

**STANLEY RUNWAY
and the
BLACK BUCK RAIDS
1982**

BACKGROUND

1. On the 21st July, 2020, the *Daily Telegraph* published a letter by Dr M. Fopp (a member of the RAF Historical Society) which read in part:

I take issue with most of what Mark Campbell-Roddis says in defence of aircraft carriers and the Royal Air Force [Letters, July 20] As a historian, I object to his suggestion that the RAF raids on Port Stanley in the Falklands conflict were “ineffectual”. As well as demonstrating the strategic ability of Britain to attack a target at a greater distance than had ever been achieved before, the “Black Buck” raids denied the airfield to the enemy’s attacking fast jets...and cratered its runway.... Royal Navy spin doctors gave little credit to the RAF’s contribution, but it was key in 1982, as the proposed coordination of effort is meant to be today.

Dr Michael A Fopp

Director General, RAF Museums, 1988-2010

2. This was followed by a response from Major-General Julian Thompson published on 25th July which read in part:

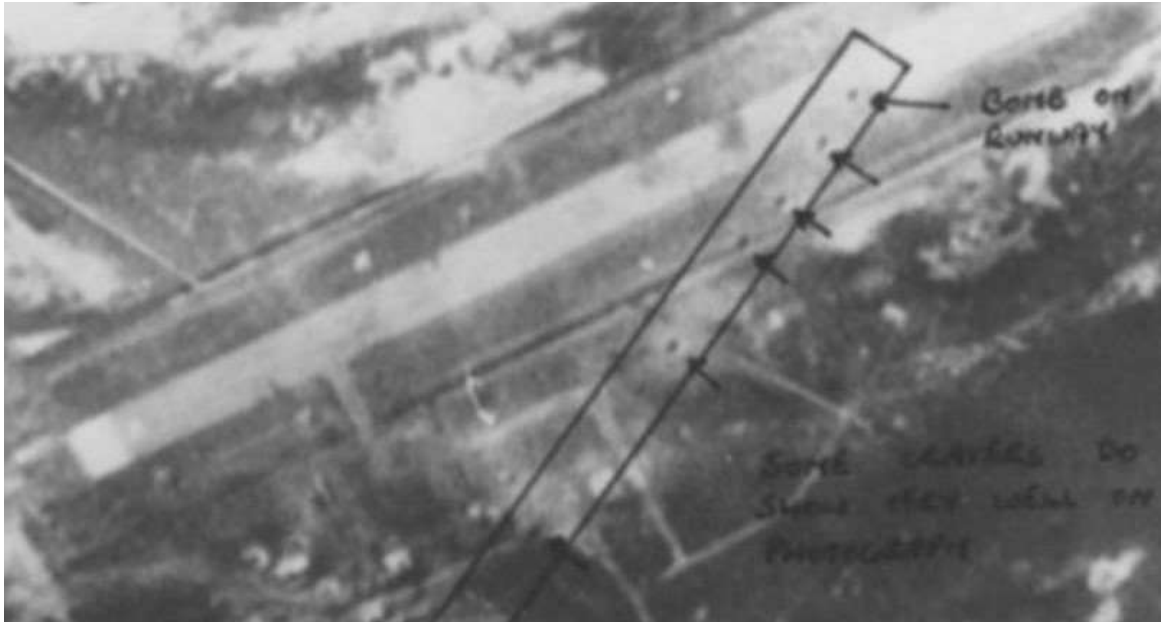
The runway at Port Stanley in the Falklands was not damaged by the Black Buck raids as Michael A Fopp says – or not enough to prevent Argentine C-130s from using the airfield almost every night of the war. As we got closer, my artillery forward observers could see them, but my guns were just out of range.

Staff visiting the airfield just after the Argentine surrender reported no craters on the runway, but several on each side. The runway was too short for fast jets, and the Argentines failed to use the time before the British carriers arrived to extend it.

Major General Julian Thompson

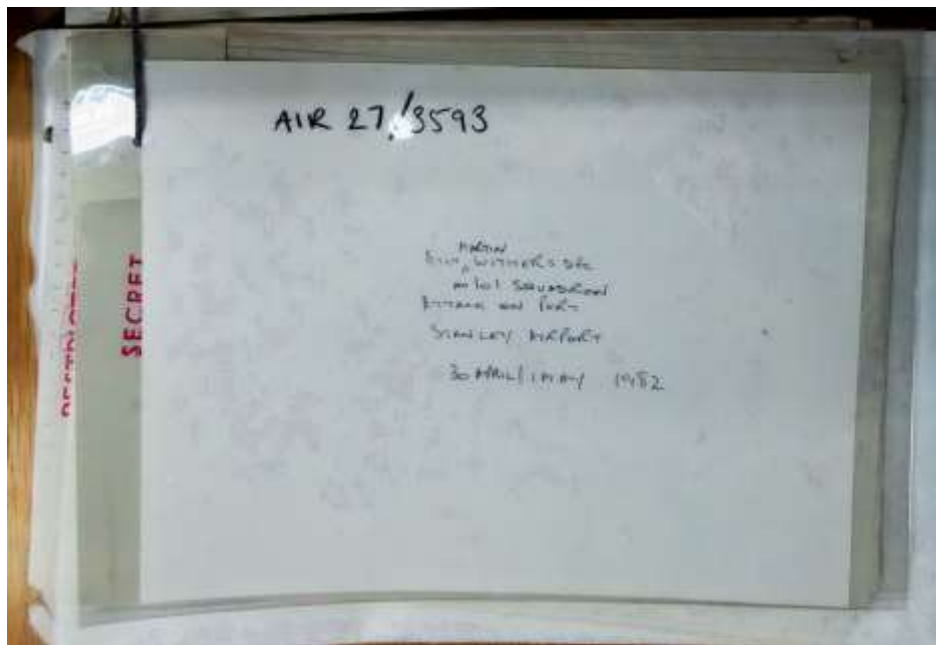
Commander of 3 Commando Brigade in the Falklands, 1982

3. Anxious to nip in the bud these apparent misconceptions by an RAF historian, Lieutenant-Commander Lester May spoke and wrote to Dr Fopp on 29th July, 2020. This elicited a reply e-mail on 30th July which contained no text but just one photograph of Stanley runway (Photographs Nos 1 and 2 below) showing a bomb crater precisely in the middle and just short of halfway down the runway from the east. Dr Fopp offered no explanation and, tellingly, no clue as to this photograph’s origin. We now know, and are puzzled by, this photograph’s provenance whereby a Fleet Air Arm-sourced aerial photograph has appeared in RAF files in the National Archives showing a crater in a position that does not appear in any other known FAA photograph, together with its RAF-centric caption. It was clear that this confusing affair needed to be studied in more detail.



Photograph No 1

National Archives document AIR 27/3593. Although this photograph is 'attributed' to 'No 101 Squadron (Falklands Conflict)' and is found in RAF Form 549 for 101 Squadron, a rather clearer version was taken by a *Sea Harrier* of 801 Naval Air Squadron on the same day - 1st May (Before Black Buck Two).



Photograph No 2

Caption on reverse of Photograph No 1

4. Although Photograph No 1 appears - on its reverse in Photograph No 2 - to be 'credited' to 101 Squadron RAF, at that time the only aircraft capable of aerial reconnaissance were the *Sea Harriers* of 801 and 800 Naval Air Squadrons.

5. Interestingly, the ‘first three’ craters in Photograph No 1 - one on the runway’s centre-line, one on the edge on packed grass and earth over peat and the third also on packed earth - are all too similar. Commodore Michael Clapp (lately the Commanding Officer of 801 Naval Air Squadron flying *Buccaneer* Mk II bombers and, in 1982, Commander Amphibious Task Group) believes that they are suspiciously evenly spaced and in a dead straight line unlike lines of craters in other photographs which tend to be slightly zig-zagged and not so evenly spaced.

INTRODUCTION

6. The RAF have long claimed to have hit Stanley runway – dead centre – with a *Vulcan*-launched 1,000 lb bomb during Operation Black Buck One on the night of the 30th April/1st May 1982 while also claiming that this strike seriously restricted Argentine flying operations. The RAF also claim that their raid on Stanley airport forced the Argentine Air Force to remove a significant number of aircraft to the north of the mainland to protect the major cities, and especially Buenos Aires, against British bombers; thus reducing the threat to the Task Force. After 38 years of assumptions this paper has been written using all photographic, eyewitness and written evidence that can be obtained from Argentina, France, the United States, the Falkland Islands and the United Kingdom in order to assess whether or not the RAF claims for the success of Black Buck One have any authenticity. Black Buck Two’s bombs, dropped overnight 3rd/4th May, landed off the western end of the runway. Black Buck Three was cancelled and Black Buck Seven’s bombs missed in the same general area as Black Buck Two. The results of these latter three raids are not in contention.

7. After the campaign the same photograph that Dr Fopp sent to Lieutenant-Commander May (Photograph No 1) was circulated within the RAF and became accepted as fact. Commander Tim Gedge (CO of 809 Naval Air Squadron in HMS *Invincible*, in 1982) has stated in an e-mail to Major-General Julian Thompson:

This photo [Photograph No 6 below] shows the runway as it was after the second Black Buck raid. In the photograph sent to Lieutenant-Commander May by Dr Fopp [Photograph No 1 above] amazingly, the runway has grown a new crater, this one dead centre of the runway. This photograph has however been widely circulated by the RAF and I assume it was released as an official photograph....

*This original photo [processed on-board HMS *Invincible* within an hour] is un-doctored, unlike one I was shown at Cranwell some months later which showed the first bomb crater slap bang on the runway centre-line! - and which has appeared several times in published media since then. But your point about C-130s landing there is most relevant. We all know from numerous sources that the runway was never put out of action.*

8. A first, exploratory, paper on this subject was written on the 17th August and distributed internally. Mindful of the broader implications of our findings it was decided to alert the First Sea Lord, Admiral Radakin. This was a matter of courtesy that allowed him to hear firsthand of our concerns before they reached a wider readership. Commodore Clapp sent this e-mail which reads in part:

Dear First Sea Lord,

I am writing on behalf of General Thompson and several others to warn you that a Dr. Michael Fopp, who was once the Director General, RAF Museums, has been accusing some of the retired Naval Service of being spin-doctors over the subject of the Stanley airfield runway in the Falkland Islands in 1982. The matter is that the RAF by their Black Buck raids have always claimed that their Vulcans managed to drop one bomb on the runway and so put it out of action, However, Lt. Col. Ewen Southby-Tailyour and others have evidence that no bomb was landed on [the centre of] the runway. This is supported by opinions from Argentine officers...including General Menéndez.

It is apparent that photos have been 'adjusted' and the spin doctors must have worn light blue. Dr Fopp was politely informed nearly a week ago but has so far failed to reply. [He replied on 12th August with a non-committal response and the e-correspondence was terminated.] ... We hope this matter will not boil over and hinder any relationship you have with the Chief of Air Staff or create too much acrimony. If you wish to see the evidence I will let Ewen know. Colonel Maynard suggested we handed it to the Naval Historical Branch and this will happen when Ewen returns and all known evidence is collected.

With my best wishes,

Michael Clapp, CB. Cdre. Ret'd.

9. The First Sea Lord's response (also writing as a barrister) states in part:

Dear Michael,

Very good to hear from you and thank you for the email. All that you say makes very good sense to me and bringing in the Naval Historical Branch strikes me as the best tactic. I have copied in Stephen Prince accordingly. And I hope that I am close enough to Mike Wigston [CAS] to dampen this down if it all starts to boil over....

Thank you to you and Julian and Ewen for highlighting this issue in The Telegraph and all the preparatory work that accompanies such efforts: history and truth are as important as ever. ...

Best wishes, Tony

10. This second paper not only has a wider circulation list, outside the naval service, but it takes the discussion to a higher level. It will look at as much eyewitness, documentary and photographic evidence as possible in order to refute or verify Dr Fopp's photographic opinion that the Black Buck raids denied the runway to Argentine fast jets and cratered it on the centre-line as shown in Photograph No 1. In doing so it will also conclude whether or not the Black Buck raids met the RAF's official aim which was to: *Impede Argentine air operations.*

HISTORY

11. Argentina invaded the Falkland Island overnight 1st/2nd April 1982.
12. While the Task Force was being made ready and despatched towards Ascension Island the RAF was authorised to attack the only paved runway throughout the archipelago in order to prevent fast jets from operating out of Stanley airfield (had the Argentines lengthened the runway across the cleared ground to the west) and, secondly, to prevent transport aircraft from resupplying the Argentine occupying forces. As the (un-extended) runway was just over 4,000 feet in length two craters would have been needed for this second aim to have been met. A single crater halfway down the runway would allow C-130s to operate off either end. Using ‘tactical take-off’ speeds, and depending on its payload, a *Hercules* can become airborne in as little as 900 feet although 2,000 is preferred. Most fast jets would have needed the full runway.
13. The RAF mounted seven Black Buck bombing raids from Ascension Island; the first three targeted the runway (the third raid of these was cancelled prior to take off because of the weather) and the seventh targeted the airfield installations: the remaining three raids (4, 5 and 6) were aimed at radar installations and airfield ‘facilities’. According to Air Operation Order 3/82 271440 Z APR 82 the Mission of the Black Buck raids was *To impede Argentinian air operations from STANLEY Airfield*.
14. In between the first and second Black Buck raids the Argentine cruiser ARA *General Belgrano* was torpedoed and sunk, thus forcing the Argentine Navy and merchant fleet to remain in national, coastal waters for the duration of hostilities.
15. The first AAF *Hercules* to land at Stanley following the second Black Buck raid did so in daylight on 6th May. The last took off during the night 13th/14 June.
16. Hostilities ceased on 14th June.
17. The Royal Engineers began their survey of Stanley runway on the 17th June and started repairs two days later.
18. The first British *Hercules* to land at Stanley did so on the 24th June.

AIM

19. The aim of this paper is to establish whether or not British *Vulcan* bombers managed *To impede Argentinian air operations from Stanley Airfield* during Operation Corporate in 1982.

SCOPE

20. This paper does not concern itself with the strategic aspects of the Black Buck raids and nor does it speculate on the effectiveness of naval gunfire support, *Harrier* GR3s or *Sea Harrier* operations against the runway.

21. This paper does not discuss Black Buck raids 4, 5 and 6 but does address the claim that Argentine aircraft were moved to the north as the direct result of the Black Buck raids.

22. It is important to state that we all would rather the RAF had put Stanley runway out of action but sadly this was not the case despite remarkable personal courage by the aircrew involved and inventive, staff planning. We would also like to emphasise, strongly, that all of us involved 'down south', in the naval service and the army, retain our full admiration for a number of aspects of the RAF's involvement in 1982. We acknowledge the fine work of the *Harrier* GR3s in support of ground troops; we are full of praise for the gallant and invaluable efforts of the sole surviving *Chinook*'s ground crew and pilots and we particularly admire the two *Hercules* crews who flew almost continual, 24 hour sorties to supply the task force, deep in the South Atlantic, with urgently needed spares and, not least, mail.

23. What we cannot accept is the RAF's claim to have damaged Stanley runway to a significant extent, with a 1000 lb bomb on the centre-line, that Argentine air operations were *impeded*. This analysis will clarify why we hold this view. At this point it might be useful to highlight just one account (www.buckinghamcovers.com) by the *Vulcan* pilot of Black Buck One which explains why we are concerned at the falsification of history and the public's perception of the success of the Black Buck raids. Similar claims are made in various other websites and interviews.

The 21 1,000 lb bombs were released two miles out from Port Stanley - one hit the runway and the others hit the dispersal areas causing damage to aircraft and the fuel storage area. Mr Withers (Black Buck One's *Vulcan* pilot) describes the raid as "*100 per cent successful*". He said: "*We had one bomb right on the runway and as a result the runway was never used for the rest of the war by the Argentineans.*" [Our emphasis.]

24. Throughout, we have restricted ourselves to presenting only eyewitness, firsthand facts plus accounts from official, historical records both in the United Kingdom and Argentina; untainted, we believe, by manipulation and personal hypotheses. For the majority of the archive research in Argentina we acknowledge the work on Argentine aviation matters by Señor Santiago Rivas. For his research in the British National Archives at Kew - and his adroit application of the Freedom of Information Act - we are indebted to Señor [Dr.] Alejandro Amendolara. We are also grateful to the military historian Señor Mariano Sciaroni for researching various AAF documents concerning the repairs to the Stanley Runway as well as the repositioning of fighter aircraft from the south to the north. Señor Alejandro Pita was our link to his father, *Capitán de Navío de Infantería de Marina* Miguel Pita, who commanded the initial Argentine amphibious assault.

25. We have discounted all third hand accounts and accounts from those who were not directly involved on the ground or in the air over Stanley runway. There are three major exceptions to this restriction: a published excerpt accompanied by one contemporaneous, annotated photograph from a respected French publishing house is included, as is evidence from Lieutenant-Colonel Roger Blundell (an aviator) who was serving at Northwood in 1982 on the C-in-C's staff as the Fleet Royal Marines Officer and who was a member of the C-in-C's sea, land and air briefing team. The third example is a USMC staff paper dated 2nd April 1984 headed *Offensive Air Operations of The Falklands War* by Major Walter DeHoust.

26. This paper has been written with the help and input of considerably more people (at home and abroad) than those quoted or those whose signatures follow. For the sake of clarity all ranks stated are those held subsequently and not, necessarily, those held at the time.

BLACK BUCK ONE

27. Over the night of 30th April/1st May one *Vulcan* bomber dropped 21 1,000 lb bombs aimed at Stanley airfield's paved runway. During daylight hours of 1st May an aerial reconnaissance photograph (Photograph No 3) was taken by a *Sea Harrier* from 801 Naval Air Squadron. This was then analysed on board HMS *Hermes* by Rear-Admiral (later Admiral Sir John) Woodward's staff.



Photograph No 3

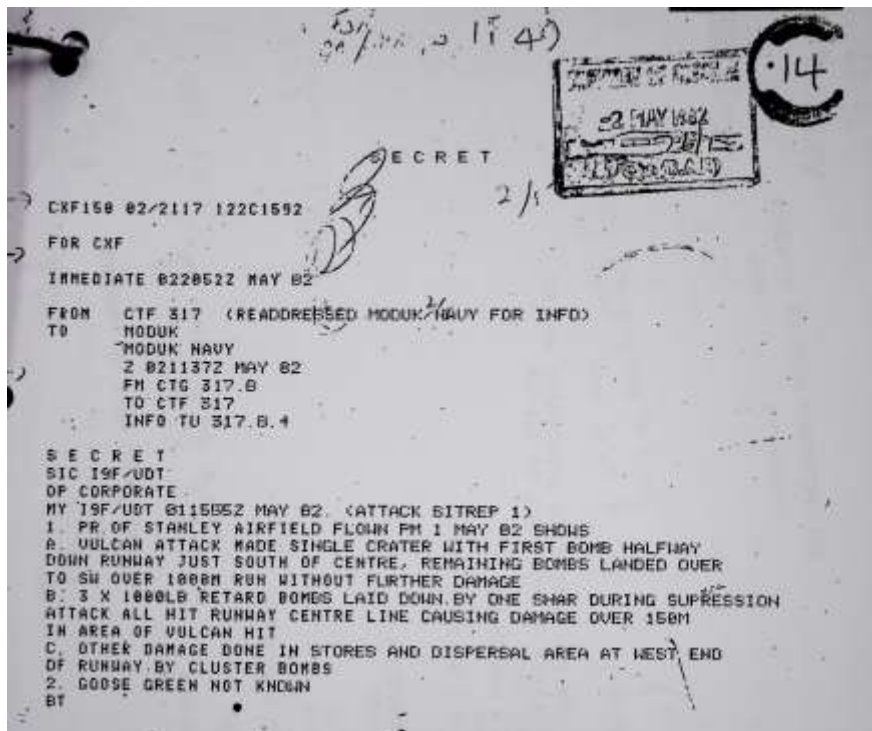
Taken on the 1st May. National Archives DEFE 69/844 HMS *Invincible*: Falkland Islands Campaign Dairy

28. Photograph No 3 was taken before the Argentines would have had time to muster the resources required to fill in or alter any crater. The first bomb to land hit the southern half of the runway, the second bomb crater clipped the runway as can be seen clearly. In a comparison with the RAF-sourced Photograph No 1, also taken on 1st May, a distinct difference is immediately obvious: in No 3, whose origin is undoubted and whose clarity is obvious, the first crater is off the centre-line but in No 1 (which comes via the RAF's 101 Squadron and whose fuzziness is evident) the first crater is central and the photograph has been notated with an overlay.



Photograph No 4 – enlarged from No 3

29. Photograph No 4 is an enlarged section of Photograph No 3 and shows clearly that the first bomb missed the centre-line of the paved runway. There is no indication of any damage, or dummy crater or rubble on the centre-line. We now know that the first bomb's crater was filled in before Black Buck Two. (See Commander Air Group Malvinas, Brigadier Luis Guillermo Castellano's comments in Paragraph 66.)



Signal No 1

30. Having analysed FAA Photograph No 3 Admiral Woodward [CTG 317.8] sent a signal to Admiral Sir John Fieldhouse [CTF 317] in Northwood on the 2nd May [Signal No 1] which was then repeated by Admiral Fieldhouse to the MOD with a description of the battle damage as far as could be ascertained from the photograph.

Interim Summary

31. Although, presumably, the same photograph the position of the first crater on the FAA photograph, whose origin is not in doubt, differs from the first crater on the 'RAF photograph', whose provenance is confused by the inscription on the reverse – and yet they are the same photograph.

POST BLACK BUCK ONE

32. After the first Black Buck raid and before the second, ARA *General Belgrano* was sunk. This action, combined with the introduction by the British of a Maritime Exclusion Zone followed by a Total Exclusion Zone, influenced any intention to operate fast jets out of Stanley as the Argentine historians, Señor Santiago Rivas, and Señor Dr) Alejandro Amendolara explain: [Their accounts have been amalgamated.]

Damaged or not, the runway was not affected on its operations until the end of the war. To operate fast jets from it didn't mean only to extend the runway, but to have enough fuel for them, a storage for air-to-air missiles and the creation of dispersal areas, among other needs.

There was a ship, the 10,000 ton ELMA Rio Cincel under the command of Captain (Merchant Navy) Juan Carlos Trivelin, that sailed from Buenos Aires on the 3rd April with logistic supplies for the army and air force in the Falkland Islands. These consisted of six vehicles, 80 pallets of aluminium planks and 800 drums of JP1 fuel. She arrived on the 7th April and the AAF Construction Group No 1 were able to extend the 'parking' capacity of the airfield by 100%. The aim was then to extend the runway, not to deploy fast jets to the islands but to use the runway as a diversion or only to refuel after a sortie over the islands before returning to the mainland. A second merchant ship, ELMA Córdoba, sailed from Buenos Aires on 8th April laden with further logistic supplies plus another 231 aluminium 'planks', these for the runway extension. However she was delayed in Mar del Plata when the Maritime Exclusion Zone was enforced. Hoping still to make the journey to the Falkland Islands she moved to Puerto Deseado where she was detained by a collision with the dock: when she was ready to sail ARA General Belgrano had been sunk.



Photograph No 5
ELMA Córdoba – unladen at Puerto Deseado
(Credit Oscar Arredondo)

Interim Summary

33. That the runway extension was never possible was nothing to do with the RAF and the Black Buck raids but the imposition of a Maritime Exclusion Zone by the Royal Navy on 12th April. This was followed by the sinking of ARA *General Belgrano* by HMS *Conqueror* on the 2nd May and the extension of the Total Exclusion Zone to 12 miles from the Argentine coast on 7th May, after which no Argentine ship, naval or merchant, left national, coastal waters.

BLACK BUCK TWO

34. A second Black Buck raid took place over the night of 3rd/4th May with all the bombs missing the western end of the runway. Within hours of this second bombing mission an aerial photograph (Photograph No 6) was taken by Lieutenant Cantan in a *Sea Harrier* from 801 Naval Air Squadron. This not only shows the Black Buck Two bombs that missed the runway but also the Black Buck One bomb crater just off the south side of the paved runway and about halfway along as seen in Photograph No 3. This photograph No 6 was processed and analysed within an hour or so of Cantan landing back on board HMS *Invincible*. Its origin and authenticity have never been queried. Yet this photograph also differs when compared with Photograph No 1.

35. The bomb on the southern half of the paved runway in Photographs Nos 1 and 2 has disappeared in No 6 and in its place there would appear to be a faint white ring clipping but not straddling the centre-line. Yet the bomb crater in Photograph No 1 clearly straddles the centre-line. Thus it must be concluded that some manipulation of the 'RAF photograph' has taken place.

36. The origin of Photograph No 1 needs to be established. The only aircraft that were available to take such photographs in that time frame were the *Sea Harriers*, which retained an optical camera fit (F95) as standard for a multi role aircraft, or satellites. No RAF aircraft were available to take other photographs.



Photograph No 6
Taken on 4th May by 801 Naval Air Squadron following Black Buck Two

37. Photograph No 6 is also the photograph used by *Wikipedia* and **which no one has seen fit to replace.** [Our emphasis.]

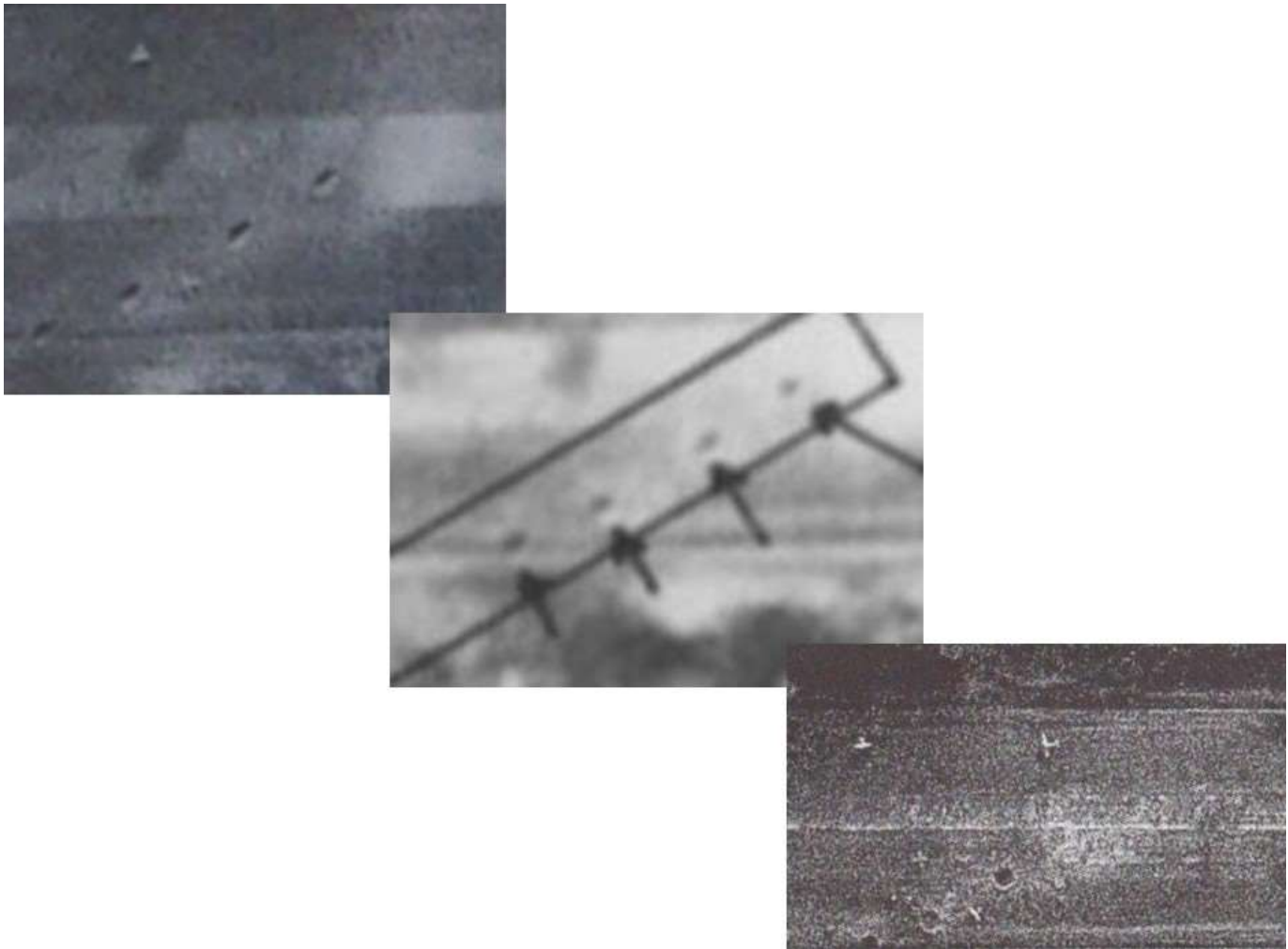


Photograph No 7 – enlarged from No 6

38. Photograph No 7 is an enlarged version of No 6 from which it is even more clear that there is one crater clipping the southern edge of the paved runway and no other extant crater on the runway following Black Buck One. The white circle towards, but not straddling, the centre-line is hardly visible. This suggests that the crater had been filled in.

Interim summary

39. The disparity between the FAA-sourced photographs and Photograph No 1 needs some explanation which we are unable to offer short of concluding that it has in some way been altered; it has certainly become more ‘fuzzy’ than the FAA original.



Composite Photograph No 8

From top left: FAA photograph taken on 1st May; centre, RAF-sourced photograph also taken on 1st May and bottom right FAA photograph taken on 4th May showing that the first crater has been filled in. The odd-man out is the RAF photograph (middle) sent by Dr Fopp.

AN ARGENTINE PERSPECTIVE

40. That same day, 4th May, Brigadier-General Mario Menéndez (the then Argentine military governor of the Falkland Islands) took his own ground-level photograph (Photograph No 9) of the bomb crater that clipped the runway. In an e-mail to Lieutenant-Colonel Ewen Southby-Tailyour in 2013/14 he explained that this crater was very deep and with no damaged concrete blocks as it had exploded on the grass and hard-packed earth on the south side of the runway. Debris had, he explained, been strewn across the paved runway as far as the centre-line; ‘collateral damage’ of a sort that was immediately exploited by the Argentine engineers.

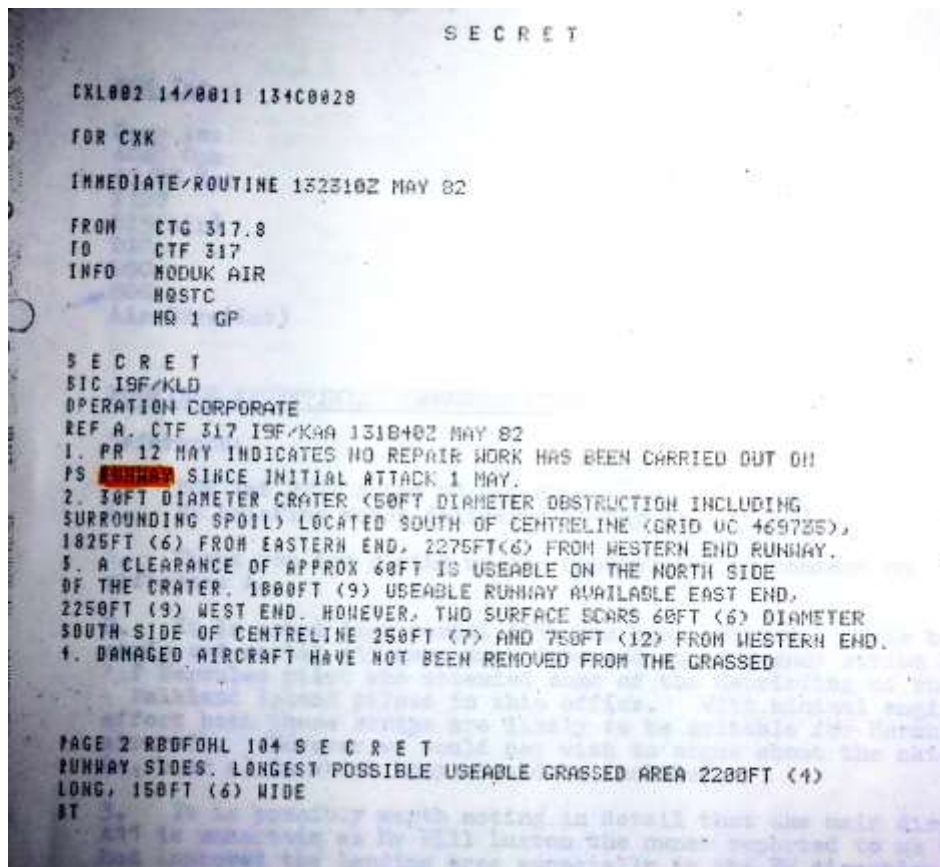


Photograph No 9
Taken on 4th May by General Mario Menéndez

41. In Photograph No 9 the paved runway is beyond the vehicles. This north-facing photograph, coupled with General Menéndez’s accompanying description, offers evidence that this crater is not on the paved section of the runway. The runway was constructed of 12 inches of crushed stone on a sand base, covered by four inches of concrete (then overlaid with asphalt, although this has to be confirmed). There is not much sign of that in this photograph. Either side of the paved runway the surface was hard packed earth topped with rough grass. These two strips each 180 feet wide along the runway’s full length were suitable for (although not constructed for) parking and the taxiing of light aircraft.

42. In an exchange of e-mails with Southby-Tailyour in 2013 the general confirmed that the photograph that he had taken of the crater was just clipping the edge of the paved runway and was the first bomb to hit: he made no mention of bombs either side of the runway or in the middle although he admitted that much rubble was spread unevenly across the paved area towards the centre-line. His statement is, though, at odds with that of Brigadier Luis Guillermo Castellano, Commander Air Group Malvinas. [See Paragraph 66]. As will be shown this rubble was enhanced to fool the British in an action described enigmatically by the general as: *Consequently, much subterfuge.*

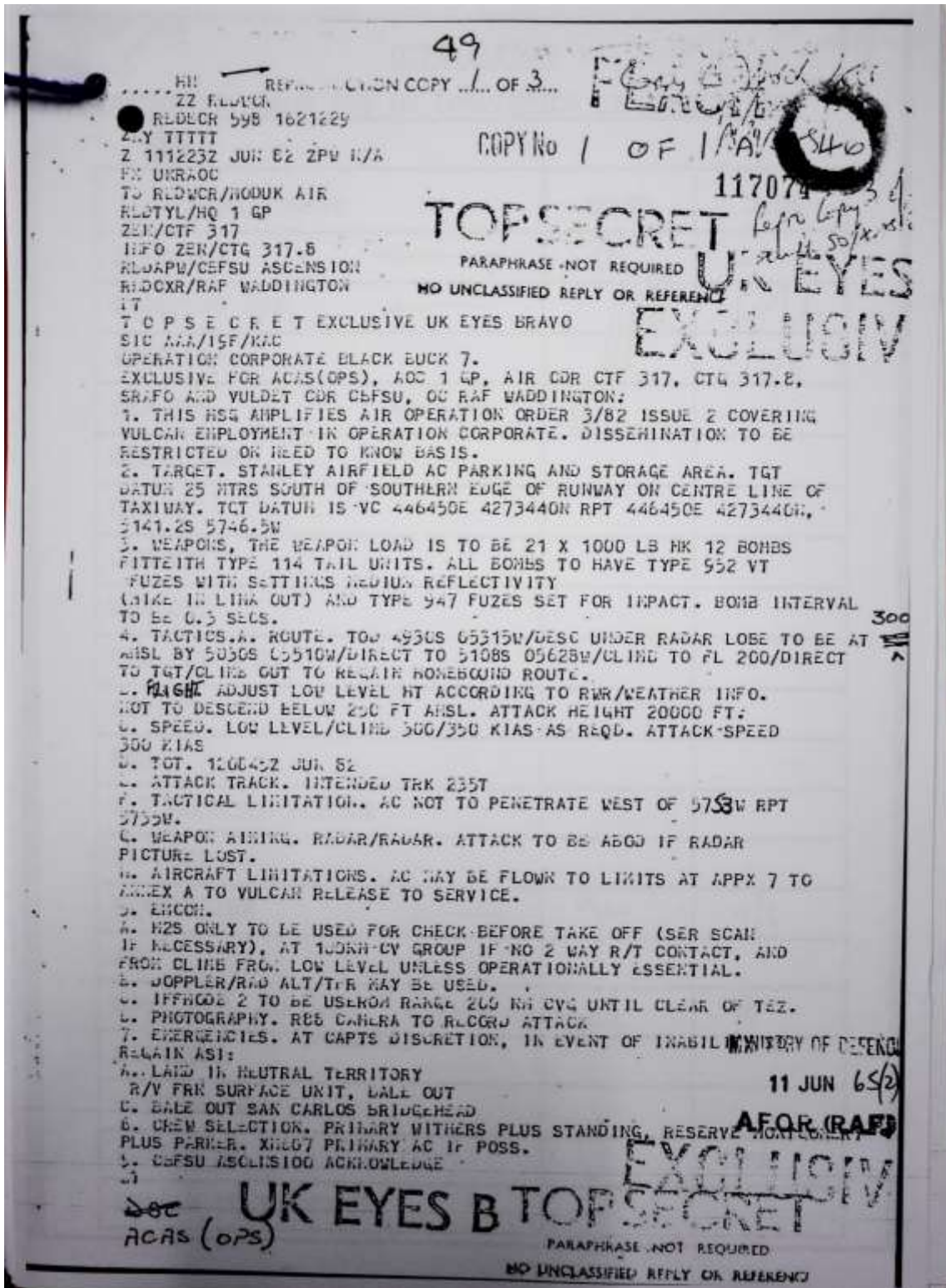
BATTLE DAMAGE ASSESSMENTS



Signal No 2

43. On the 12th May a further photo-reconnaissance flight was conducted by a *Sea Harrier*, as result of which Admiral Woodward was obliged to send Signal No 2 on the 13th May which suggests that he knew that the runway was still operational. He did though, as with the RAF MoD staff [see below] believe, initially, that the runway was only operational over each end and not down its full length. He, too, underestimated the Argentine determination to keep flying. Interestingly he notes that no repair work had been carried out, despite (below) subsequent Argentine insistence that it had.

BLACK BUCK SEVEN



Signal No 4

46. The 'final' operation order for Black Buck 7 was sent on 11th June (Signal No 4) giving the target as *Stanley airfield aircraft parking and storage area*. The fuses were to be set for air burst to avoid further damage to the runway in advance of British forces.



Signal No 5

47. On 12th June a signal (No 5) was sent from Ascension Island to the C-in-C at Northwood offering an optimistic *crew assessment* of the damage caused and stating that all bombs had *seem* to have detonated on target.

SECRET

TF10

CXF009 13/0151 16400179
 FOR CXF
 IMMEDIATE/ROUTINE 122355Z JUN 82

FROM CTG 317.1
 TO CTF 317
 MODUK AIR
 HQ1GP
 CTF 317.1
 CTF 317.1.1
 CTF 317.1.2
 RAF HADDINGTON
 INFO HMS HERMES

14

MINISTRY OF DEFENCE

2 JUN 82
6/1

AFOZ (R.A.F.)

SECRET

SIC 19F/KLD
 OPERATION SUTTON/BLACK BUCK
 4. CBF09 000/19F/KLD 121935Z JUN 82 (NOTAL)
 5. CTU 317-1.1 19H 122104Z JUN 82 (NOTAL)
 1. PR LIMITED BY CLOUD HOWEVER NO FURTHER DAMAGE OBSERVED. SUSPECT MISSED TGT
 2. FOR 317.1.1. PREVIOUS PR SHOWS AT LEAST 5 DAMAGED AC IN AREA PLUS 2 POSS DUMMY SHEPT WING AT EAST END OF STRIP
 BT

DISTRIBUTION 19F

CXF	1	DSC(AF OPS)	ACTION	(CXF)	1	DSC(AFDDO)
CXF	1	DSCYRON				
CXF	2	DOSSEC				
CUN	1	DOMS				

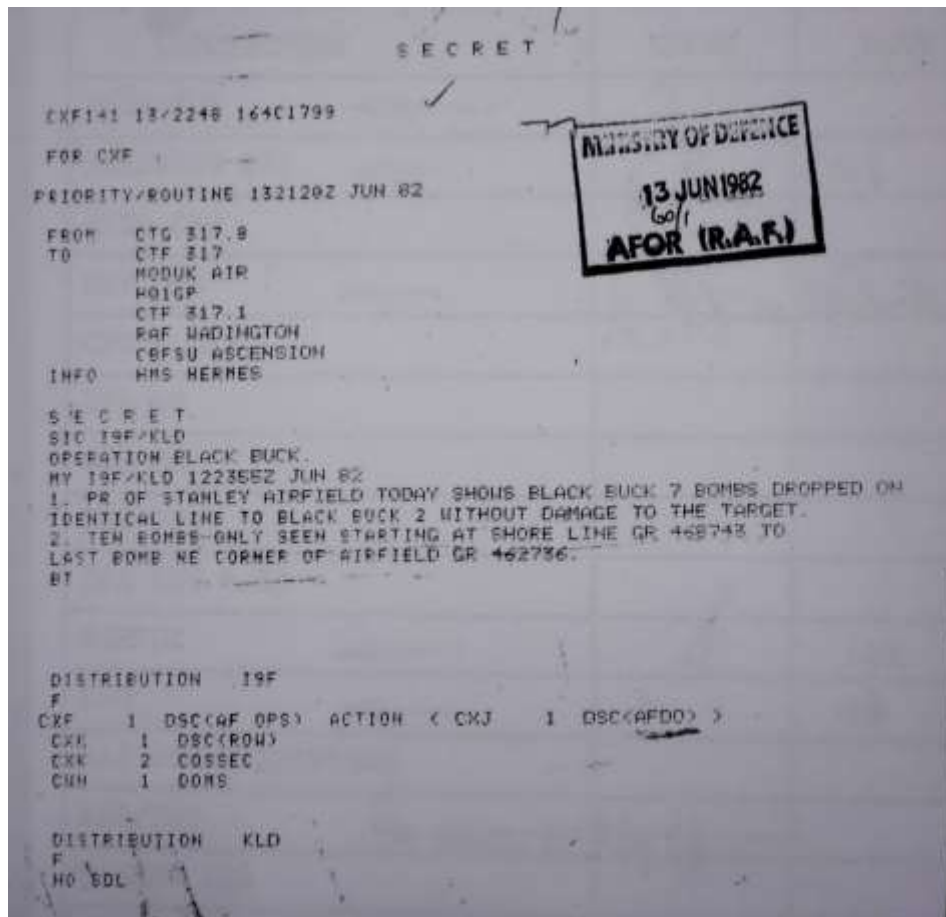
DISTRIBUTION KLD

NO EDL

*Copied to
Cdr's Account
UKL*

Signal No 6

48. This was followed on 12th June by a second signal (No 6) from Admiral Woodward expressing the concern that all the bombs were *suspected* to have missed the target.



Signal No 7

49. Finally, on 13th June, it was confirmed in Signal No 7 that all bombs had missed the target while expressing some doubt over how many might have actually detonated.

A ROYAL ENGINEER'S PERSPECTIVE

50. This ties in neatly with the view of Andrew Rastall who, in 1982, was serving with 49 EOD Squadron, Royal Engineers. He offers this narrative:

We conducted clearance work around the airport/runway area several times. Sometime in August '82 I was working near the runway and was using a very sensitive metal detector along with two pioneers were there to dig out anything I'd located. We were systematically searching the area at least several hundred yards to the north of the runway and west of the airport buildings. Towards the end of that day I got a very strong signal from a puddle. The water was dark brown and we couldn't see anything in it, at which point one of the pioneers pushed his spade into the water and hit something hard. Unless they've got a very high iron content, rocks don't generally register on metal detectors so I started to bail out the puddle with a discarded food can. As the water level dropped, the 'rock' turned out to be a 1000 lb bomb. The tail of the bomb had broken off and the cylinder of the brass fuse was clearly visible. The brass itself had oxidised and was dull but there were two small bright grooves cut into the edge of the cylinder, presumably where the pioneer had struck the thing with his spade.

Normally, we'd blow the thing in situ but it was one of our own and the MOD boffins wanted the fuse to find out why it hadn't detonated. Incoming air traffic was put into holding patterns while the OC and myself went to deal with the bomb. Once the fuse was removed and the bomb made safe the decision was made to blow it in situ immediately because planes were waiting to land. We had to bring up plastic explosive, det cord, detonator and an electrical firing cable. Having prepared the bomb for detonation we took cover behind a rock. We got covered in lumps of peat and something hard hit the rock we were sheltering behind - it turned out to be a large piece of shrapnel that I took home for a souvenir.

I've studied the photographs in your paper and have tried to position the UXB I found relative to the craters from Black Buck One. My thinking has been along the following lines: Basically, someone must have a record of the number of bombs dropped on that first raid. If the number of craters in the photograph supplied by the RAF can be seen to equal the number of bombs dropped then they've failed to account for the UXB I found. This would mean that one of those craters should not be on the photograph, i.e. too many craters for the number of bombs that actually detonated. Looking at the RAF photograph and counting from the 'crater' in the middle of the runway, there are four craters which appear to be relatively evenly spaced and then there's a longer gap between the fourth and fifth craters. The UXB I found was certainly to the north of the runway and to the west of the airport buildings and may well have been in the gap between the fourth and fifth craters on the RAF photograph. It could be that the UXB I found was part of a stick dropped on that third raid – a line of 'duds'? Assuming the fuse we removed from the UXB was sent back to the MOD it may be possible to find out in which raid that particular bomb was dropped if records have been kept of bomb and fuse serial numbers? If it turns out that it was dropped in the first raid then the only position it could have been was between the fourth and fifth craters on the RAF photograph. Assuming the original aerial photograph is of sufficient quality, it would then be a case of counting the craters made by the bombs dropped on that first run. If the number of craters equals the number of bombs dropped then someone will probably have some explaining to do.

ARGENTINE EVIDENCE

53. The Argentine military historian, Señor Mariano Sciaroni, has written:

*Black Buck One was an incredible story of planning and professionalism on the part of the RAF, but in my view, the only concrete effect was ... **publicity**. The Argentine Air Force did not modify its logistics operations due to the single impact, but simply instructed the pilots to use only one side of the runway. Nothing else. In that sense, Black Buck One did not meet its objective, not even partially. [Our emphasis.]*

52. Señor Sciaroni explained that two AAF C-130 pilots had written books about the war. Alfredo A. Cano wrote in his book *Recuerdos Transporteros*:

Fortunately, the accuracy of our former 1981 International Air Tattoo Judge Gordon Graham [navigator in Black Buck One's Vulcan] was not as good as his host performance; only one of the 1,000-pound bombs dropped hit the southern side of the runway. That has been one more reason to continue remembering him with great affection.

53. Señor Sciaroni again:

Besides the joke, for the C-130 pilots (according to their histories) the crater was not an issue at all in the planning stage. Also, remember the crater was not enough to prevent the runway's use by MB-339 jets.

54. In the publication *Malvinas - Testimonio de su Gobernador* (Carlos M. Túrolo, Editorial Sudamericana; Buenos Aires, 1983) General Menéndez is quoted as saying, between pages 120-121:

The runway had a direct hit that at first it was believed to render it useless, but later we were able to verify that it had not. Later, the Air Force men, led by Commodore Destri, did an excellent job of trying to fool the English into believing that the runway was really disabled. They used stones, paint, etcetera.

55. This might explain the faint white circle in Photograph No 6. It does not explain the centre-line crater in Photograph No 1: the only photograph of dozens, aerial or low-oblique, to show a crater exactly on the runway's centre-line.

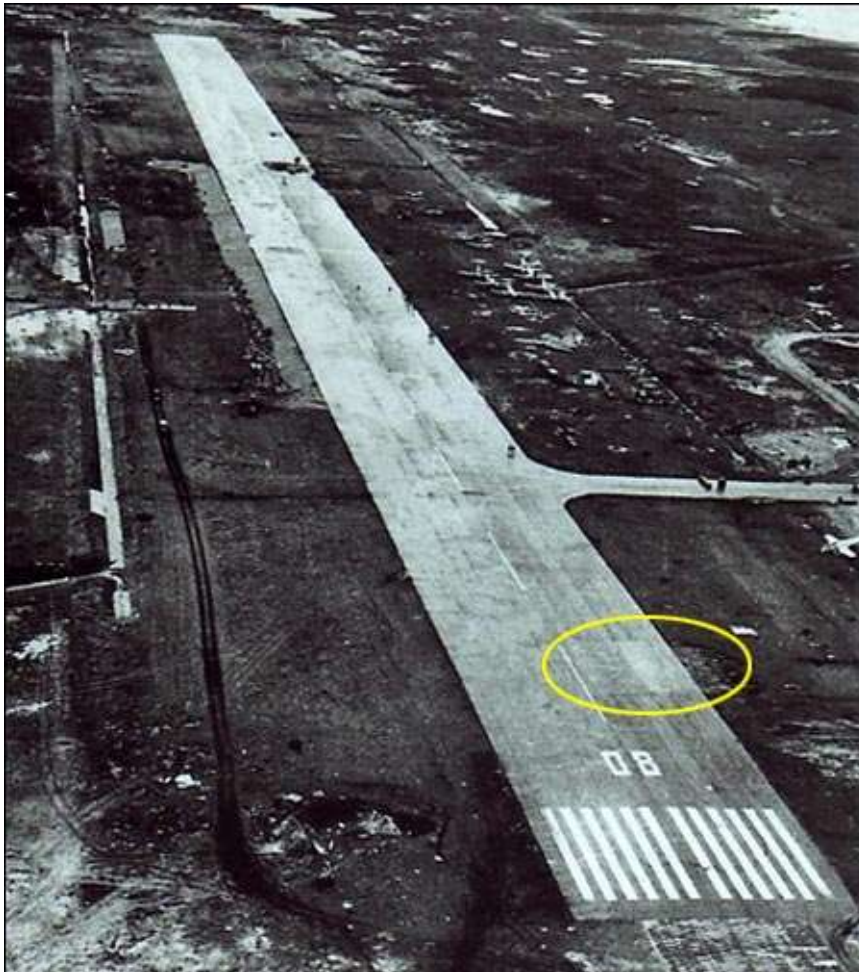
56. The general continues:

If I remember correctly, it was that night when in Buenos Aires among the news that were broadcasted, one was that the runway had not been affected by the bombing and could continue to operate, which is why the British later bombed it again. The English were always in doubt, as they say that according to aerial photographs the runway could not be used, at least with large aircraft. On the other hand, the news that came from Argentina led them to the idea that maybe the runway was in good condition.

57. ...and again:

Between pages 127-128: With the majors Buitrago and Doglioli to the airport area. It would be 1 or 1.30 pm. On the way, while we were crossing an isthmus [between The Canache and Surf Bay] from where the sea is very well controlled, we saw three white spots to the southeast. I commented to the majors: "Those are three English ships that are approaching to complete the task of the airplanes, they come for naval bombing". At the airport we could see the great destruction that was there: the planes, the sheds, the building ... anyway ... at that time there were no people to be seen anywhere, they were all in their foxholes or shelters, except for the defence personnel, not close to the place.

We saw the holes left by the bombs; the one that hit the track [no precise position given] had made a large crater and you could see that it had left a gap intact, but [the runway] was still full of stones so it was not known if the track would be usable or not. There were unexploded bombs, so they had to be very concerned. It had been determined already that the runway could be used and I already commented on the information that was released in Buenos Aires that the runway had not been damaged and was in good condition. This, related to the repetition of enemy air attacks on it, aroused a tremendous anger among the men, both from the Air Force and from all of us. [It would appear that the Argentinian armed forces had the same problem with their national broadcaster as did the British with the BBC.] The point is that when the news that was given on the track on the continent broke, there was an explosion of anger. At the command post, for example, where Brigadier Castellanos and the Air Force staff were, they said it was inconceivable....but the flights were restarted. This does not detract in any way from the effort of the Hercules pilots who arrived in Puerto Argentino [Port Stanley] or the naval Fokker pilots who also crossed, challenging the blockade, the weather conditions and the decrease in the runway operability.



Photograph No 10
(Credit AAF)

58. Photograph No 10 would appear to corroborate the above statement. Note no crater is straddling the centre-line. The crater caused by the one bomb that did hit the runway is quite clear suggesting that this photograph was taken before Black Buck Two by when it had been filled in. [See Photographs 6 and 7.] The significance of the yellow circle is not known: it does, though, mark the area known to have been overlaid with rubble. It is thought that this area might have suffered superficial scarring made to look much worse with rubble then, eventually, patched as shown.

59. In addition to General Menéndez's written description of the crater just clipping the runway sent to Southby-Tailyour along with Photograph No 9, the following comes from Vicecomodoro Alberto Vianna in an e-mail to Southby-Tailyour in 2013 and repeated in *Wings of the Malvinas. The Argentine Air War over the Falkland*. (Hikoki Publications, Manchester, 2012). The author, Santiago Rivas, corresponded for over two years with Southby-Tailyour on this and other aviation matters. Vianna, the first Argentine pilot to fly a *Hercules* to the Falkland Islands after Black Buck Two, says and wrote in part:

On 6th May the navigator had led me to the final approach to the runway. We saw the runway and went in to land, we saw there was a crater to one side of the runway so we landed on the other side and waited for the ambulances with our engines running....the engineer told me that the leading tyre of the right main gear had blown. We could take off but very carefully because the rubber was dangerous if it began to shred.

60. It is important to emphasise that his landing took place less than 48 hours after Photograph No 6 had been taken: yet no mention of a crater on the main runway. Vianna made it quite clear in a series of e-mails to Lieutenant-Colonel Southby-Tailyour, that had he seen the slightest sign of damage to the main runway - or had the control tower warned him of a crater, which it did not - he would have aborted his landing for which he, *used the full runway*. Laden with eight casualties Vianna took off at 1625 and landed safely at Comodoro Rivadavia at 1835. This confirms that the crater on the runway had already been filled in before this flight and thus before Black Buck Two.

61. On 7th May another C-130 landed with a payload of 31,750 lb (just under half the maximum payload – depending on the variant) and no mention of any crater by the pilot... and so the air bridge continued to the end (although there were to be interruptions due to the presence of *Sea Harriers* and bad weather). *Hercules* daylight flights continued until the 20th May, after which they were all at night. [See Photographs 17 and 18.]

62. In the book *Guerra Aérea en las Malvinas*, (by Benito Héctor Andrada; Emecé Editores, Buenos Aires, 1983) the following information was supplied by the Argentine Air Force:

Between pages 85-86: The Base Commanding Officer and his immediate collaborators were dedicated to verifying the effects of the attack, helping the wounded and taking them to the medical post. In a first impression, they had estimated that this could be a disaster. However, they immediately verified the opposite and all the staff regained their calm. The Vulcan's bombs had fallen on a trajectory oriented obliquely to the runway.

It was a kind of trail formed by impacts separated from each other by about thirty or forty meters and placed alternately, to the right and left, (ie in a zig-zag formation) of an imaginary line that was about a thousand meters long. Only one bomb, the first, had hit exactly the centre of the paved runway, but on one side. Of the thirty meters wide, it had disabled half with an impressive crater seven or eight meters deep and ten or twelve in diameter.

All the other bombs had "gone long," with respect to the target that was undoubtedly the runway itself.

One of them, fallen in the middle of the bivouac formed by the tents where the soldiers slept, showed part of its body, which emerged more than a meter from the ground where it was buried. It was nailed at a slight angle, and in contact with the side panel of one of the tents. Rotating near the tail, grains of explosive matter were visible within.

There were sixteen impacts from the Vulcan bombs, but only fifteen craters. Only fifteen craters because there had been no more than fifteen explosions. The bomb dropped among the soldiers had not exploded.

[page 166] *The pilots prepared for landing in Puerto Argentino [Port Stanley]. They knew they could only use half the width of the runway, the fifteen meters on the north side, because the other half, on the south side, was disabled by the crater of a bomb dropped on May 1. Its edges were dangerously close to the centre-line of the track. [Although, according to Brigadier Luis Guillermo Castellano in Paragraph 66, it had been filled in. Nevertheless it was considered sensible to avoid landing too close.]*

63. In *Malvinas - Otras Historias* (by Rubén Oscar Palazzi, Editorial Claridad; Buenos Aires, 2006) Brigadier Luis Guillermo Castellano, Commander Air Group Malvinas, states:

Between pages 42-43, In the early morning of May 1, we were resting next to our Command Post, when a deafening thunder lifted us off balance. I immediately contacted Commodore Destri, who was the Commander of the Military Air Base Malvinas, and he laconically informed me that a Vulcan had probably bombarded the runway. The magnitude of the violence of this apocalyptic and surprising attack was consistent with the desired effect: neutralizing the airfield runway, a vital point of communication between the islands and the mainland. Its tremendous destructive power was such that it is enough to imagine that only one of the craters measured 12 meters in diameter by more than 6 meters deep. The assumption that we would be the enemy's first target had been met, but the intensity and shock of its effect was unimaginable.

After overcoming the initial surprise, still perceiving the acrid and penetrating smell of explosive that remained in the air, the men began to react positively and even recklessly, to the point that efforts had to be made to control the contagion of heroism in them, which were exposed in the dark, to help the wounded comrades and subordinates, being guided only by the laments and exposing themselves to the explosions by delay.

The enemy's intention to break the will of our forces to fight on that same day was very clear, but evidently, it did not succeed. We dominated the anxiety, until the first light of day, to allow us to verify that only one bomb had hit the track, thus maintaining its operability.

Then we found that 21 bombs of 1,000 pounds each (454 kilograms) had been used in the attack and that when they were dropped late they missed the track, but reaching the bivouac where the troops slept until the night before, miraculously only perishing the two soldiers on duty.

Page 129: *On May 1 at 0440 am, without any prior warning, an Avro Vulcan bomber plane, heading NE / SW, dropped a trail of 21 bombs weighing 1,000 pounds (454 kilograms) each, which exploded in less than 10 seconds. **The first hit the side of the runway,** opened a crater twelve meters in diameter, and rendered useless fourteen meters of the thirty of width the runway had. Fifteen of the bombs fell in the area of the bivouac, causing great damage to the precarious facilities. The remaining bombs fell long and exploded in the waters of the bay. [Our emphasis.]*

Between pages 135-136 [after the unsuccessful Black Buck Two raid] *Someone said: 'what if we help the English break the track?'. So we decided to build two simulated impacts on the track so that the Vulcan would stop shaking us and the result was successful.*

*After the second Vulcan bombing, it was sought to make the enemy believe that had achieved his objective. For this, two craters were simulated similar to the real one **already repaired.** [The Black Buck One crater on the runway.] A later English aerial photographic reconnaissance (publicly released), revealed that the runway was affected with three bomb hits, for which they assumed that our Hercules were landing and taking off on the strip of land adjacent [packed earth, not the paved runway] to the runway, when in fact they did so in the remaining sixteen meters of width. [Our emphasis.]*

64. Lieutenant Carlos Centeno had served as a Commando in the Argentine Forces. Later he established a small company making TV documentaries on the wildlife of Argentina and the South Atlantic. On the invasion of the Falkland Islands, he offered his services as a war correspondent and with a team of three volunteers from his TV Company spent the duration of the conflict recording the action on the Islands. Concerning the air war, he has provided the following information:

I did my job and 'with a little help of my friends' (3 TV workers also volunteers) recorded a 3 hours documentary as war correspondents, that aired in 1983. It's also true that as I was a keen radio-amateur, I was excited with an infantry radar "Rasit" which had a 30 Km range capacity. So every night I detected the warships that were firing from 14 km away from shore and that was useful as early warning and helped save many lives. I tell you this in order for you to understand that because of my earlier service as an Argentine Commando I was free to move all around the defensive positions without asking anyone's permission.

The truth I can tell you about the airport runway, which not only I visited but also filmed and got photos, is that it was fully operational until the last day of the war. Air Force C-130 Hercules and Navy F28 Fokkers normally operated every night and did so until the early hours of June 14th.

I remember that night well. It was when my 3 TV workers were evacuated from the Island on the last Hercules flight around 3 am; taking with them all the recorded material and equipment. I remained as a POW until the people of the Red Cross and a very decent Parachute Regiment colonel let me go on June 18th.

*Thanks to my ability to move freely in pursuit of recording the conflict, I spent many days and nights on the airfield. Before dawn, the military authorities would make use of bulldozers and other heavy equipment **to create simulated big holes] - craters - on the runway using earth and stone circles.** The runway was fully operational all the time, except one or two times that Marine Corps engineers had to disable an unexploded, retarded, bomb [delivered by a Sea Harrier] that remained close to the runway. I think to be honest when I say that really the Vulcan's bombing on the runway did not significantly affect the actions.[Our emphasis.]*

65. Lieutenant Centeno also stated:

I walked the full length of the runway a few days after the opening of hostilities with Black Buck One and that there was no visible sign of any crater damage on the runway's centre-line.

66. In forwarding the above extracts the Argentine military historian, Alejandro Amendolara, says:

I hope the extracts are helpful for the paper. What emerges clearly from them is that the runway was actually hit, not in the centre, but just to the south of the centre axis, in the runway. And that was the crater filled by the AAF personnel the next day and covered up with rocks and mud, for the aerial photo reconnaissance that followed over the next days and during the rest of the conflict.

Also, it is interesting the Woodward's signal attached [Signal No 3] dated May 26, in which he "urgently requires" for Laser Guided Bombs kits "to ensure urgent neutralization of Port Stanley Airfield". Evidently, he knew the airfield was still operative.

67. The Argentine aviation historian, Santiago Rivas, also wrote, in August 2020,

Regarding the Black Buck raids the runway was fully operational until the end of the war. I not only talked with Vianna a lot (and his entire crew, as we are writing their story), but also with Pucará and MB-339 pilots who flew from there until the end of the war and they all talk about the simulated craters and a real one on the side that didn't affect the operations. In any case, they only used the northern side of the runway, which was wide enough for the operation of the Hercules, Fokker F28 and all the smaller aircraft, which flew until the last night of the war.

I had never seen any clear picture of a big crater inside the runway, but I have a couple of pictures, unfortunately of not good quality, which show what could be some damage to the runway. But the pictures are not clear enough to determine if they were real or fake craters. At least two fake ones were made, close to the taxiway, one on each side of it, being the darker areas on the picture below.



Photograph No 11
Although watermarked by Alamy this was taken by the AAF on 7th June



Photograph No 12
Although watermarked by Alamy this was taken by the AAF

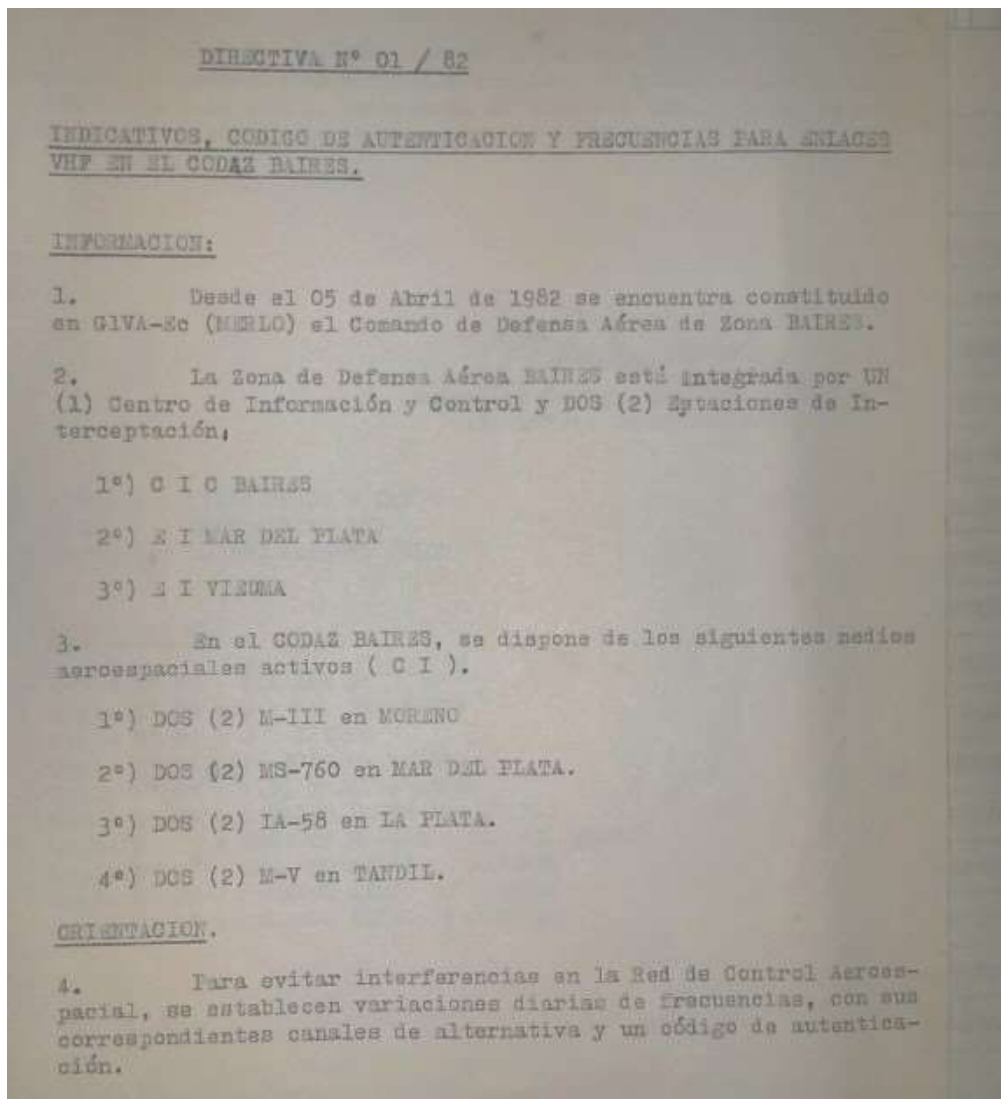
68. In Photographs Nos 11 and 12 the crater that clipped the southern edge of the runway is clear. There is no hint of a crater straddling the centre-line.

THE ALLEGED MOVEMENT OF ARGENTINE AIRCRAFT TO THE NORTH

69. It has been claimed that as a direct result of the Black Buck raids Argentina moved a number of fighter aircraft to the north to protect their major cities, thus reducing the air threat to the Task Force. We now know that no such significant moves took place. The aircraft assigned to the defence of Buenos Aires had already been designated by mid-April in Buenos Aires Defense Scheme (Order 1/82), dated April 15, 1982 [Document No 1 below]. This has been sent to us by Señor Mariano Sciaroni who also states:

*Only a handful of aircraft remained on alert in the vicinity of Buenos Aires, to face any incursion from the sea or from Chile: two Mirage III, two Dagger, two MS-760 and two Pucará. **The order was not changed after May 1**, so it cannot be thought that a number of aircraft would be tied up by a possible Vulcan bombing. [Our emphasis.]*

I don't know what they were going to do with the Pucará and the MS-760 (surely, not intercepting a Vulcan...). One of those Pucará crashed during the war, apparently the pilot was doing unauthorized stunts.



Buenos Aires Defense Scheme (Order 1/82), dated April 15, 1982

70. Señor Santiago Rivas confirms these facts in an e-mail dated 18th October 2020:

The reality is that, as Alejandro and Mariano have detailed, there was not much concern of an air strike by Vulcans to Buenos Aires. The Mirages and Daggers that remained at their bases in Moreno and Tandil were the two seaters, so, with less combat capacity and, in the case of the Mirage IIIs, no radar. Anyway, they performed CAPs over the city (I remember seeing them flying very high every day, despite being a kid). Also, the pilots that were at the bases were the less experienced ones, as all the others were deployed south.

As the Navy had also a couple of ships deployed on the mouth of the Rio de la Plata, any attempt to bomb Buenos Aires will be warned at least with enough time (not less than 30 minutes) to scramble a pair of Mirages (which were at less than five minutes of flight from Buenos Aires) and guide them to their target before the Vulcan reached Buenos Aires. Also, a night bombing of the city would cause more civil casualties than military ones (most probably, none), so should have been a big political setback for the UK and, most probably, a bigger support to the war and the military government by the Argentine population.

REPORT OF PROCEEDINGS
by
AAF GRUPO I CONSTRUCCIONES

71. It may not have been known at the time of the first Black Buck raid that the Argentines had foreseen an attack on the Stanley runway and were standing-by to repair any damage. At the end of hostilities Major Raul Oscar Maiorana, the Commanding Officer of the AAF's airfield construction unit, *Grupo I Construcciones*, wrote in his Report of Proceedings:

The bombing attack [on Stanley airport's runway] on 1st May 1982 affected the runway causing damage to the surrounding taxiways [presumably, according to Photographs Nos 3 and 6 which show two craters on the hard-packed earth either side of the main runway, this is the 'taxiway', used also for parking] producing a crater of 18 m diameter and 6-8 m in depth [with damage/rubble] on the surface in the surrounds [to the runway]. Patched up so that repair of the runway could be carried out. 80% of plant was used to clear the splinters. 20% had been totally destroyed by the air attack - loss of heavy vehicles and a motor grader.

Three simulated craters were constructed on the main runway with the aim of deceiving the enemy before possible armed reconnaissance missions (took place). [Interestingly, no mention of a direct hit on the runway - except splinters - but only on the taxiways. Three dummies are mentioned whereas elsewhere two and the 'real' crater are mentioned. We are inclined to believe the above although we accept that there could be cause of confusion. Either way, the runway remained operational.]

72. There can be no doubt from the evidence in Paragraphs 82 - 88 that the *Grupo I Construcciones* were extremely proficient and professional in their task: especially so considering the lack of equipment and ‘building’ material. The ROP goes on to state:

Although the task of Group I of Constructions is clearly specific [the maintenance of] the execution of runways and platforms and everything inherent to the airport works, other non-specific tasks were carried out... The requirements [carried out] were satisfying. Regarding the suitability of the personnel, it was possible to detect that they were [ideal] in the handling of the elements for their use.

FRENCH EVIDENCE

73. Although this might be considered circumstantial evidence a French report published in the learned *La Guerre des Malouines* (Édition Larivière, Rennes, 2002 and known for the exceptional accuracy, clarity and research of all of its titles) states that:

The effect of the string of 21 bombs of 450 kg had very questionable results.

74. It goes on to display a photograph of unknown origin that shows a number of damaged areas none of which are on the main runway. Photograph No 13 has this caption:

Aerial photos of the Falklands aerodrome in an attempt to take stock of the raids. Despite the tons of bombs the ‘piste’ remained usable until the end of the conflict.



Photograph No 13

UNITED STATES EVIDENCE

75. Although the following is not a firsthand, eyewitness account it is instructive and was published just two years after Operation Corporate. Because Operation Corporate was, overall, a resounding amphibious success the United States Marine Corps took a very close look into the lessons learned.

76. On 2nd April 1984 Major Walter DeHoust, of the USMC Command and Staff College wrote a paper headed *Offensive Air Operations of the Falklands War*. He concluded that:

*The most critical judgement of the use of the Vulcan centres on the argument that their use was "...largely to prove (the air force) had some role to play and not to help the battle in the least." This illustrates the practice of armed services to actively seek a "piece of the action" when a conflict arises, even if their capabilities or missions are not compatible with the circumstances of the conflict. Using Black Buck as an example shows that **the effects of this practice can be trivial and the results not worth the effort (nor the fuel) involved.***

*However, the success of Black Buck can be at **best described as minimal.** The seven attempted missions included three aborts, three of undetermined results and one of minimal success – the first. **The runway was continually used by Argentine C-130's until the end of the war. The Argentines would leave the runway covered with piles of dirt during the day causing British intelligence to surmise that repairs were still in progress.** This deception misled the British as to the condition of the airfield and the success of their raids. [Our emphasis.]*

FALKLAND ISLANDS EVIDENCE

77. When the Argentine forces invaded the Islands and took over Port Stanley, Police Officer Fred Clark was serving as one of the four town police officers. He and his colleagues remained under close arrest in Port Stanley throughout the conflict. Although restricted in movement he was able to monitor all operations closely. His evidence concerning the bombing of the airfield is as follows:

The first raid did not do enough damage. They were still flying the next day, I remember that. Don't forget the Argies built moveable craters that were put on the runway when not in use and removed them only when flying operations required it.

BRITISH EVIDENCE

78. Commodore Clapp (Commander Amphibious Task Group in 1982) has written about witnessing the unease felt at the time among senior RAF personnel that all had not gone quite according to plan: [It is not clear which Black Buck raid this was.]

When we were in Ascension I sat with the Group Captain listening to one of the raids. He told me he was unimpressed by their aircrew as one raid failed to close their cockpit canopy and turned home while another screwed up on some other event which I cannot remember. Probably a navigation error. [Or, if Black Buck Seven, the incorrect fusing of the bombs?]

Air Marshal Sir John Curtiss who was AOC Coastal Command and Air Component Commander for Operation Corporate in Northwood also admitted there were failings from lack of training but hoped the Argies would accept the Vulcans could bomb their mainland if it came to that. They may have had a degree of deterrence but how much is beyond me and, I suggest, Dr Fopp.

79. Captain Peter Hore, Royal Navy (Joint Logistics Officer Ascension Island in 1982) has added this vignette covering Black Buck One which suggests much the same as above:

My recall of the first bombing is sitting in the CBFHQ tent on the afternoon afterwards, [1st May] when we had no Battle Damage Assessment of what the single Vulcan over the target had achieved. The senior RAF officer had briefed that the mission had been fully successful, but I gathered that that only meant a singleton a/c had reached the target area and all had returned.

Present in the tent were Group Captain J Price RAF and myself. In came Don Coffey, the civilian PanAm manager who ran the American facilities, and he was holding an envelope or something similar in his hand. He began to speak to Price and showed him something.

After a few minutes of hushed whispering at the top table, I heard Price raise his voice and start shouting. I don't remember the exact words, but Price first accused Coffey of being in possession of misleading propaganda, then of being in possession of classified information, and then he threatened to have him court-martialled.

However, I quickly gathered that Coffey had been sent from somewhere in the USA a satellite (or U2?) photo of Stanley airfield, and Coffey had dutifully brought it in to show Price. Price's anger was based on his refusal to believe what it showed. On reflection, I don't think that Coffey knew how poor our (British) intelligence was and that we didn't already have this info. It was however the first visual intelligence we received on Ascension Island of Black Buck. Shortly afterwards both men left the HQ tent, Don was red-faced and clearly very angry, Price in a squeal of tyres.

I learned that evening via Coffey's girlfriend, who was the headmistress of the Cable & Wireless school, that a friend of Coffey, maybe a brother-in-law, worked 'stateside' somewhere else in PanAm or maybe NASA and he had obtained a satellite photo of the airfield clearly showing Beetham's one-bomb and had sent this to Coffey – or maybe it was a deliberate leak by our friends?

80. It is quite feasible, indeed most likely bearing in mind Price's reaction, that the photograph Don Coffey had given Price, showed that no bombs had caused such damage that the runway was unusable.

81. At this time the RAF staff in the MoD appear to have been muddled over the Black Buck battle damage assessment.

82. Nearly three weeks after Black Buck One a Group Captain Crwys-Williams (DI3 Air) wrote a 'SECRET' paper for, Air Chief Marshal Sir Michael Beetham, the then Chief of the Air Staff (Reference: D13 (Air)/6/2 dated 19 May 82) this followed an earlier briefing paper (dated 16th May) by the same author for the CAS on the status of Port Stanley airfield. In the latter paper in Paragraph 5a under the heading DAMAGE ASSESSMENT it is stated that: *there are 3 x apparent craters, one on each side, one on the runway.* Yet no photographs have ever shown craters from Black Buck One on each side of the runway. Even the 'RAF photograph' shows no craters to the north of the runway. In Paragraph 6a of the same paper it is stated:

Vulcan – A single crater, with first bomb halfway down runway just south of centre. Remaining bombs to SW without further damage over 1000m run. Yet in Paragraph 5a Crwys-Williams talks of: One on each side of the runway. Which is it to be?

83. Diagram No 1 from the same RAF paper ties in with most Argentine statements. However, unaware of the Argentine determination to continue flying, it erroneously suggests that only half the runway in each direction was usable.

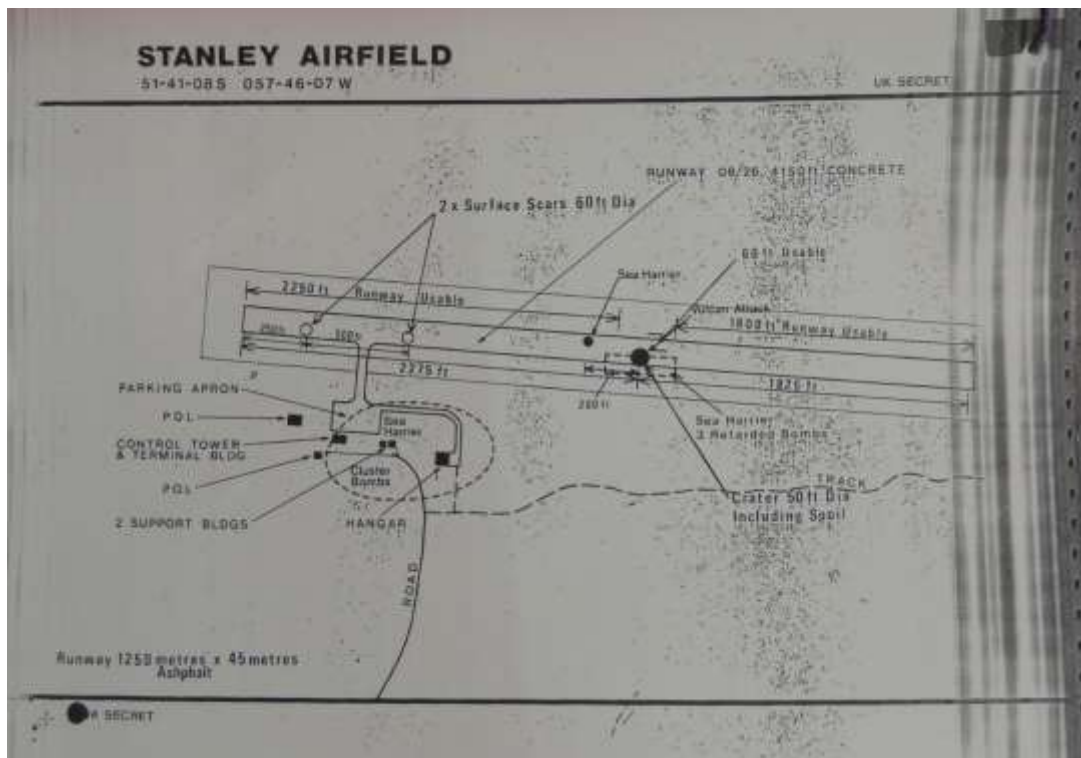


Diagram No 1

84. Soon after hostilities had ended, and before the Royal Engineers had started work, a number of interested parties inspected the runway with the express purpose of establishing any, or no, damage. Rear-Admiral Sanders (then a Commander and Rear-Admiral Woodward's Staff Officer Operations) accompanied by Major-General Moore and Rear-Admiral Woodward, Commander Gedge (CO 809 Naval Air Squadron), Major Norman, (lately OC Naval Party 8901) and Lieutenant-Colonel Southby-Tailyour, (OC NP 8901 1978-1979) all came to the same conclusion. There was no sign of any significant damage to the runway which suggests that the Argentines had been highly successful in their repair work on the paved runway or there never had been a crater on the runway.

85. Rear-Admiral Jeremy Sanders:

I walked the runway on 17th June with General Moore and Sandy (Woodward) and my recollection matches Southby-Tailyour's.

86. Commander Gedge again:

The usable part of the runway is of course the centre part, just a foot or two wider than the white threshold markings (piano keys) at the ends: the first bomb of the stick of 21 (Black Buck One) landed just off the very edge of the usable runway as we can plainly see and was easily filled in.

I walked slowly down the entire length of the runway with the late (Commander) Mike Cudmore on 16 June 1982 and it was difficult to see any signs of the filled-in crater. There was, however, a dummy crater on the threshold of runway 08 (top end of Photographs No 14 and 15 below) where debris had been shovelled onto the runway to make it look as though there was a crater. I prodded this with a stick to find a pristine surface beneath.

87. Later Commander Gedge was to write

The runway was intact apart from the dummy crater at the western threshold, just in from the piano keys on the southern side. I was also at the airfield on 17 June but I think the runway inspection was on the first day.

I cannot recall any sign of the crater on the runway itself so, if it had been there, it must have been filled in very promptly after BB1 - and before the Cantan photo on 4 May. The 4 May photo does show some signs of discolouration closer to the runway centreline but we have always thought this was either fake or the result of one of the other (I understood to be 228) explosives that were 'thrown at the airfield by one means or another.

88. This ties in with the comments above by Comodoro Héctor Luis Destri, Commander Military Air Base Malvinas as well as historian Alejandro Amendolara both of whom state that the crater was filled in immediately and a false one 'constructed' more towards the centre-line but not quite as central as the one in the 'official' 'RAF photograph'.

89. Lieutenant-Colonel Southby-Tailyour who commanded Naval Party 8901 in the Falkland Islands 1978-79 and who was with the Task Force in 1982 has written:

At the end of the campaign, on 23rd June [the day the Royal Engineers had completed enough of their work to allow a Hercules to land the next day.] I drove the length and breadth of the runway with Ian Strange, a Falkland Islander and internationally-acclaimed ornithologist who knew the runway well, in his Land Rover. Up and back. No sign but plenty of craters to the south and shallow scores either side and on the tarmac (Harriers?) filled in. One small hole that could have been a bomb crater. I had driven up and down the runway many times in 1978-9 as I was then responsible for its security, thus I knew what the original surface looked like.

90. Major Mike Norman, OC NP 8901 in 1982 and, subsequently, OC Juliet Company, 42 Commando during the campaign:

Later that day, the 15th June, [Prior to the Royal Engineers' recce.] having acquired an Argentinian Mercedes I drove to the airfield to see:

a. How the PoWs were progressing.

b To view the damaged runway which I had last seen on 2 April.

The runway was undamaged apart from several small canon holes. There were a couple of large craters in the soft ground but absolutely no damage to the hardstanding or any sign of recent repair. The runway was exactly as I remembered it, but not so the airfield. I drove up and down the runway several times and then returned to my disarming duties.

91. Lieutenant-Colonel Roger Blundell (an aviator) then a major, was the Fleet Royal Marines Officer on Admiral Sir John Fieldhouse's staff who worked closely with the three service commanders at Fleet Headquarters, Northwood, including Air Marshal Sir John Curtiss the Air Component Commander. Lieutenant-Colonel Blundell's evidence corroborates that of Commodore Clapp who also spoke to Air Marshal Curtiss:

Having achieved the flight there was indeed only one hit on the runway and that on the edge and therefore did not in any way stop the Argentinians using the runway as they wished with aircraft types appropriate for the shortish length.

Not mentioned, so far, was that after Black Buck the Argentines put piles of mud not only around the one hit but also thoughtfully positioned further along the runway to give the impression that much more serious damage had been caused than was the truth and even they could not use the runway, which was not true.

Interim Summary

92. We have four British eyewitness accounts of the state of the main paved area of the runway all of which support the view that there was no major damage to the paved area that had been left unfilled in. These have to be taken into account along with the evidence of Lieutenant Carlos Centeno. Conversely, we have no eyewitness accounts offering a contrary view.

FURTHER PHOTOGRAPHIC EVIDENCE

93. Photograph No 14 has been used by others to show that a 'Vulcan's bomb hit the runway'...but this is not a 1000 lb bomb crater but rubble, as mentioned by Commander Gedge and Lieutenant-Colonel Blundell, on the western end of the runway. It's juxtaposition with the control tower indicates its position as being to the north-west whereas the one bomb that clipped the runway was to the north-east. Even if this is not rubble then the only other credible explanation is that it is damage by a *Sea Harrier* and was easily repaired before Alberto Vianna landed his *Hercules* along the northern side of the runway.



Photograph No 14
Credit AAF



Photograph No 15
Credit AAF

94. In Photograph No 15 of the whole runway, the bomb that clipped the paved portion can just be seen on the right in the distance but no sign of anything towards the runway's centre as it either did not happen or was placed there by the Argentines - or it had already been repaired. There is no hint of a centre-line crater. The dummy rubble is clear in the foreground on the right side of the paved area.



Photograph No 16
Credit AAF

95. No sign of any significant runway damage in Photograph No 16 taken before the end of hostilities.



Photograph No 17
Credit AAF

Alberto Vianna taking off safely towards the east in his *Hercules* TC-65 on 6th May along a clean-looking section of the runway (being chased, in vain, by a late ambulance!).



Photograph 18

Credit AAF

An Argentine *Hercules* landing safely on Stanley runway post Black Buck Two

REPAIRS

96. The Royal Engineers began their survey on 17th June and in Excerpt No I (below) of the Royal Engineers' Report of Proceedings there is mention of only one *Vulcan* crater on the runway.

DAMAGE TO THE AIRFIELD
The Argentine Forces surrendered on 14 June 1982 and the damage was initially assessed on 17 June 1982. The detailed reconnaissance took place over the next two days amid the several thousand POWs who had been concentrated onto the airfield. The main damage was:
(a) *Craters*. There were five craters on the runway, the details of which are included in Figure 1. Cross section profiles showing the heave around the Vulcan Crater are given in Figure 2. The enemy had also placed earth on the runway to represent craters.
(b) *Scabs*. There were over 1000 scabs, the average size of which was 350mm in diameter and 30mm deep. The scabs had largely been caused by shrapnel, machine-gun fire and debris.

Excerpt No 1

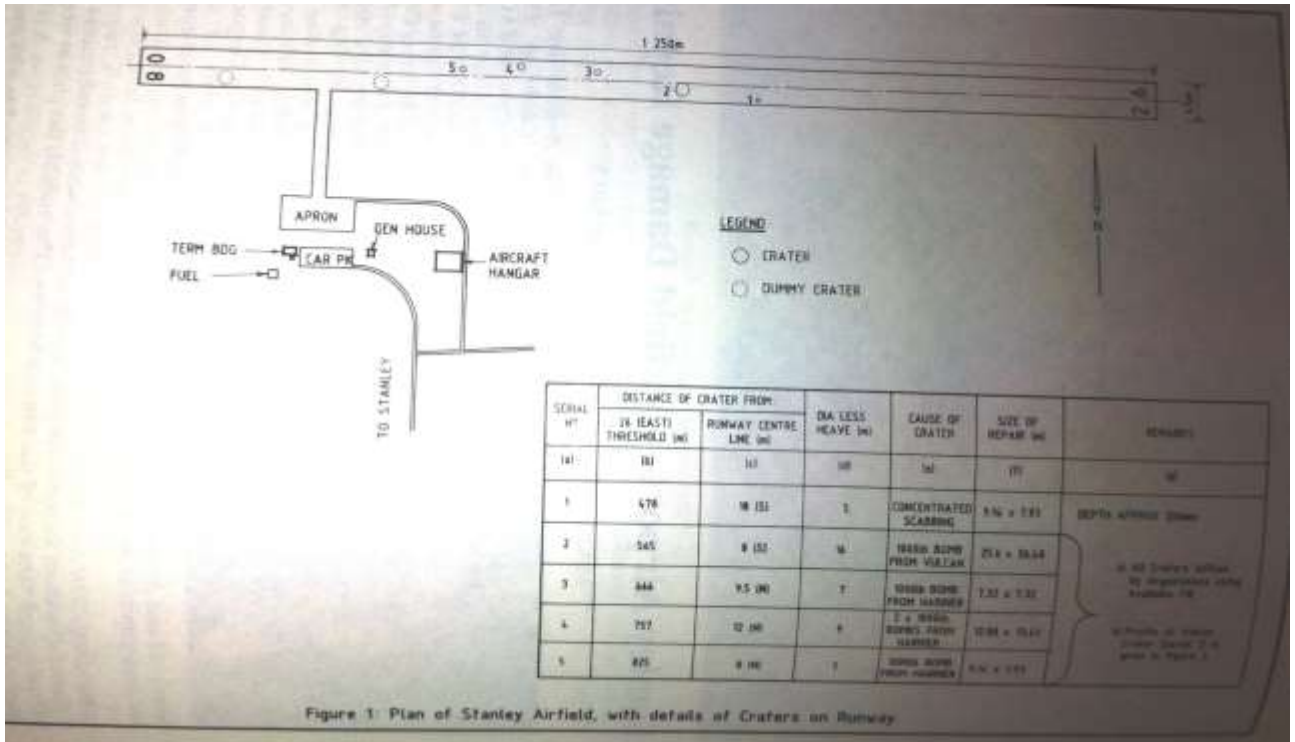


Figure 1: Plan of Stanley Airfield, with details of Craters on Runway

Excerpt No 2

97. Excerpt No 2 is the Royal Engineers' chart of the runway damage as found on the 17th June and corroborates the RAF Diagram No 1 [above] as far as the position of the one *Vulcan* bomb is concerned. The dummy craters are shown as such here but are depicted as 'surface scars' in the RAF's diagram. General Menéndez's *subterfuge* had worked!

98. In Excerpt No 3 (below) we show the only photograph we have seen of a close up, ground view of the one crater on the runway. The main crater can be seen towards the left with rubble spread (we believe, from Argentine statements) by hand towards the centre-line.



Excerpt No 3

99. The first British *Hercules* landed on the runway on 24th June just seven days after the first engineer recce.

SUMMARY

100. We have shown that the Black Buck raids played no part in the Argentine decision not to operate fast jets from Stanley runway and we have shown that Black Bucks Two and Seven missed the target. Black Buck One hit the southern half of the runway with one bomb allowing flying operations, including the *Aeromacchis AM-339* fast jet fighters, to continue along the full length of the northern section of the runway.

101. We have offered visual and written firsthand accounts all of which - British, Falkland Islands, French, American and Argentine - state that no significant bomb damage could be discerned on the centre-line nor on the northern half of the paved runway. We accept that there was superficial damage from *Sea Harrier* strikes. We show the original FAA photograph taken just a few hours after the Black Buck One raid which shows one bomb crater on the southern half of the paved of the runway. We also show the FAA photograph taken a few hours after the Black Buck Two raid which shows no crater on the paved runway, but a white circle closer to the centreline. We have General Menéndez's photograph of the nearest crater to the runway and his (probably vague) description of its position and we have Vicecomodoro Vianna's description of landing his *Hercules* onto an intact runway, apart from well-repaired damage on the southern edge.

102. Conversely we have not seen one RAF eyewitness account, firsthand or written, that supports a bomb straddling the centreline of the runway but we do have one 'RAF photograph' showing a bomb crater straddling the very centre of the runway. Unfortunately, we have no clue to its origin although it does appear to be a variation of the original, and much clearer, photograph taken on 1st May.

103. Across the three Black Buck bombing raids an estimated 1,000,700 gallons of fuel were used and 63 x 1,000 lb bombs were dropped with just one hitting the southern half of the runway.

104. We have shown that there was no re-positioning of Argentine aircraft, as claimed by the RAF, following the first Black Buck raid.

CONCLUSION

105. The first and most evident conclusion is that Photograph No 1, sent to us by a RAF historian, is not genuine. Of all the many other photographs and firsthand descriptions contained in this paper not one refers to, or shows, a bomb crater on the runway's centre-line. At best the origin of this notated and fuzzy photograph (the original taken by the FAA and analysed by Admiral Woodward's staff) is suspect.

106. The second conclusion is that the Argentines were never going to operate fast jets out of Stanley airfield but merely planned to use it as a refuelling and re-arming base by extending the runway using 231 aluminium 'planks' pre-loaded into the Argentine merchant ship, *ELMA Córdoba*. That this extension was never possible was nothing to do with the RAF and the Black Buck raids but the direct result of the Royal Navy's surface and sub-surface operations that prevented all Argentine ships from sailing outside their own coastal waters.

107. The third conclusion is that the first crater on the southern half of the runway from Black Buck One was filled in before Black Buck Two and replaced probably (as hinted by Commodoro Destri) by the faintish, pale circle close to, but not on, the runway's centre-line. This was a rough circle of painted stones, part of General Menéndez *subterfuge* and which Commodoro Héctor Luis Destri described as to:

*...help the English break the track?. So we decided to build two simulated impacts on the track so that the Vulcan would stop shaking us and the result was successful. After the second Vulcan bombing, it was sought to make the enemy believe that he had achieved his objective. For this, **two craters were simulated similar to the real one already repaired.** We did an excellent job of trying to fool the English into believing that the runway was really disabled. We used stones, paint, etcetera. [Our emphasis.]*

108. Clearly this stratagem worked although eventually Admiral Woodward saw through it.

109. Despite the obvious and highly laudable courage and determination of both the *Vulcan* and *Victor* tanker crews the inescapable assumption is that Black Buck One (and even less so Black Bucks Two and Seven) did not meet the RAF's Mission as laid down in Operation Order 3/82 271440 Z APR 82 which was, *To impede Argentinian air operations from Stanley Airfield.* All evidence tells us that the runway remained operational for *C-130s*, *Pucara*, *Fokkers*, as well as the *Aeromacchis AM-339* fast-jet fighters from the first until the very last day of the campaign. The *Pucara* and *Aeromacchis* operated *inter alia* against HMS *Argonaut* on 21st May and the *Pucara* against British troops at Goose Green on 28th/29th of May.

110. No Argentine aircraft were moved north as the result of the Black Buck raids thus the treat to the Task Force was not diminished.

111. Our penultimate conclusion is that Flight-Lieutenant Withers' statement, *We had one bomb right on the runway and as a result the runway was never used for the rest of the war by the Argentineans* (Paragraph 23) is both misleading and historically incorrect.

112. Thus, we come to the inevitable decision that, tactically, the four Black Buck bombing raids (1, 2, 3 and 7) were, at best, ineffectual and, at worst, expensive failures.

THE CONSEQUENCES

113. The consequences of the Stanley runway remaining open for Argentine flying operations throughout the campaign were profound.

114. In his book *One Hundred Days* (Fontana, 1992) Admiral Woodward says:

*My own opinion was that frequent bombardment of that strip of tarmac from the sea would permanently discourager them from ever using it as a take-off or landing area for fast jets. I fully expected them to bodge it up with cement and rubble and packed earth sufficiently to run in the old Hercules freighters with supplies or even acting as ambulance planes to remove the wounded **but I did not care too much about that.** I cared about fast jet bombers striking at the British carriers and my general policy was to make life a misery for any one planning to operate against us from Port Stanley. High speed aircraft need a very smooth and long surface to get off the ground or even to land and **we intended to make sure that was an impossibility** .[Our emphasis.]*

115. In this latter intention both the admiral and the RAF failed as the *Aeromacchis AM-339s* operated out of Stanley from the beginning to the end.

116. In other words the admiral *did not much care* about resupply flights for the Argentine land forces but only about the fast jets that might attack British ships. He would not have known of *ELMA Córdoba* and her load of ‘planks, being prevented from sailing due to the Maritime Exclusion Zone followed by the sinking of *ARA General Belgrano*. Nevertheless, the British land forces most certainly did care about the almost continual resupply of food, fuel, ammunition – and firewood – to the Argentine land forces.

117. Nor could the admiral have possibly known that in late May three *Exocet* anti-ship missiles (the threat that he feared the most) had been flown into Stanley in an ‘old’ *Hercules*, with four more arriving overnight on the 5th June: one of these was to seriously damage *HMS Glamorgan*. With respect, if the admiral had cared a little more about preventing the Argentine *Hercules* flights and had the Black Buck raids been the success the RAF continue to claim, not only would the British land forces have faced a more *materiel*-deprived enemy but *HMS Glamorgan* would have remained unscathed.

118. The Task Force faced the same number of enemy aircraft after the first Black Buck as there had been before the 1st May. The air threat was not diminished by the Black Buck raids.

SIGNATORIES

[Positions are those held in 1982, ranks are those achieved in due course]

Señor (Dr.) Alejandro Amendolara, Argentine naval and military historian
Señor Santiago Rivas, Argentine aviation historian
Señor Mariano Sciaroni, Argentine military historian and lawyer
Señor Alejandro Pita, Argentine Navy midshipman at Rio Grande, son of *Capitán de Navio de Infantería de Marina* Miguel Pita
Dr Anthony Wells: Head of Special Programs, UK Intelligence directorate, 1979-1983.
Author of: *A Tale of Two Navies* and *Between Five Eyes*
Rear-Admiral Jeremy Larken, Commanding Officer HMS *Fearless*
Rear-Admiral Jeremy Sanders, Staff Officer Operations on Rear-Admiral Woodward's staff
Major-General Julian Thompson, Commander 3rd Commando Brigade, Royal Marines
Major-General Nick Vaux, Commanding Officer 42 Commando, Royal Marines
Major-General Malcolm Hunt, Commanding Officer 40 Commando, Royal Marines
Commodore Michael Clapp, Commander Amphibious Task Group
Captain Gordon Wilson, Royal Navy, School of Maritime Operations
Captain Peter Hore, Royal Navy, Joint Logistics Officer, Ascension Island (J4)
Colonel Richard Preston, military adviser and SF coordinator to Rear-Admiral Woodward
Colonel Ivar Hellberg, Royal Corps of Transport, Commanding Officer, Commando Logistic Regiment
Commander Laon Hulme, First Lieutenant, HMS *Brilliant*
Commander Tim Gedge, Commanding Officer 809 Naval Air Squadron
Commander Graham Edmonds, Operations Officer, HMS *Broadsword*
Commander David Baston, Commanding Officer 848 Naval Air Squadron
Commander Nigel MacCartan-Ward, Commanding Officer 801 Naval Air Squadron
Commander David Hobbs, DG Aircraft (Navy) Department, naval historian and author
Lieutenant-Colonel Peter Cameron, Commanding Officer 3 Commando Brigade Air Squadron
Lieutenant-Colonel Roger Blundell, Fleet Royal Marines Officer, C-in-C's staff, Northwood
Lieutenant-Colonel Ewen Southby-Tailyour, OC Task Force Landing Craft Squadron
Major Mike Norman, Officer Commanding Naval Party 8901 and J Company, 42 Commando
Lieutenant-Commander Lester May, Supply Officer HMS *Hydra*
Mr Michael Shuttleworth, retired Royal Marines officer and helicopter pilot
Dr Andrew Rastall, Royal Engineers

16th November 2020