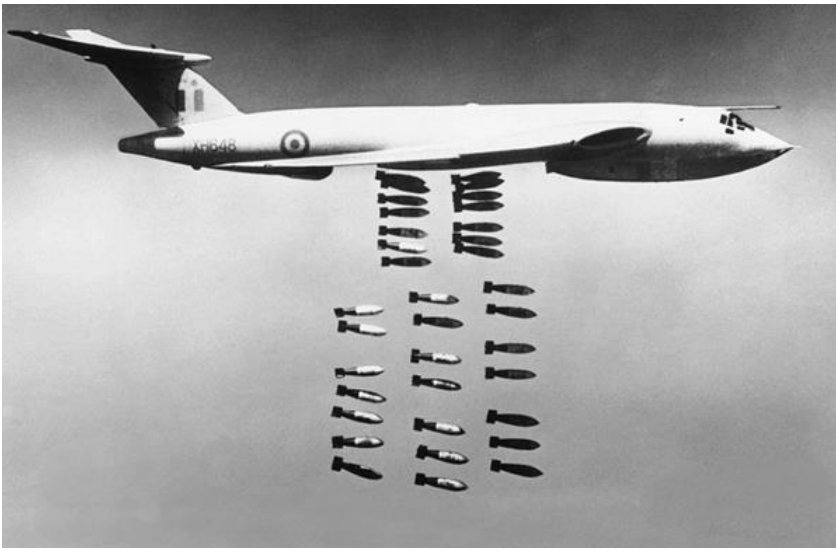
I managed to get down to Ohakea myself and on one occasion I recall attending an evening function following an air display. I was introduced to two charming ladies, of a certain age, one of whom said that she had a brother in the RAF. 'Oh,' said I, 'what's his name?' 'Elworthy.' (*Laughter*)[2]

Mike Meech. In the course of describing the successful use of tankers during deployments, reference was made to their limited fuel capacity. Was that because using converted V-bombers implied using them only for supporting fighters around the UK, and that there had never been any intention of using them for long range operations to distant theatres?

Jefford. I don't think so. At the time we still had extensive global obligations and that inevitably meant that we needed to be able to deploy over long distances. It was just plain economics. The Valiant had been very successful in laying the foundations of AAR, developing and validating the techniques, defining the operational procedures and so on – not least devising the very flexible approach to planning that we have heard about. At much the same time as the RAF lost its Valiants the French Air Force was shopping for tankers and in 1964 they bought the KC-135. With hindsight, I think that we should have done the same. If we could have afforded it, we might well have done so, but using recycled Victors was presumably the best we could do. The result was that we had a second-best tanker made workable by the planners and the ingenuity of its crews. But it is an inescapable fact that the disposable fuel load of a KC-135 is of the order of 200,000 lb, which is more than the all up weight of a fully loaded Victor. If we had had tankers of that capacity, we would not have had to indulge in the kind of hot-planning and juggling that Ian described. It also has to be said that every Victor tanker cost us a bomber and thus contributed to the steady decline in the size and capability of the RAF – a process that never seems to end.

McBride. In fairness, we didn't get around to the discussing the Victor K2, as it was outside our timeframe, but that was a significantly better aeroplane, with a bigger fuel load. By and large, it did the job, although it was a bit stretched supporting the BLACK BUCK missions. It would be interesting to know how many KC-135s would have been needed to do that – more than a few I suspect.

Air Cdre Norman Bonner. Jeff made a point about the Vulcan reinforcement exercise not being well-publicised. I took part in the initial 15/57 Sqn deployment in December 1963 and the very first thing we were told to do was to fly all eight aircraft around, about 30



The iconic picture of a Victor of No 15 Sqn dropping thirty-five 1,000 lb bombs on Song Song Range on 22 January 1964 – although all was not quite as it seemed.

seconds apart, criss-crossing Singapore and southern Malaya to ensure that the local population knew we were there – which made the *The Straits Times* – and to drop thirty-five 1,000 pounders – something which, I should point out, the Vulcan couldn't do. (*Laughter*)

Mind you that famous picture is a bit misleading, because we would never have actually dropped them like that; we would have gone at low level to avoid the SA-2 that we knew the Indonesians had got. There are two other factors. First, you wouldn't have dropped them all at 15 millisecond intervals like that and secondly, the 81 Sqn Canberra that took the picture overbanked so the first batch of bombs fell off the bottom of the film before the next batch emerged from the bomb bay. The sergeant photographer said, 'Can you leave it with me overnight, Sir?' and you have seen the very satisfactory end result. I believe that it subsequently became Sir Frederick Handley Page's Christmas card – and that he sent a lot of them to Manchester! (*Laughter*).

Jefford. A slight misunderstanding, I think. I have no doubt that the

Malaysians were well aware of the presence of the V-bombers from the outset. What I actually said was that there was some evidence to suggest that the Indonesians had not known about them. Why did I say that? Because I was quoting the aviation historian Humphrey Wynn, with whose writings many of you will be familiar.

Reading from a footnote to my script – at one of this Society's earlier seminars, held way back in 1993 and devoted to Confrontation (*see Journal 13, p71*), Wynn reported that he had asked retired Indonesian Air Force AVM R J Salatun what he thought 'the deterrent effect was of the RAF V-bombers and Canberras'. Salatun had responded that he had consulted a number of colleagues who had been involved at the time, only to find that none of them 'mention the Canberras, Victors and Vulcans'; indeed a MiG-21 Squadron Commander stationed at Medan had questioned whether the British had 'deployed any bombers at all.'

Personally, I find that quite hard to believe. After all, the V-bombers were around for two and half years and there will surely have been fellow travellers in Malaya reporting back to Djakarta and/or folk simply in touch with relatives on the other side of the Malacca Straits. The Indonesians must surely have known.

Sir Ian Macfadyen. Since there are no other questions, I think that we can draw the afternoon to a conclusion. May I first, on your behalf, offer our sincere thanks to all of our speakers who have clearly done an immense amount of preparation for our benefit. My thanks also to our Chairman, Nigel Baldwin, and to the officers of the Society for arranging this highly successful event.

We have heard, notably from Sir Michael, about having a lot of fun and it is quite clear that those who operated in FEAF did indeed have fun. But what also became apparent during the day was that there had been a good deal of 'make do and mend'. That was true elsewhere, of course, but it was particularly significant in the Far East where flying conditions, not least the weather, could be particularly challenging and the supply pipeline was very long. Furthermore, fifty years ago there were no sophisticated navigation aids in a region that encompassed large areas of sea and, often trackless, jungle. There were no computers in those days and communications were relatively primitive compared to what we have become accustomed to today. It is clear

that inter-Service co-operation had been a significant factor and much had depended upon the close working relationships that were built up between the RAF, the RAAF and the RNZAF.

I think that, on an occasion such as this, the RAF is entitled to blow its own trumpet a little to celebrate its early contribution to ensuring the peace, freedom, stability, and thus the subsequent prosperity, that are now enjoyed by the people of both Singapore and Malaysia. Should anyone wish to read more about this topic I can strongly recommend Sir David Lee's *Eastward* which provides an excellent account of the RAF in the Far East between 1945 and 1972.[3]

Finally, thank you all for coming today and for contributing to what has been, I think, a particularly productive seminar. I look forward, in due course, to reading the proceedings in our excellent Journal.

[1] This reference to YELLOW SUN arose from a misleading remark made, by the Editor, in the course of his earlier presentation on 'The Reinforcement of FEAF'. A superficial reading of the Op Orders had led to his interpreting instances of '7,000 lb' appearing in the text as references to the 'HE 7,000lb HC' bomb, ie YELLOW SUN. On subsequently re-reading these documents, however, it became apparent that the references had actually been to the 7 × 1,000 lb bomb carriers required for conventional weapons. The original remarks have been deleted and no longer appear in the paper as published at pages 58-93. My apologies for the confusion. **Ed**.

[2] At the time. depending on the date, Sir Edward Elworthy would have been either Chief of the Air Staff or Chief of the Defence Staff.

[3] Lee, Air Chief Marshal Sir David; *Eastward* (HMSO, 1984).

BOOK REVIEWS

Note that the prices given below are those quoted by the publishers. In most cases a better deal can be obtained by buying on-line.

An Alien Sky by Andrew Wiseman (with Sean Feast). Grub Street, 2015. £20.00.

The author of this autobiography was born in 1923 as André Weizman,[1] the son of a 'modestly wealthy' Polish Jew who had been educated in Russia but was domiciled in Berlin. His mother came from a Latvian Jewish family but had American nationality. Increasing anti-Semitism led to the family moving to Poland in 1935, but in anticipation of a German invasion, the 16-year old André was sent to school in England in 1939. As a result of his nomadic upbringing he would eventually be fluent in English, as well as Russian and German, and have conversational Polish and French. These linguistic skills would exert a strong influence on the three phases into which the rest of his life would fall.

The first of these began in 1941 when he enlisted in the RAFVR, a process that was complicated by the fact that he was an alien, albeit a friendly one, and that, being a Pole, he ought, by rights, to have joined the Polish Air Force in exile. These wrinkles were ironed-out and, with his dog tags incorrectly stamped 'CofE' (an error which he very wisely decided to tolerate), he embarked on the contemporary two-year aircrew training sequence. Having qualified as a sergeant observer,[2] in South Africa in May 1943, he returned to the UK to

[1] In Air Cdre Clarke's Forward, he says that Weizman's name was changed to Wiseman when he joined the RAF. This does not appear to have been the case, however, as he was still being recorded as Weizman in No 466 Sqn's ORB when he was shot down in 1944. Oddly, however, some respected post-war chroniclers, eg Clutton-Brock and Chorley, have listed him as Wiezman. It is not clear from his book when Weizman actually did anglicise his surname.

[2] The author says that he graduated as an observer and that he was awarded an 'O' flying badge; the latter was certainly the case and, as photographs in the book show, he continued to wear it thereafter. But the aircrew category of observer, and its distinguishing badge, had both been declared obsolete in 1942 and it seems more likely that he was actually categorised as an air bomber but that stocks of the appropriate 'B' flying badge had not been locally available at the time. He is certainly annotated as an air bomber in the F541s raised by No 466 Sqn.

follow the well-beaten path via PRC, (O)AFU, OTU and HCU before eventually joining No 466 Sqn as part of a mixed RAAF/RAF crew in March 1944. On 18 April, on his sixth sortie, his Halifax was shot down.

Having succeeded in concealing the fact that he was a Polish Jew, Wiseman arrived at *Stalag Luft III* a few weeks after the 'Great Escape' and its murderous aftermath. His skills as an interpreter meant that this rather unusual *Krieggie* was often present at dealings between the Senior British Officer and the *Kommandant* and this provided him (and now his readers) with a unique insight into these and later negotiations. He took part in the Long March from Sagan and, once the survivors had reached Luckenwalde Wiseman became an essential link in liaising with the Germans and latterly in handling exchanges between the, notionally, liberated POWs, represented by the Norwegian General Ruge, the Russians and the Americans. Following repatriation, by now a warrant officer, Wiseman spent another year or so in uniform, some of it in Berlin and at Bad Eilsen, working in an intelligence capacity.

On leaving the Service he found employment with the BBC, again exploiting his languages as a translator monitoring foreign, ie Russian, broadcasts, including a stint in Cyprus. In 1954 he moved across to TV, becoming involved in early outside broadcasts and eventually a producer of such high-profile shows as Tomorrow's World, while continuing to play a key role in facilitating arrangements for international broadcasts, particularly those involving Germany and the USSR. Following retirement in 1983 he began a third career as a freelance interpreter working with the police and immigration authorities in cases involving Germans, Poles and Russians. He died in January this year (2015).

The narrative within this 176-page hardback is well-written, satisfyingly detailed and largely free from errors (but one can always find something and, just to prove that I really did read all of it, a '25 metres' on p106 should surely have read '25 miles' and a reference to No 426 Sqn on p131 should have been to No 462). Unfortunately, it has to be said that, if one has read one recollection of wartime aircrew training and the personal experience of bomber operations there is a sense of *déjà vu* when one reads another. That said, Wiseman's account contains numerous interesting anecdotes throughout and is an

excellent example of the genre. Where his story is unique, however, is that it provides a first-hand account of the month that the ex-prisoners spent in limbo at *Stalag IIIA* pending their release by the Russians, which finally permitted the Americans to fly them out to Brussels. This involved, sometimes tense, negotiations with some rough and ready international diplomacy conducted by the 22-year old Wiseman with cordial relations sometimes being cemented over a bottle of vodka. If for no other reason, his account of this interlude makes this book definitely worth a read.

CGJ

The Battle For Britain – Interservice Rivalry between the Royal Air Force and the Royal Navy, 1909-1940. Anthony J Cumming. Naval Institute Press; 2015. $39.95 (£16.14 from Amazon)

I embarked upon writing this review with some reluctance, keenly aware that whatever I write risks being written off in terms of the Mandy Rice-Davies Syndrome. Very likely this is not a suitable task for an airman, who must be perceived as having as much baggage in matters of inter-Service rivalry as those whose blood runs dark blue. Arguably it is too big a job for a High Court judge!

The Battle for Britain is one of a number of polemics by Anthony Cumming in which he criticises the existence of a third Service, while carefully acknowledging the gallantry of members of the Royal Air Force in war. He lays blame at the door of Field Marshal Smuts for his 'hasty' decision, to recommend the creation of the Royal Air Force, the consequences of which, he argues, have since had detrimental effects on the Royal Navy in particular and the Nation's defences in general.

Anthony Cummings's latest book (which runs to 224 pp with 12 b/w plates & 2 maps) sets out to remind its readers that the Battle *for* Britain was something much wider in terms of the Nation's survival than was the Battle *of* Britain fought out largely in the skies over the South East of England. In considering the events of the first two years of war, he rightly draws attention to the operations of the other Services, although it may be suggested that these manifested many of the same deficiencies of equipment, personnel, leadership and performance as did the Royal Air Force. It is not clear that he recognises that the equipment and tactical employment of each

reflected the standards and practices of the time and not those of 2015, when hindsight affords much greater clarity than was the case in 1940. From his starting point, the wrong-headed decision to form a third Service in 1918, Cumming goes on to suggest that Trenchard's 'obsession' with strategic bombing , the complicity of politicians of the time, the success of Air Ministry PR in the inter-war years and the general incompetence of the RAF, all combined to deny the other Services what was needed by way of air support. He makes his view clear that the RAF was the unworthy beneficiary of British wartime propaganda designed to attract the United States to the anti-Fascist cause.

Even today, the assertion, that 'RAF PR and staff work are better than those of the RN', while gratifying if true, lies deep in the beliefs of some members of the Senior Service. Equally, resentment of the upstart third Service is not always absent from their DNA. Cumming is insistent that PR and propaganda afforded the RAF unfair advantages, at the expense of the Royal Navy.

The author is careful to qualify many of his assertions, using phrases such as 'in my view', 'I believe', or 'in my opinion' to leave no doubt as to the provenance of such statements. His selection of source material, faithfully attributed, does suggest a degree of partiality and members of this Society will recognise the work of such authors as David Divine, Wing Commander Dizzy Allen, Vincent Orange, Captain W E Johns and Len Deighton, not all of whom were always completely uncritical of the Air Ministry, the Royal Air Force or its leadership. The views of the authors quoted from the (naval) Phoenix Think Tank, of whom Cumming is one, are predictable This work is unashamedly radical in its objectives and revisionist – in the words of its publisher a 'provocative reinterpretation of both British air and naval power from 1909 to 1940'. Provocative it certainly is and the conclusion towards which its first 160 pages are directed, is unsurprising:

> *'The dissolution of the RAF would be a vital first step in the direction of armed services unification.'*

Although he also recommends breaking up BAE, to 'unshackle the creativity of private sector aircraft designers' – arguably a naive and unworldly suggestion – Cumming is silent on what should follow 'dissolution of the RAF'. Logically, we may suppose, the next step

would see the Admirals and Generals slug it out for first place – and what fun that would be!

The Battle for Britain is a painfully honest piece of work and clearly the product of strongly held views. It will certainly be regarded as provocative, if unoriginal in its principal conclusion, but it offers a reminder of what are sadly deep-seated hostilities and resentments that hark back many years. It may surprise some to read the suggestion by a former First Sea Lord in his Foreword, that in today's world a separate Service to deliver air power may not be necessary. That conclusion will delight both the author and the populist media about whom he complains!

AVM Sandy Hunter

An Expendable Squadron by Roy Conyers Nesbit. Pen & Sword; 2014. £25.

Roy Nesbit will need no introduction to students of aviation history. An observer who survived a tour on a Coastal Command Beaufort squadron, for which he was mentioned in despatches, he became a prolific writer of aviation books.

His first title, *Woe to the Unwary*, was a semi-autobiographical account of his experiences while flying with No 217 Sqn when the Beaufort was new into service and was being used to bomb ports and installations in NW France. Losses were heavy. He later wrote a much-acclaimed series of books about torpedo dropping squadrons and the Strike Wings of Coastal Command and the Mediterranean.

His great interest in, and devotion to, Coastal Command and its relatively unsung exploits led him to write about its deeds. Later, he widened his scope to include, amongst other topics, the exploitation of ULTRA in the U-boat war and accounts of the mysteries surrounding the disappearances of Glen Miller and Amelia Earhart. He wrote a number of books for The National Archives and was in great demand as an advisor by television, film and video producers.

After his ninetieth birthday Roy decided to return to his first book and expand it. The result was this, 250-page, illustrated history of the whole of 217 Squadron's war, which began with it mounted on Ansons and ended with it flying Beaufighters from Ceylon. A meticulous researcher, with a large circle of contacts, he felt it to be his duty to record the exploits of his wartime colleagues and to remind

a wider public of their sacrifices. Still using his ancient word processor, and establishing new contacts in France, which yielded a great deal of additional material, he was engaged in the final stages of preparing his book for publication when he passed away in February 2014.

While *An Expendable Squadron* would have benefitted from a final proof read, it is, nevertheless, a good read and it achieves Roy's aim of providing a fitting memorial both to his Beaufort colleagues and to those who followed. It is also appropriate that his distinguished writing career should begin and end by chronicling the events that meant so much to him and had such an influence on his later writings.

A good friend, and one always prepared to offer advice and lend material, his legacy will be the many books he wrote and his determination to raise the profile of one of the RAF's wartime roles which, despite the invaluable contribution that it made, had attracted less publicity than it had deserved. .

Air Cdre Graham, Pitchfork

Rescue Pilot – Cheating The Sea by Jerry Grayson AFC. Bloomsbury; 2015. £16.99.

Even in the days of the ubiquitous worldwide web it is quite unusual to find a website devoted to a single book but that is the case with this title and the author points the reader towards it as the final words of his account.

Jerry Grayson, the youngest helicopter pilot employed as a navy search and rescue pilot, joined the Fleet Air Arm at the age of 17 and served on an eight-year short service commission. He subsequently became a commercial helicopter pilot and worked in the film industry. He now lives in Australia and his business interests extend into motor racing and other sporting events.

This is not a cerebral work of great moment, so much as an autobiographical tale of one man's urge to fly and where that ambition led him. Much of his story will probably be familiar to other RN helicopter pilots of the 1970s and, from that perspective, it has a similar 'footprint' to Geoff Leeming's *From Borneo To Lockerbie*, which I reviewed in Journal 56.

This 230-page book was clearly written by an individual with plenty of confidence in his own abilities and he tells his story in a

straightforward way. The assumption appears to be that the reader will know little, if anything, about flying so Grayson explains some of the techniques used in his trade. Although much is made of his search and rescue work, Grayson also served as a 'pinger' – RN slag for an anti-submarine operator. In these roles he served, *inter alia*, on HMS *Ark Royal* and at Culdrose. His account includes a number of diversions into other topics, such as motor racing, and includes the kind of occasional brush with authority, which has been the lot of most of us at some stage or another.

Personally, I found the most interesting part of the book to be Grayson's involvement in the Fastnet Race disaster of 1979. Although I knew a little of this event, his account is the first from anyone, other than a contestant, that I have seen in print, although it follows a TV programme in which a (then) very junior naval officer told of his involvement.

All in all an enjoyable read, despite the occasional digs at 'Crabs' to remind us that the senior service is not going soft on us!

Wg Cdr Colin Cummings

B-24 Liberator in RAF Coastal Command Service by Pavel Turk & Miloslav Pajer. JaPo Books; 2015. £70.00.

The Liberator was probably the key aircraft in winning the battle against the U-boat in the Atlantic during WW II. In the 320 pages of this beautifully produced book the authors offer a comprehensive account of the Liberator's part in this vital battle. Profusely illustrated, with an excellent array of around 550 well-captioned photographs, this book is complemented by a marvellous range of colour side views portaying aircraft of pretty much every unit. The operational record of every maritime Liberator squadron is well covered but, as indicated in the sub-title, . . . *with Focus on Aircraft of No 311 (Czechoslovak) Squadron RAF*, the book pays particular attention to the operations of that Czech-manned unit. Every aspect of the activities of this exiled unit is covered, including an appendix devoted to providing details of each of the aircraft it operated.

Printed on high quality, A4-sized, glossy art paper, this book is a true *tour de force*. It is highly recommended, a 'must' for those interested in the wider history of WW II, modellers will find it an essential reference to this elegant aircraft. However, whilst it deserves

every success, there is a drawback – its price is likely to deter all but the most ardent enthusiast, which is a great pity as it does deserve a place on the bookshelf.

Sqn Ldr Andrew Thomas

Nimrod's Genesis by Chris Gibson. Hikoki; 2015. £29.95.

Having previously dealt with issues associated with the V-Force in his *Vulcan's Hammer* (see Jnl 51, pp157-9), and post-war air defence in *Battle Flight* (see Jnl 55, pp125-6), this prolific author has now tackled 'maritime patrol projects and weapons since 1945'. I understand that he is currently working on air transport, so watch this space.

The first point to make about *Nimrod's Genesis* is that the key word in the title of this 224-page, A4-sized book is 'Genesis'. It is not a book about the Nimrod. That aeroplane does get its, very respectful, due, of course, but it doesn't become the focus of attention until page 163 and by page 180 the story has moved on.

The first 20 pages are devoted to a summary of the opposition – the evolution of the Soviet naval threat, both surface and submarine – and the weapons devised to counter these. Some of the latter, which never saw service, might reasonably be described as exotic, even eccentric.

An early chapter is devoted to the ten-year-long, but doomed from the outset, rear-guard action fought by the flying boat fraternity until it was finally obliged to accept defeat in the mid-1950s. Thereafter, the text is chiefly concerned with examining the succession of Operational Requirements drafted, over more than half-a-century, by a very hard-to-please Air Ministry/MOD. Attempting to satisfy their challenging, and sometimes conflicting, demands (eg long range, long endurance on patrol, ability to operate from Gibraltar's 6000-foot runway, high transit speed but low patrol speed) kept numerous design teams, both at home and abroad, busy sketching proposals. The only hardware to result from their endeavours were the Shackleton and Nimrod and, while the development of those aeroplanes, is addressed, the bulk of the story is concerned with scores of 'what if' projects. These ranged from a tarted-up Varsity, via a fat MR Vulcan and doggedly repeated attempts by Vickers/BAC to persuade the RAF to recognise the multi-role potential of the VC10, to a 180-foot long transonic swing-wing proposal dreamed-up by Hawker Siddeley. Breguet's Atlantic and

Lockheed's Orion lurk constantly in the background, of course, along with options based on the Trident, the BAC One Eleven, the Avro 748 and so on – and on.

A notable feature of *Nimrod's Genesis*, as with all of Chris Gibson's work, is that it is lavishly illustrated. There are photographs, of course, but, more importantly, there are many well-captioned and very well-executed general arrangement drawings showing the layout of most of the projected designs and the subtle differences between variations on themes as the various schemes evolved.

Embedded within the narrative are numerous insights into the factors that influenced designers, such as the evolution of engine technology – piston, turbo-compound, turboprop and eventually, low by-pass and high by-pass turbofans – and how many of these there should be? Another factor that is discussed is the impact of the decline, and eventual collapse, of the Soviet Union which meant that maritime air became increasingly concerned with protection of Exclusive Economic Zones rather than anti-submarine warfare.

Sadly, as the author makes clear, regardless of where the focus of contemporary maritime aviation lies, the RAF is no longer a player. Nevertheless this well-presented book is full of interest and will, of course, have a particular appeal to ex-Coastal Command/18 Gp folk.
CGJ

ROYAL AIR FORCE HISTORICAL SOCIETY

The Royal Air Force has been in existence for more than ninety years; the study of its history is deepening, and continues to be the subject of published works of consequence. Fresh attention is being given to the strategic assumptions under which military air power was first created and which largely determined policy and operations in both World Wars, the interwar period, and in the era of Cold War tension. Material dealing with post-war history is now becoming available under the 30-year rule. These studies are important to academic historians and to the present and future members of the RAF.

The RAF Historical Society was formed in 1986 to provide a focus for interest in the history of the RAF. It does so by providing a setting for lectures and seminars in which those interested in the history of the Service have the opportunity to meet those who participated in the evolution and implementation of policy. The Society believes that these events make an important contribution to the permanent record.

The Society normally holds three lectures or seminars a year in London, with occasional events in other parts of the country. Transcripts of lectures and seminars are published in the Journal of the RAF Historical Society, which is distributed free of charge to members. Individual membership is open to all with an interest in RAF history, whether or not they were in the Service. Although the Society has the approval of the Air Force Board, it is entirely self-financing.

Membership of the Society costs £18 per annum and further details may be obtained from the Membership Secretary, Wg Cdr Colin Cummings, October House, Yelvertoft, NN6 6LF. Tel: 01788 822124.

THE TWO AIR FORCES AWARD

In 1996 the Royal Air Force Historical Society established, in collaboration with its American sister organisation, the Air Force Historical Foundation, the *Two Air Forces Award*, which was to be presented annually on each side of the Atlantic in recognition of outstanding academic work by a serving officer or airman. The British winners have been:

1996	Sqn Ldr P C Emmett PhD MSc BSc CEng MIEE
1997	Wg Cdr M P Brzezicki MPhil MIL
1998	Wg Cdr P J Daybell MBE MA BA
1999	Sqn Ldr S P Harpum MSc BSc MILT
2000	Sqn Ldr A W Riches MA
2001	Sqn Ldr C H Goss MA
2002	Sqn Ldr S I Richards BSc
2003	Wg Cdr T M Webster MB BS MRCGP MRAeS
2004	Sqn Ldr S Gardner MA MPhil
2005	Wg Cdr S D Ellard MSc BSc CEng MRAeS MBCS
2007	Wg Cdr H Smyth DFC
2008	Wg Cdr B J Hunt MSc MBIFM MinstAM
2009	Gp Capt A J Byford MA MA
2010	Lt Col A M Roe YORKS
2011	Wg Cdr S J Chappell BSc
2012	Wg Cdr N A Tucker-Lowe DSO MA MCMI
2013	Sqn Ldr J S Doyle MA BA
2014	Gp Capt M R Johnson BSc MA MBA

THE AIR LEAGUE GOLD MEDAL

On 11 February 1998 the Air League presented the Royal Air Force Historical Society with a Gold Medal in recognition of the Society's achievements in recording aspects of the evolution of British air power and thus realising one of the aims of the League. The Executive Committee decided that the medal should be awarded periodically to a nominal holder (it actually resides at the Royal Air Force Club, where it is on display) who was to be an individual who had made a particularly significant contribution to the conduct of the Society's affairs. Holders to date have been:

Air Marshal Sir Frederick Sowrey KCB CBE AFC
Air Commodore H A Probert MBE MA

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Gp Capt K J Dearman
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Middleton Stoney
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(who also deals with sales of publications)
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